

Supply and Demand

Supply and Demand is one of the most central concepts in the field of economics. It not only applies on the microeconomic level for individual businesses, but also on the macro level for entire markets and global economies. The concept in essence is simple enough to understand: firms thrive when they supply at the level that their product is demanded. Yet still, over 50,000 businesses deteriorate each year out of a failure to conform to this seemingly-basic ideology.

There are four groups of *market participants*, all looking to get something out of the *market*, any place where goods or services are exchanged. Consumers aim to maximize their own satisfaction and happiness (*utility*), business firms aim to maximize *profits*, and the government, ideally, aims to maximize social well-being. Foreigners also participate in both the *product markets* and the *factor markets*, with the same goals in mind as the domestic consumers, firms, and government agencies. In the *product market*, goods and services are sold by firms to consumers. In the *factor market*, *factors of production* are sold by consumers to firms. *Factors of production* are the resources firms utilize to produce goods and services, such as labor (workers), land (natural resources), capital (facilities and machinery), and entrepreneurship (skill in production). Thus, it can be said that businesses *supply* products that consumers *demand*, and consumers *supply* factors of production that businesses *demand*. Supply and demand are involved in any market exchange.

Demand can be categorized as the willingness and ability of a person to purchase a good or service. A market only exists when people are willing and able to both sell a good or service and to buy that good or service. However, this demand is contingent on the price the good or service is being sold at. This applies on both an individual level and on the larger market scale. For example, at the individual level, if Jamie is planning a party and wants to please her guests while still staying within her budget, she might buy more bags of chips (which are currently inexpensive) than she would have had the price been higher. She has a set budget of how much she is willing and able to spend on her party, since she has other important things she spends money on, like her rent and her college tuition. Since she already had a demand for chips, and wants to maximize the satisfaction of her guests, she will buy whatever quantity she is able to while still staying within her set party budget. If one were to make a table detailing the quantity of chips Jamie is willing to buy at alternative prices, this would be a *demand schedule*. On the larger market scale, other consumers will think like Jamie. If they want as many chips as possible, they will purchase more and more chips as the price decreases. Therefore the *market demand* of chips increases as the price falls. This illustrates the *Law of Demand*, which states that demand has an inverse relationship to price, *ceteris paribus*.

The Law of Demand can be illustrated with a *demand curve*, a graphical demonstration of quantities demanded (on the x-axis) at alternative prices (the y-axis). Changes in quantity demanded in response to price changes result in movements along the demand curve, as illustrated by how Jamie demanded more chips (to maximize her utility) when the price of chips was low. But what if Jamie discovers that her party-goers don't want chips, and would prefer pretzels because they are healthier? Now Jamie's desire to purchase chips has decreased, because of something other than the mere price of chips. After this discovery, Jamie demands less chips *at any price*. Rather than a movement along the demand curve, due to price, Jamie is experiencing a leftward shift in the demand curve, due to a change in taste. Shifts in the demand curve are due to changes in the underlying *determinants of demand*, which may include changes in consumer income or expectations, number of buyers, and the availability and price of other alternative goods, as well as changes of tastes. These determinants of demand alter the demand for a product at any price, shifting its entire demand curve to the left or the right.

Say this change in taste for chips not only occurs in Jamie's friend group, but in the majority of the consumer population. Perhaps a public service announcement broadcast on primetime television linked obesity to the consumption of chips. With the demand for chips decreasing, what is the producer of chips to do? Before this information bashing chips was released to the public, the producer had found the perfect quantity and price at which to produce chips. They did this by creating a *supply curve*. A supply curve is a graphical demonstration of quantities supplied (on the x-axis) at alternative prices (on the y-axis). Similar to the Law of Demand exhibited by consumers, the *Law of Supply* states that the quantity supplied increases as its price increases, *ceteris paribus*. Therefore quantity supplied and price have a direct relationship, as producers aim to maximize profits. When producers compare a product's supply curve with its demand curve, they can find the product's *equilibrium price*. The equilibrium price is found at the point (an intersection of price and quantity) where the supply curve and the demand curve meet. However, since the demand curve for chips shifted to the left, the producer of chips was no longer supplying at the equilibrium price, and there ensued a *market surplus* (more product being supplied than is demanded at a given price). Now, to continue to produce at the rate that consumers are willing to meet with their buying power, the producer of chips must find the new equilibrium price. This is found at the intersection of the supply curve with the *new* demand curve. Since the demand curve shifted to the left, the producer must produce a lower quantity of chips at a lower price.

Unfortunately, the chip company will now make less profits since they are producing less output at a lower price. But what will happen to the pretzel company if the majority of consumers now view pretzels as the new healthier alternative to chips? The demand curve for pretzels will now shift to the right, and there will ensue a *market shortage* (not enough pretzels being supplied to meet consumer demand). Now consumers will be willing to pay a higher price to meet their demand for the healthier pretzels. In the short-run, the firm might not be able to produce more pretzels because of a lack of currently-available land and capital. In the meantime, they can raise the prices of their pretzels while they work on attaining the facilities and resources to produce more pretzels. But until these factors of production can be gained in the long-run, profits will not be maximized.

The intricacies of supply and demand lend businesses the resources to decide how best to produce to maximize profits. For a business to succeed, they must produce at the price and quantity where supply meets demand. Firms are required to constantly re-analyze data to decide at which price and quantity to produce. Consumers strive to maximize utility with the purchasing power they have. Although they have different goals in mind, consumers and producers are interdependent because the forces of supply and demand are always at work.

Reflection

Supply and demand are important for economists to study, especially when it comes to the question of what to produce as a nation. Economists working for the government are able to use the market mechanism to determine how best to allocate scarce government resources to achieve the optimal mix of output for our country. They can do this by looking at the market supply and demand curves for various products and services. For example, if there is a market shortage for wheat, and there is a higher demand for wheat than farmers can afford to meet, the government can decide to subsidize the production of this staple grain. This would shift the supply curve for wheat to the right, so that farmers are able to produce more wheat at any given price, and the quantity of wheat produced would be able to increase while its price stayed the same, ensuring that civilian demand is met and wheat farmers can still profit at a higher production level. Similarly, government economists might notice (by analyzing market supply and demand) that more healthcare is demanded that can be supplied at a reasonable price, leaving less-wealthy consumers uninsured and at risk to fall into unjust medical debt. The government can then fix this market shortage by allocating more resources to health insurance providers, enabling them to provide on a sliding scale where everyone is capable of paying for insurance and providers can still profit at a lower price. I see the forces of supply and demand at work in my personal life as they pertain to my job. I work for a restaurant where the demand for the food we produce has recently skyrocketed, because of a high rating in a popular national publication. We are now receiving more customers than we are prepared to serve with our current size of facility, amount of workers, and amount of machinery. We are selling out of the popular menu items by the middle of every business day. The owners of the business had to hire more workers in the short-term to cover their own shifts on the premises so they are able to go out and look for a second kitchen to prepare a larger quantity of food in at the start of each day. When they purchase these additional facilities they will be able to supply at a level closer to consumer demand, but they should also raise their prices to maximize profits. If they keep their prices at the same level, they will not make enough profit to cover rising costs (labor, facilities, and materials). While they are selling their services to consumers in the product market, I am selling my services (my labor) to them in the factor market.