

Overview

To this point we have been focusing exclusively on buyers, or consumers. But buyers comprise only one half of the market mechanism. We now turn to the other half, sellers (also known as producers, companies, or firms). Considering the behavior of sellers is somewhat less complex because we can assume that sellers have only one motivation, to maximize their profits. We will examine supply graphically, analyze its determinants, and look at examples in real estate.

Objectives

- Learn how to move from the supply schedule to the supply curve
- Identify the non-price determinants of supply and how they shift the supply curve

Chapter 3: Real Estate Supply and the Supply Curve

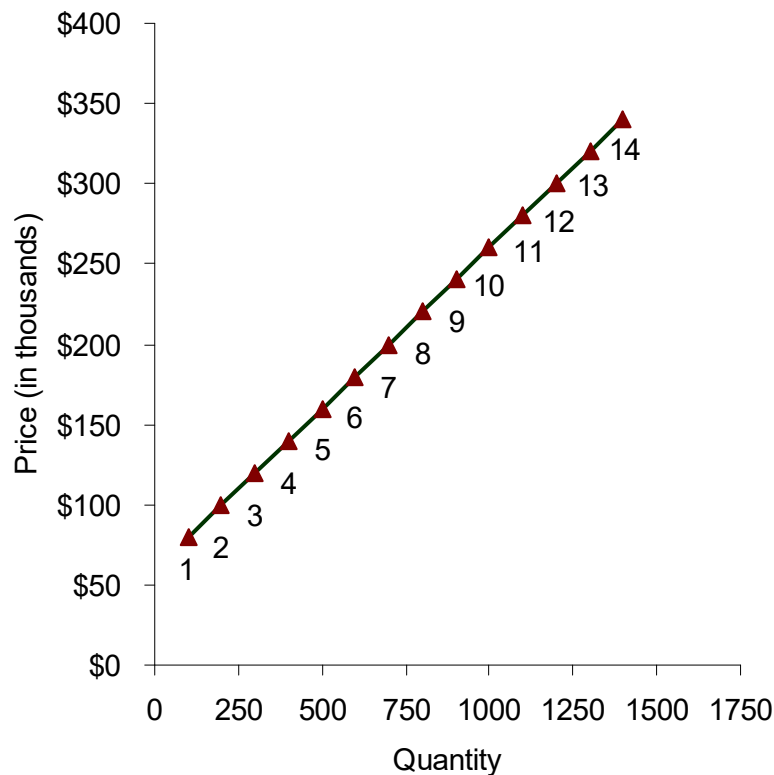
Total revenue is the money generated from selling a particular product. In the previous chapter, we calculated this as the price of the product multiplied by the quantity sold. As an example, if we sell 50 units at \$10 each, total revenue is \$500, but if we sell the 50 units at \$20 each, total revenue is \$1,000. But more sellers would be willing to enter the market for \$20 per unit; sellers will be willing to supply more at each increasing price point. In Economics this is called the law of supply. (Contrast this with the law of demand which states that as the price of a product rises, the quantity demanded of that product falls.)

We can illustrate the law of supply with a supply schedule for homes.

Data Point #	Price	Quantity Supplied
1	\$80,000	100
2	\$100,000	200
3	\$120,000	300
4	\$140,000	400
5	\$160,000	500
6	\$180,000	600
7	\$200,000	700
8	\$220,000	800
9	\$240,000	900
10	\$260,000	1,000
11	\$280,000	1,100
12	\$300,000	1,200
13	\$320,000	1,300
14	\$340,000	1,400

Graphing the Supply Curve

As the supply schedule on the previous page indicates, as the price of homes goes up, producers want to sell more homes. The graph of the data below depicts the law of supply as an upward-sloping line. Notice that the line does not begin at the origin (the origin on a graph is where 0 meets 0 on the axes). There is some above-zero price where no seller will produce at all. As with the graph of the demand curve, movement is along the line if it is the price of the product that changes. For example, if the price rises from \$320,000 to \$340,000 per home, we move along the line from point 12 to point 13. In this case, the quantity supplied rises from 1,300 homes to 1,400 homes. Also similar to the demand curve, we shift the line if anything else changes. We will consider the factors causing shifts in supply in the next section.



Non-price Determinants of Supply

Just like with the demand curve, if the price of the product changes, movement is *along* the supply curve. We *shift* the entire curve if the impact is from anything other than price. Those causes of the shifts in supply are known as the non-price determinants of supply. We will review four; they are listed here. We will look at each in more detail.

- Costs of production
- Number of sellers
- Substitute goods
- Expectations

Costs of Production

It is true that sellers will be willing to supply more at each increasing price point. But this statement should be followed by, “all other things being equal (*ceterus parabus*).” For we are assuming costs of production are constant. Producers seek to maximize profits not just total revenue. Profits are calculated as the difference between total revenues and total costs of production. Thus if the costs of production changes, this is a change in a non-price determinant of supply.

As costs of production increase, profits decline, and therefore the quantity supplied should fall for each price point. The supply curve will shift to the left. Conversely, as costs of production fall, profits increase, and the quantity supplied should rise for each price point. The supply curve will shift to the right. For builders, costs include the costs of resources such as wood and other materials used in building a home, the costs of labor (wages and benefits), as well as the costs of the capital.

Number of Sellers

One of the non-price determinants of demand was the number of buyers. The supply side is similar. There is an influence from the number of sellers of a product. When the number of sellers increases, the supply will increase. The curve shifts to the right. When the number of sellers declines, the supply should decrease. The curve shifts to the left.

Substitute Goods (Non-price Determinants of Supply)

As with the demand side, supply is also affected by the price of a substitute good for the product under consideration. For the supply side case, the substitute is a substitute for the seller; it is another good also produced by the same seller. For example, consider a builder looking to build condos versus single-family homes. If the price of condos goes up, the builder will build fewer single-family homes. The supply of single family homes will decline at each price point. The supply curve will shift to the left.

Expectations

Producers, like buyers, also have expectations that influence their behavior. If sellers expect the price to rise, they will want to sell less today (shift the supply curve to the left) and wait for the price to go up in the future. Home sellers will hold their homes off the market if they believe the prices will rise soon.

In summary, the quantity supplied for a given product will increase (shift the curve to the right) if:

- costs of production fall
- the number of sellers rises
- the price of another good produced by the same seller falls
- sellers expect the price of the product to fall in the near future

Of course the converse relationships will also be true.

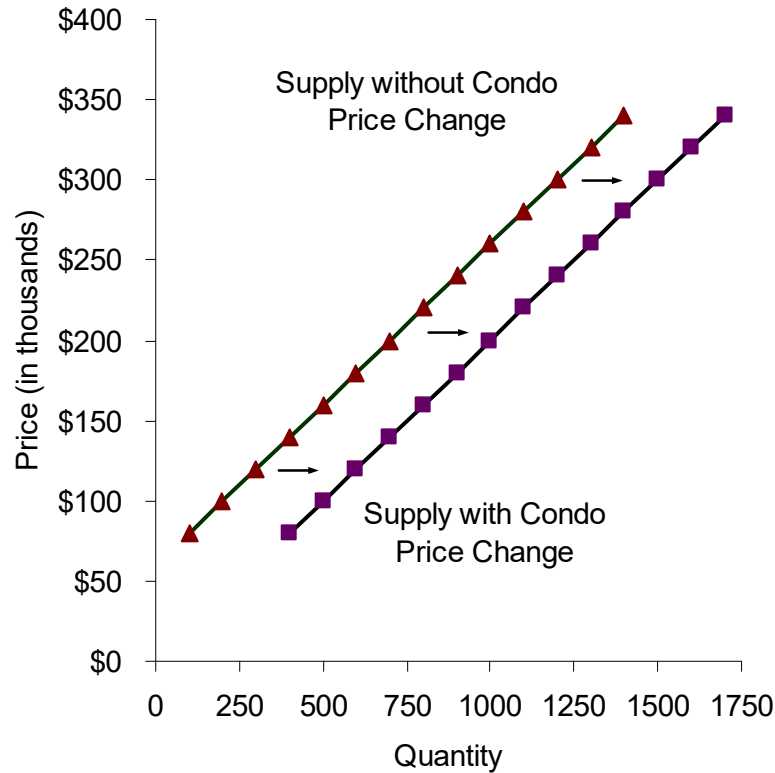
Shifting the Supply Curve

To illustrate a shift in supply, let's say that condos are not drawing very high prices (the price of a substitute has fallen). How will this influence the supply of single-family homes? The answer is that the quantity supplied at each price will increase.

Data Point #	Price	Quantity Supplied of Single-family Homes	
		Without Condo Price Change	With Condo Price Change
1	\$80,000	100	400
2	\$100,000	200	500
3	\$120,000	300	600
4	\$140,000	400	700
5	\$160,000	500	800
6	\$180,000	600	900
7	\$200,000	700	1,000
8	\$220,000	800	1,100
9	\$240,000	900	1,200
10	\$260,000	1,000	1,300
11	\$280,000	1,100	1,400
12	\$300,000	1,200	1,500
13	\$320,000	1,300	1,600
14	\$340,000	1,400	1,700

You can see this graphically on the following page.

Supply Curve Shift Graphically



A shift to the right means that sellers want to produce and sell more homes than they did before at every price. Note that the shift is to the right and represents an increase. It is NOT a shift down. The graph is read left to right, not up and down. By the same token, a shift to the left would mean that sellers want to produce and sell fewer homes at every price than they did before.

Summary

We have examined the idea of supply in this chapter. Graphically supply is an upward-sloping line. Sellers will seek to sell more of a product as the price increases. As with the demand curve, a change in price causes movement along the curve while any other change (a non-price determinant) causes a shift in the curve itself.