

Shifts in Demand

by Sophia Tutorial



WHAT'S COVERED

This tutorial will cover shifts in demand, comparing what causes a movement along a demand curve versus what causes a shift of the demand curve.

Our discussion breaks down as follows:

1. Law of Demand: A Review
2. Shifts in Demand
3. Causes of Shifts in Demand
 - a. Changes in Income
 - b. Changes in Price of Related Goods
 - c. Changes in Tastes/Preferences/Advertising
 - d. Changes in Number of Consumers

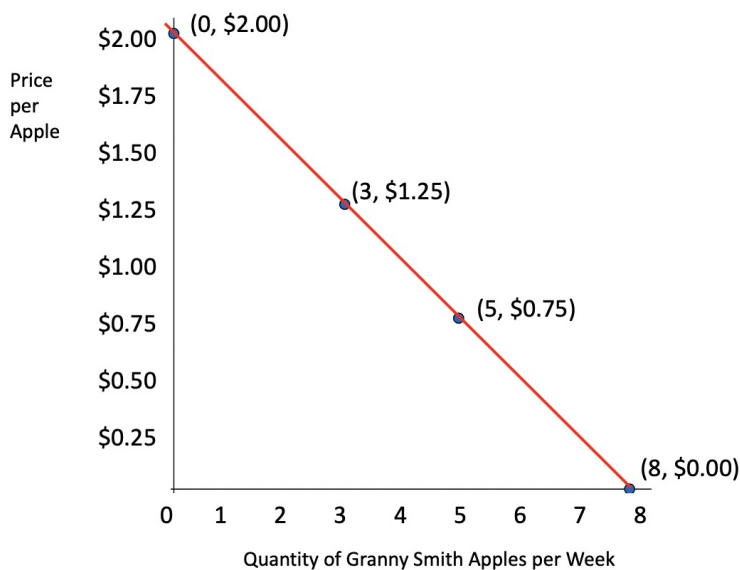
1. Law of Demand: A Review

Before we begin, let's review the **law of demand**, which is defined as the inverse or negative correlation between price and quantity with all other variables fixed.

Here are a demand schedule and demand graph for Granny Smith apples.

Price of Granny Smith Apples	Quantity of Granny Smith Apples Each Week
\$2.00	0
\$1.75	1
\$1.50	2
\$1.25	3
\$1.00	4

\$0.75	5
\$0.50	6
\$0.25	7
\$0.00	8

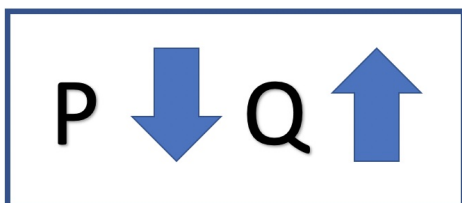


Notice that when the price is high at \$2 per apple, you do not want to purchase any apples at all. However, as the price falls, you want to purchase more and more. At \$1.50, you might buy two a week; if the price was only \$0.50 an apple, you would purchase six, and if they were \$0.25, you would purchase seven. Now, if the apples were free, you likely would eat more than an apple a day, so you would buy eight in a week.

When we plot the points of the demand schedule on a graph with price on the y-axis and quantity on the x-axis, it provides the demand curve.

Notice that the law of demand suggests a negative or inverse relationship between price and quantity. As the price of Granny Smith apples falls, you would purchase more. As the price rises, you would purchase less. Therefore, as the price changes, we are moving along the demand curve.

The price change is the only reason you are purchasing more. For instance, you would purchase six apples only because they each cost \$0.50. If they go up in price, you will purchase fewer apples.



Now, this is only describing a relationship between price, on the y-axis, and quantity, on the x-axis. These are the only two variables, so we can only move *along* the demand curve to show the relationship between price and quantity.

Therefore, this is a change in quantity demanded, not a change in demand itself. You would not say that if the price of apples went up, you demand less. Rather, you would say that since the price of apples went up, the

quantity you are demanding decreases.

Movements along the demand curve are demonstrated when the price of the product changes and impacts the quantity demanded.

Now, the law of demand governing these movements along the demand curve assumes **ceteris paribus**, holding everything else constant, although this is not always the case.

As mentioned, when the price of Granny Smith apples goes up, we can expect people to buy fewer Granny Smith apples. However, ceteris paribus assumes that *only* the price of Granny Smith apples--and nothing else--has changed.

The price of Gala apples did not change, nor did the price of other substitutes for apples like oranges or bananas. Your income did not change, either--only the price of Granny Smith apples.

 TERMS TO KNOW

Law of Demand

The inverse correlation between price and quantity with all other variables fixed

Movements Along Demand Curve

Demonstrated when the price of the product changes and impacts the quantity demanded

Ceteris Paribus

Holding all other variables constant

2. Shifts in Demand

Now, what if something else does change, as it very often does? Suppose you have to take a significant pay cut, or you read an article stating that Granny Smith apples are the least healthy apple. Will you still buy the same amount of Granny Smith apples? Will the relationship between price and quantity be the same?

The answer is no.

So, here is a new demand schedule for Granny Smith apples. Notice that compared to our original demand schedule, the numbers are totally different at the same prices.

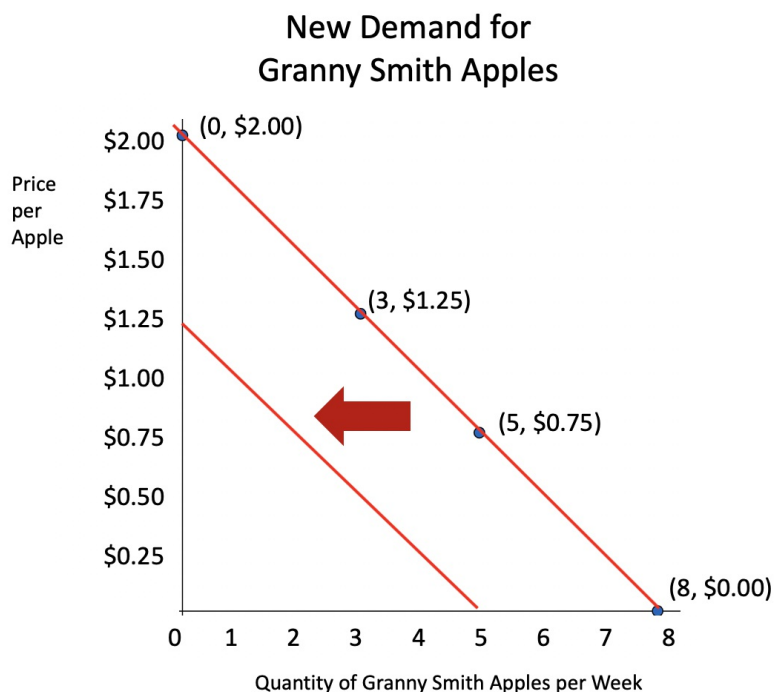
Price of Granny Smith Apples	Quantity of Granny Smith Apples Each Week
\$2.00	0
\$1.75	0
\$1.50	0
\$1.25	0
\$1.00	1

\$0.75	2
\$0.50	3
\$0.25	4
\$0.00	5

Before, you were willing to purchase an apple when they were \$1.75 each. Now that you took a pay cut, though, you cannot afford Granny Smith apples at that price. Alternatively, perhaps now you are concerned that Granny Smith apples are unhealthy, so you will buy fewer at all prices.

When we plot these new points, notice we cannot simply move along the original demand curve. There is an entirely different relationship between price and the quantity that you are buying.

You are not buying fewer because the price went up; you are buying fewer because something else that changed. You are buying a different quantity at every price. Therefore, a new demand curve is needed.



This represents a **shift in demand**, which is a change in something other than price that affects purchasing behavior.



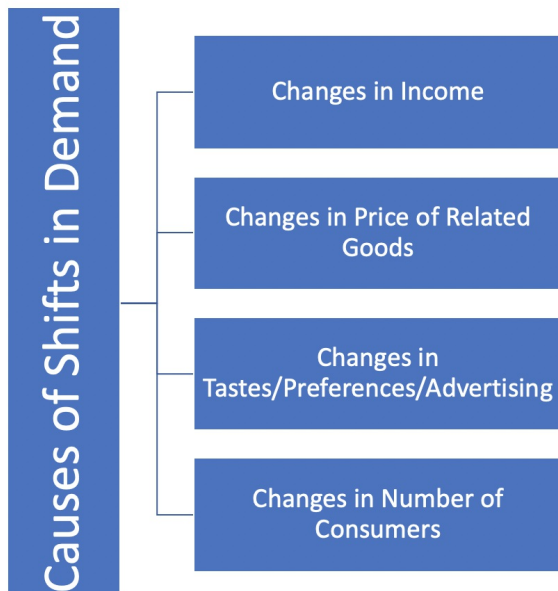
TERM TO KNOW

Shift in Demand

A change in something other than price affects purchasing behavior

3. Causes of Shifts in Demand

Here is a summary of the factors that cause a shift in demand. We will cover each of these in further detail:

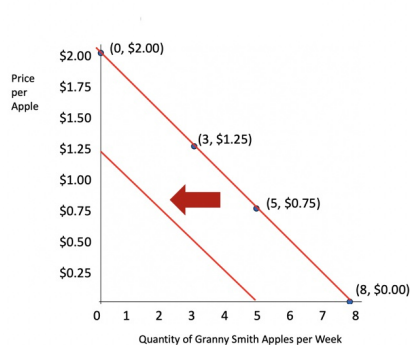


3a. Changes in Income

Changes in income can impact how much we buy of things. We can either decide to buy more of most goods as our income goes up-- these are known as normal goods--but there are some items like generic brands that we actually buy less of as our income increases.

Let's refer to the graph illustrating a decrease in demand. Remember, the price of Granny Smith apples did not change. However, if you make less money, you cannot afford as many and will buy fewer apples at all prices. Therefore, demand shifted to the left.

Change in Income



Price of Granny Smith Apples did not change. If I make less money, I cannot afford as many. I buy fewer apples at all prices, so we need a new curve.

**Increase in Income =
Increase in Demand (most goods)**

**Decrease in Income =
Decrease in Demand (most goods)**

For most goods, meaning normal goods, an increase in income will cause an increase in demand, while a decrease in income would cause a decrease in demand.

Now, the opposite is true for some goods called inferior goods, such as generic brands, whereby an increase in income would cause us to buy fewer of them, while a decrease in income would cause us to buy more of them.

3b. Changes in Price of Related Goods

Changes in the prices of related goods is another factor that will shift the demand curve. For instance, if something related to Granny Smith apples changes in price, this can affect how many Granny Smith apples you buy, even though the price of Granny Smith apples did not change.

- **Substitutes in production and consumption** state that as the price of one good increases, the demand for an alternative good meeting the same producer or consumer need will increase.

➡ **EXAMPLE** If Granny Smith apples are the only type of apple that becomes more expensive, the quantity demanded for them will decrease, which is expressed as movement along the Granny Smith apple demand curve. However, how do consumers respond?

Well, perhaps they buy more Gala apples because they meet the same consumer need. Gala apples are a substitute. The demand for Gala apples has shifted because Gala apples did not change in price, yet now people are purchasing more of them.

- **Complements in production and consumption** exhibit different behavior. A complement is a good for which the demand increases as the price of an associated good decreases.

➡ **EXAMPLE** Suppose you eat apples and caramel apple dip together. If caramel apple dip goes on sale, you buy more, which is expressed as movement along the demand curve for caramel apple dip. However, even though the price of apples did not change, you are also going to buy more apples to go with your caramel apple dip. This represents a change in demand for apples, or a shift of the demand curve to the right, because the price of apples did not change, yet you are buying more of them.



TERMS TO KNOW

Substitutes (Production and Consumption)

As the price of one good increases, the demand for an alternative good meeting the same producer or consumer need increases

Complements (Production and Consumption)

A good for which the demand increases as the price of an associated good decreases

3c. Changes in Tastes/Preferences/Advertising

Changes in tastes and preferences are impacted by things like positive or negative news reports. If there is a good news report about a product, or fads, or strong advertisements, this results in an increase in demand for

that product.

➦ **EXAMPLE** For example, the child's toy Tickle Me Elmo was featured on a popular television show, so every parent in the market wanted to purchase it for their child, resulting in a massive increase in demand.

Negative news reports or fads going out of style result in a decrease in demand.

➦ **EXAMPLE** Suppose you hear on the news tonight that there was an E. coli outbreak in spinach in your local area. At all prices, people will be purchasing less spinach, which is a decrease in demand.

3d. Changes in Number of Consumers

Finally, if the number of consumers in a market change, this will obviously impact the amount of demand for something.



BIG IDEA

It is important to differentiate between a change in quantity demanded or a change in demand. A change in the price of a good results in a change in quantity demanded or movement along the same demand curve. A change in any other factor could potentially shift the demand curve, which represents a change in demand itself. Keep in mind that different situations will shift the curve more than others.



SUMMARY

We started today's lesson with a **review of the law of demand**, recalling that a change in the price of a good causes movement along that good's demand curve. We also learned about **shifts in demand** and the factors that cause a shift of the demand curve. These **causes of shifts in demand** include **changes in income, changes in the price of related goods**—which factor in substitutes and complements, **changes in tastes, preferences, and advertising**, and finally, **changes in the number of consumers**.

Source: Adapted from Sophia instructor Kate Eskra.



TERMS TO KNOW

Ceteris Paribus

Holding all other variables constant.

Complements (Production and Consumption)

A good for which the demand increases as the price of an associated good decreases.

Law of Demand

The inverse correlation between price and quantity with all other variables fixed.

Movements Along Demand Curve

Demonstrated when the price of the product changes and impacts the quantity demanded.

Shift in Demand

A change in something other than price affects purchasing behavior.

Substitutes (Production and Consumption)

As the price one good increases, the demand for an alternative good meeting the same producer or consumer need, increases.