

When More Is Less

Functions of Prices

Objectives

- A** Explain the importance of price.
- B** Explain how prices are determined.



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What would life be like without prices? Let's take a look. Assume that you are planning a surprise



birthday party for your best friend. Even though you've been saving up your money for weeks, you have a limited amount of cash to pay for the event. Of course, your priority is purchasing a birthday cake and ice cream. If you can afford it, though, you also want to get a catered lunch and decorations.

"Oh well," you think to yourself. "I'll go to the grocery store and see how much the cake and ice cream cost first. Then, if I have money left over, I'll buy some of the other stuff, too." Sounds like a good plan. But what if there are no prices on anything in the grocery store? How can you decide what to buy? How much to buy? Whether to buy anything at all? You can't. Without prices, it's nearly impossible to make any purchase or economic decisions.

► *What price are you willing to pay for music?*

Who Will Pay the Price?

Price is a common topic of conversation among individuals and businesses alike. Practically everyone is interested in the prices we pay to purchase things we need and want. But what is price? **Price** is the amount of money that is paid for a good, service, or resource. In the United States, prices are expressed in dollars and cents. For example, you might pay \$1.29 to download a song from the Internet or \$20 per hour for piano lessons. On the flip side, a business might pay you \$13.95 per hour to work as an administrative assistant.



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Price is what you pay. Value is what you get.

—Warren Buffett



Jing Ulrich

Price indicates how much value a consumer places on a good, service, or resource. If consumers highly value items, they usually are willing to pay more for them. On the other hand, they pay less for items that they consider to be of little value. For instance, some people are willing to pay \$900 for a ticket to attend a FIFA World Cup soccer match. Do you know of any sporting event that you would pay that much to watch? Your answer depends on how much buying power you have available, how much satisfaction (value) you would get from attending the event, and the relative price of the ticket.

Prices: They're All Relative

Relative price is one price compared to another. In other words, it's the ratio between the two prices. Suppose that a candy bar costs \$0.75, and a pack of gum is \$1.50. If that's the case, then the price ratio is 1 to 2. Even if the prices increase to \$1 and \$2 respectively, the relative price ratio does not change—it is still 1 to 2.

Let's look at another scenario. Let's say that a shirt costs \$18 and a sweater is priced at \$36. The price ratio of the clothing is 1 to 2. But if the shirt increases in price to \$24 and the price of the sweater stays at \$36, the new price ratio would be 2 to 3.

The following chart shows an example of relative price. Suppose that you have \$20 to spend on apps and ringtones for your smartphone. Apps are \$4 each, and ringtones cost \$2 each. You could choose the following combinations of apps and ringtones:

Each time you add one app, you have to give up two ringtones. The choices you make depend on the value of the items to you. Which plan would you choose?

Plan	Apps	Ringtones
A	0	10
B	1	8
C	2	6
D	3	4
E	4	2
F	5	0



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Whether prices go up or down, relative prices do not change if the ratio remains the same. However, if the price of apps goes down and ringtones remain the same, the price ratio would be altered. This change in relative prices might cause people to buy more apps and fewer ringtones. By comparing the relative prices of goods and services, consumers choose combinations that are most satisfactory for them.

Businesses are also concerned about relative prices, especially those of resources they need. They compare the price ratio of different resources to determine which combinations to use in production. The Swedish furniture chain IKEA, for instance, studies relative prices when selecting its resources. Although the company would prefer to buy high-quality, certifiable wood products from western countries, it doesn't always do so because of the high price of such wood. Instead, it has been known to purchase wood from lower quality, lower cost producers in Eastern Europe and Asia to save money and make the company more profitable.



◀ *A landlord might compare the relative prices (rent) s/he can charge for a small apartment in the city versus a house in the suburbs.*

Relative prices are important to resource owners as well. Owners of resources compare relative prices in different markets to determine where to sell resources or services to earn the most benefits. A business systems analyst (a human resource) might compare relative prices (wages) in Dallas, Atlanta, and Boston to determine where to live and work. S/He is likely to relocate to the city that offers the highest salary for business systems analysts.

What Do Relative Prices Do?

All types of economic systems must answer the following three basic economic questions:

- What will be produced?
- How will products be produced?
- How will products be allocated?

In our economy, relative prices significantly influence how these questions are answered. Producers typically choose to provide products that are highly profitable and sell them at the highest prices the market will bear. In response to the question of how to produce these products, producers combine the needed resources and technologies to produce goods and services at the lowest cost possible. Finally, whoever is willing and able to pay the price will get the products.

The functions of relative prices can significantly impact the answers to the three basic economic questions. These functions include information, incentives, and rationing. Let's look at each in detail.

Information. Relative prices provide information needed by consumers, producers, and resource owners to make economic decisions. This information is needed to decide whether to buy, what to buy, and how much to buy. Think back to the grocery store with no prices. Because you didn't know how much anything cost, you couldn't make any purchase decisions. Or consider the frustration of choosing between two jobs without knowing their salaries. Making economic decisions is difficult without price information.

THE GRAY ZONE

A new coffee and protein drink is entering the market, initially priced at \$1.00 per can. The company intends to gain as much market share as possible at this low price and then raise the price after it gains a loyal customer base. The company does not promote the \$1.00 price as a sale or give consumers any indication that the price will rise in the future.

Is it ethical for the company to charge the lower price to hook new customers? Should the company have to make it clear that the \$1.00 price is a promotion and/or indicate that the price will rise? Would you continue to buy the product if the price increased?



Incentives. In our economy, profits are the incentives that encourage producers to change and reallocate their resources. Producers compare relative prices to determine what to produce. For example, an increase in the price of wheat relative to the price of corn might cause a farmer to plant more wheat and less corn. An increase in the salaries of advertising media buyers relative to those of market research analysts is an incentive for more people to study advertising than market research.

Rationing. Who gets the goods and services that are produced in our economy? Whoever is willing and able to pay the price. Relative prices help allocate limited resources, goods, and services among consumers. Generally, the higher the price of anything, the less of it consumers will buy—and vice versa. If 20,000 people want to attend a soccer match in a stadium that can only seat 5,000 people, the price of admission may be increased to the point where only 5,000 people are willing and able to pay the price. The other 15,000 are rationed out by the excessive price. On the other hand, if only 5,000 people are interested in attending the soccer match, and 20,000 seats are available, prices might be lowered to a point where all 20,000 tickets can be sold.

In some societies, the government (rather than relative prices) rations limited resources, goods, and services among consumers. Members of the government must determine every person's fair share. What would be some benefits and problems associated with government rationing?

Summary

Price is the amount of money that is paid for a good, service, or resource. Prices indicate values that consumers place on products. The price that a consumer will pay depends on the value placed on the product, how much money is available to spend, and relative prices. The functions of relative prices include information, incentives, and rationing. Relative prices determine what is produced or available for consumers, how products are produced, and who gets the goods and services produced.

TOTAL RECALL

1. What is price?
2. What are three factors that influence the price a consumer is willing to pay for a product?
3. Explain the concept of relative price.
4. If the price of a pencil is \$1.00 and the price of a pen is \$2.00, what is the relative price? If the pencil is \$1.50 and the pen is \$3.00? If the pencil is \$2.00 and the pen is \$3.00?
5. How do businesses and resource owners use relative prices?
6. What is the relationship between relative prices and the three basic economic questions?
7. Explain three functions of relative prices.



The Price Is Right

In our economy, supply and demand largely determine the types and quantities of products provided and the prices paid for them. Supply indicates the quantities of an item offered at different possible prices during a specific period of time. Usually, the higher the price of an item, the more of it that will be offered for sale. Likewise, the lower the price of an item, the less of it that will be offered for sale.

Demand, on the other hand, reflects the quantities that consumers are willing and able to buy at various possible prices during the same period. Typically, the lower the price of something, the more of it that will be purchased. Also, the higher the price of something, the less of it that will be purchased.

Supply interacts with demand to determine prices. To understand how this occurs, take a look at an example of a supply and demand schedule for a gaming console.

Supply and Demand Schedule

Price	Quantity Demanded	Quantity Supplied
\$400	400	800
\$300	500	700
\$200	600	600
\$100	700	500



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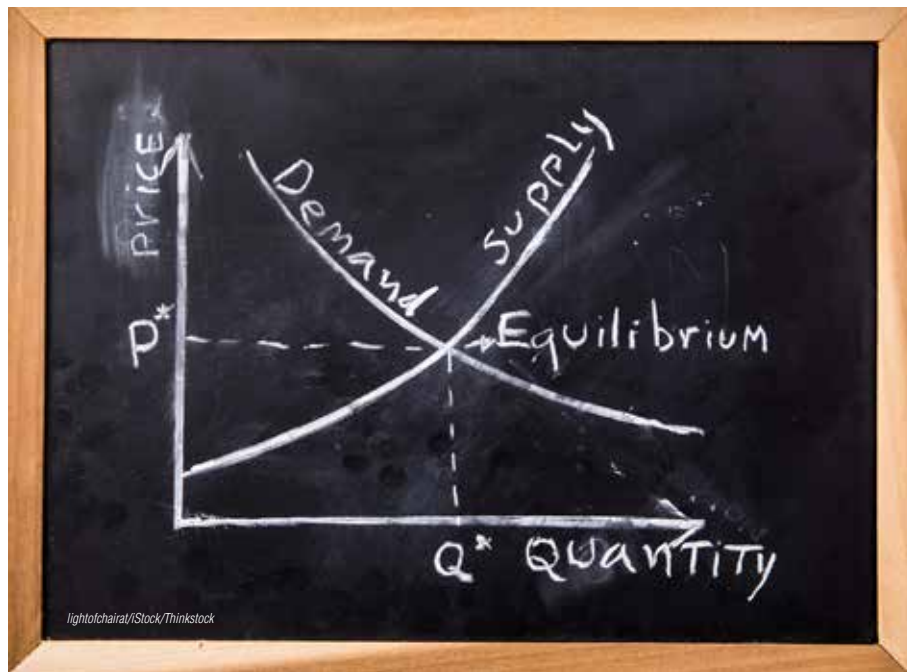
▲ *In the years since its introduction, the Nintendo Wii has fluctuated in supply, demand, and price.*

As the price increases, the demand decreases. Conversely, when the price decreases, the demand goes up. Also, as the price increases, producers are willing to supply more consoles. However, as the price declines, producers tend to decrease the supply.



Watch this video by economics teacher Jacob Clifford for a quick overview of supply and demand (and also to see him chug two gallons of milk):

<https://www.youtube.com/watch?v=LwLh6ax0zTE>.



Clear the Market

The **equilibrium price**, or **market-clearing price**, occurs when the quantity of a product that buyers want to buy is equal to the quantity that sellers are willing to sell at a certain price. Equilibrium is a state of market balance or equality between opposing forces (buyers and sellers). Buyers want the greatest economic value at the lowest possible price. Sellers want the highest possible price to maximize profits. The equilibrium price is equal to both the **demand price**—the maximum price buyers are willing and able to pay—and the **supply price**—the minimum price producers are willing and able to receive for a product. At the equilibrium price, resources are allocated efficiently, and there is no shortage or surplus of products in the market.

Let's look at the equilibrium price in the supply and demand schedule for gaming consoles. What is the equilibrium price? The price that best satisfies both buyers and sellers is \$200, where the quantity demanded equals the quantity supplied.



The equilibrium price is determined by trial and error and is very rarely the price that exists in the marketplace. The forces that determine equilibrium price are always changing, thereby causing the equilibrium price to change as well.

What Happens When Demand \neq Supply?

Since the equilibrium price seldom exists, let's see what happens to price when supply and demand are not equal. In our example of gaming consoles, producers are willing to supply 800 consoles when the price is \$400, but only 400 buyers are willing and able to pay that price. At that point, supply is greater than demand, and an **excess supply**, or surplus, of 400 consoles exists. In other words, the price is set higher than the equilibrium price for the product. When this situation occurs, producers are likely to lower their prices to sell the excess supply, creating a **buyer's market**. A buyer's market is the best time for consumers to buy. It's characterized by a large supply, low demand, and low prices. Consumers will buy more (and eliminate the excess) as the prices go down, but producers will produce less.

At what prices is there an excess supply of gaming consoles?

Just as there are times when excess supply exists, there are times when the demand is greater than the supply and a product's price is lower than the equilibrium price. In these situations, **excess demand** exists. Excess demand, also known as a shortage, can result in a seller's market. A **seller's market** is the best time for producers to sell because there is high demand, low supply, and rising prices. In times of excess demand, consumers are willing to pay more to get what they want, so prices increase. Producers respond to higher prices by increasing the supply. Excess demand is eliminated when the price reaches a point where the quantity that consumers will buy is equal to the quantity that producers have to sell.

At what price is there excess demand for gaming consoles?



- *Recently, the costs of cable television have caused many people to "cut the cord" and use cheaper video-streaming services instead. This is the substitution effect at work.*

BackyardProduction/Stock/Thinkstock

Whenever the demand price of a product changes, the relative prices of other products change as well. This results in a **substitution effect**, where changes in relative prices cause buyers to substitute the purchase of one product for another. For instance, an increase in the demand price of laptop computers would cause the relative prices of other types of computers to go down. Buyers who are not willing or able to pay a higher demand price for a laptop would be likely to purchase more desktop computers instead. This would cause the demand for laptops to decline. Likewise, a decrease in the demand price of laptops would cause the relative prices of substitutes such as desktop computers to go up. Buyers would purchase more laptops and fewer desktop models, increasing the demand for laptops. Think of it this way: Have you ever purchased a store-brand product because the price of the leading name-brand version was too high?

On the Market

Since the equilibrium price seldom exists in the marketplace, what price does exist? The **market price** is the actual price that prevails in a market at any particular time—the price that you actually pay for a good or service. For example, if you buy a cappuccino today for \$3.79, that is the market price today. However, if you return to the same coffee shop tomorrow and buy the same cappuccino for \$3.25, that is tomorrow's market price. Excess supply and excess demand cause fluctuations in the market price just as they do in the equilibrium price. In fact, any factor that causes changes in supply and demand (like natural disasters or wars) will ultimately cause changes in prices as well.



▲ Next time you go to the store, write down the price of an item. Then, check it again in a couple of weeks to see how the market price has changed!



Want a little more information about supply and demand? Investopedia breaks it down for you at <http://www.investopedia.com/university/economics/economics3.asp>.



Summary

Supply and demand have a tremendous impact on price. Generally, as the price for a product decreases, demand for the item goes up, but the quantity that producers are willing to supply goes down. On the other hand, as a product's price goes up, the quantity supplied also increases. But because some consumers are not willing or able to pay more for the product, demand declines. The equilibrium price, or market-clearing price, is the price that allows all suppliers to sell the amount they are willing and able to sell, and all buyers to purchase the amounts they are willing and able to purchase. Excess supply creates a buyer's market, while excess demand results in a seller's market. Changes in relative prices cause some buyers to substitute the purchase of one product for another, known as the substitution effect. Market price is the actual price that prevails in a market at any particular moment. In our economy, prices rise and fall in response to changing demand and supply.

TOTAL RECALL

1. How does price affect quantity supplied?
2. How does price affect quantity demanded?
3. What is equilibrium price?
4. What is the effect of excess supply on prices?
5. What is the effect of excess demand on prices?
6. Explain the substitution effect.
7. Discuss market price.

Make It Pay!

Think of five products or services that you have recently purchased. How much did you pay for each? If there was excess supply and the price of any of these products went down, would you buy more? In the event of a shortage, what is the maximum price that you would pay for each product? If any product's price went above your maximum price, what would you buy instead?