

Introduction

While we can't say that our economy runs itself, we can identify a basic principle (a kind of motor) in economics that keeps the system running. This principle is the **law of supply and demand**. It works by creating interaction between those who wish to earn money by selling goods or services and those who wish to buy those goods and services.

The Market: A Place Where Consumers Buy and Producers Sell

As a part of the specialized vocabulary used in economics, a **market** is a place where people buy, sell, or trade goods and services. In international markets people from all over the world come together to buy and sell products such as coffee, gold, and oil. However, most of the markets consumers visit are local, such as your local grocery store or the stores in your nearby mall. Look at the chart below. Notice the kind of markets or stores in which products and consumers come together.

The Marketplace		
The Products	The Consumers	The Markets
Compact Discs	<ul style="list-style-type: none"> • adults • teenagers • disc jockeys • classical musicians • jazz musicians 	<ul style="list-style-type: none"> • record shops • department stores • discount music stores • mail order catalogs
Parachutes	<ul style="list-style-type: none"> • military personnel • skydivers • aircraft owners 	<ul style="list-style-type: none"> • Army/Navy stores • mail order catalogs • military suppliers
Disposable Diapers	<ul style="list-style-type: none"> • parents with infants and toddlers • day care personnel • hospital personnel • adult elderly/disabled dependents • nursing home personnel 	<ul style="list-style-type: none"> • department stores • grocery stores • children's stores • drug stores • hospital supply stores
Insulin	<ul style="list-style-type: none"> • diabetics • doctors • hospital personnel • pharmacy personnel • parents with diabetic children 	<ul style="list-style-type: none"> • pharmaceutical manufacturers • pharmacies • department store pharmacies • grocery store pharmacies • pharmaceutical distributors

Two different kinds of markets exist on the national level: the *factor market* and the *product market*. In the *factor market* companies exchange money as either wages, rent, interest, and profits to the people in return for labor, natural resources, capital, and entrepreneurial skills. In the *product market*, companies sell *goods* or *services* to the consumer in return for money.

The chart on the next page is an economic model. It shows one of the ways that money, goods, services, and resources flow between resource owners, consumers, producers, factor markets, and product markets. Because this chart shows the flow of something, it is called a *flow chart*. In this flow chart, there are two circular flows of economic activity.

The inner circle follows the flow of resources and goods and services. Follow the inner circle from the point of the resource owners.

- Resource owners offer their resources—labor, land, capital, and entrepreneurial skills—in the factor markets.
- Producers buy people’s resources from the factor markets to produce goods and services.
- Producers then offer those goods and services for sale in the product markets.
- Consumers locate those goods and services for sale in the product markets.

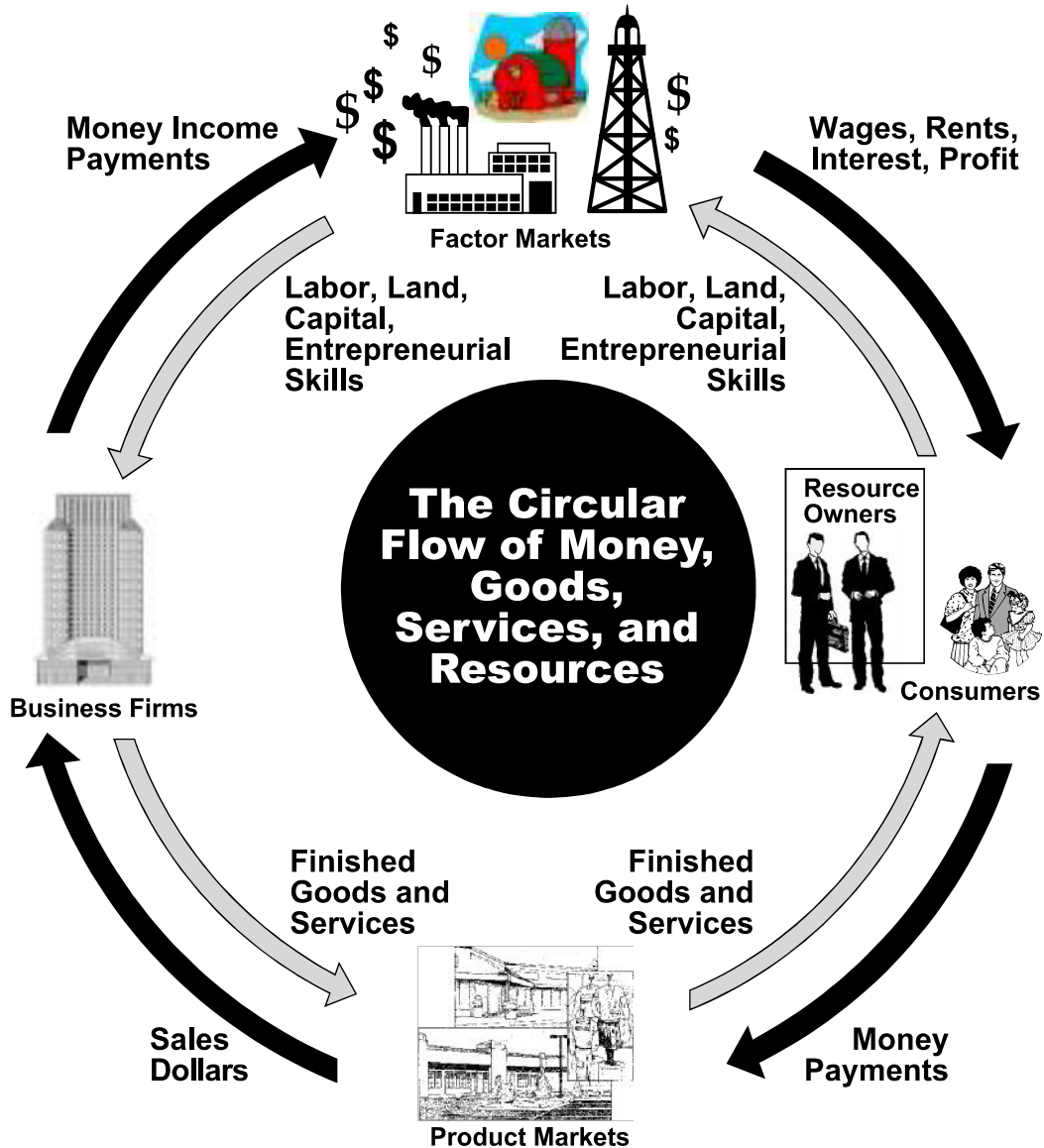
The outer circle follows the flow of money. Follow the outer circle from the point of the consumers.

- As consumers, people spend money on goods and services in the product markets.
- Producers receive this money in the product markets as payment for goods and services.
- Producers use some of this revenue in the factor markets to buy resources from resource owners.
- Resource owners receive money in factor markets for selling their resources.

In short, the circular flow model shows how our economy operates. Businesses buy factors of production (land, labor, capital, entrepreneurial

skills) in the factor market with wages, rents, interest, and profits. Businesses then use the factors to make products and sell in the product market.

Furthermore, consumers sell factors of production in the factor market and buy in the product market. This is a continuous non-stop interaction.



Case Study: The Story of How Factories Began

A Story of Factors

You are probably more familiar with the word *factory* than the word *factor*. Both words have the same origin. The story of how *factor* became *factory* is an interesting one. In England from the 14th–17th centuries, a group of entrepreneurs found a way to make money by organizing workers' labor.

The *factor*, or entrepreneur, brought to each worker's cottage, or home, a piece of work to be done. Each cottage-family did only one part of the entire job necessary to make a particular good. The separation of an entire job into its parts is called *specialization of labor*.

Because families specialized in only one task, they became fast and efficient. One family spun the wool into yarn. One family dyed the yarn for the rug. Another family wove the rug, and so on. Because the workers lived in cottages, these home workplaces were called *cottage industries*.



Woman spinning wool into yarn.

The factor combined the labor of the workers with his capital, or money, and natural resources, in this instance the wool, to produce a product. In this example, the final product was a human-made rug. The entrepreneur then sold the finished goods at the county fairs that regularly took place in England.

Water power and then steam power brought an end to cottage industries. The factor moved production from the cottages to a single building that had access to the power—water and steam. This building became known as a *factory*.

The *factor market* was created when the factor exchanged capital, or money, for the labor of the workers. A *product market* was created when the factor sold the finished products at the county fairs.

Today teenagers are part of the factor market when they sell their labor and receive a paycheck—for example when working at a fast-food restaurant or for a lawn-care service. Teenagers are part of the product market when they buy goods and services from manufacturers—for example, when they spend part of their paycheck on that CD they've had their eye on.

Practice

Answer the following using complete sentences.

1. What is the basic principle in economics? _____

2. What two kinds of *markets* exist on the national level? _____

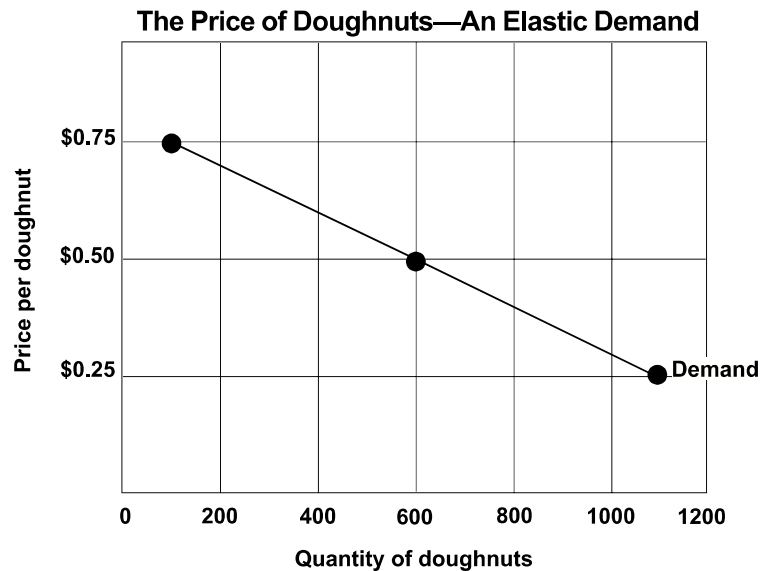
3. What is the *difference* between these two markets? _____

4. What is an *entrepreneur*? _____

5. What is *specialization of labor*? _____

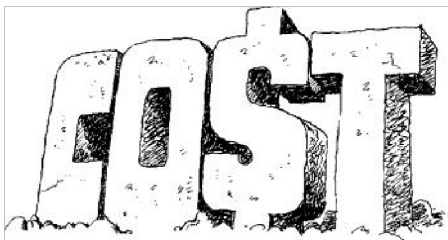
Types of Demand: Elastic and Inelastic

Producers try to supply goods and services to meet the demands made by consumers. If producers lower or raise the price of a good and consumers respond by increasing or decreasing their **quantity demand** (amount of goods or services that consumers are willing to buy at a particular price) for that good, then the demand is called *elastic*.



The graph on this page illustrates **elastic demand**. The graph shows that as the price of doughnuts goes down from a price of 75 cents each to 25 cents each, consumers quantity demand more doughnuts. This is called an *elastic demand* because quantity demand for the product changes as the price of the product changes.

The more substitutes there are for a product, the more elastic the demand for that product will be. Note on the graph that as the price of that

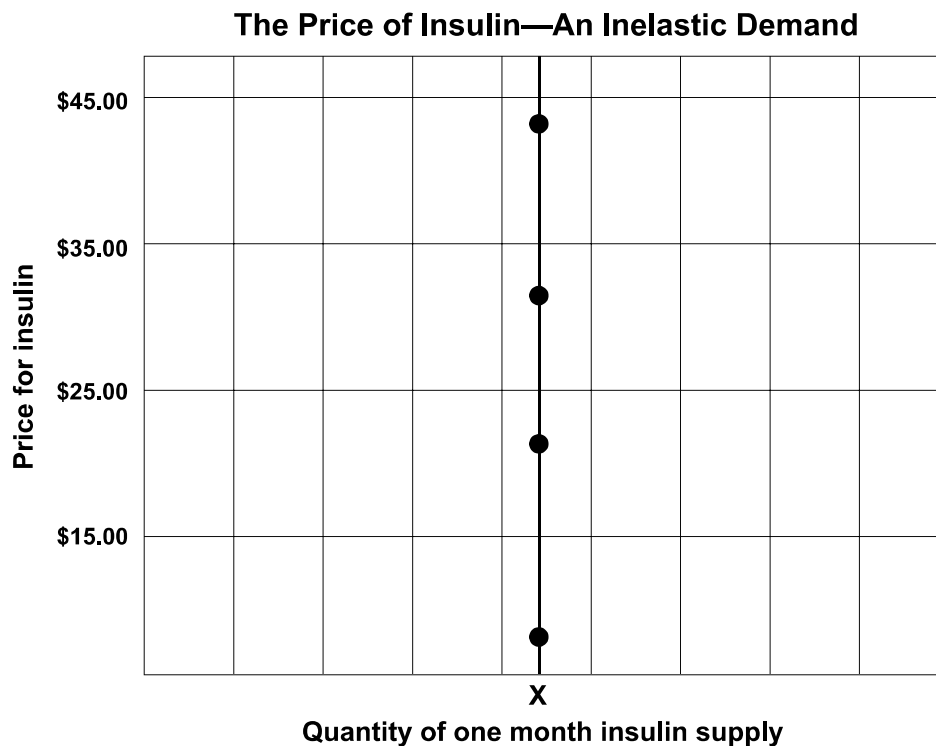


doughnut went up, consumers probably began satisfying their sweet tooth with substitutes such as cookies. If any product is too high-priced, consumers will choose substitutes instead—if they are available.

The other type of demand is called *inelastic*. **Inelastic demand** means that regardless of whether the price of a good is raised or lowered, consumers' quantity demand for that good will *not* increase or decrease. For example, the quantity demand for the medicine insulin, which is used by people who have the disease diabetes, is inelastic. Regardless of price, diabetics have to have insulin, for which there is no available substitute.

Lowering the price for insulin will not affect the demand. Insulin must be kept refrigerated and can only be stored safely for about 30 days. Consequently, diabetics will not order more of the drug because they cannot store insulin for more than a few weeks. In the same way, a rise in the price will not reduce sales because insulin is a necessity to maintain the life of some diabetics. There is no good substitute for insulin. As this example illustrates, one key to determining whether a demand is elastic or inelastic is the availability of a substitute.

The graph on this page shows an inelastic demand for insulin.



In this example, a change in the price of the good had no effect on the demand for the good. That is what is meant by *inelastic demand*. Not all goods have as many substitutes as doughnuts or as few as insulin. But if you understand the basic principle that many substitutes for a good make the quantity demand for that good *elastic*, and a lack of substitutes for a good makes the quantity demand for that good *inelastic*, you will have mastered this lesson.

Goods: The Products We Buy; Services: Trading Money for Time and Labor

Some companies provide both *goods* and *services* for consumers. Other companies provide either *goods* or *services*. If a company provides a product that you can eat, drink, wear, smell, touch, feel, take home to look at, read, etc., it is providing a *good*. When you buy food at the grocery store, purchase clothing at a department store, or buy a pickup truck at an automobile dealership, you are buying a good.

Consumers also purchase many services. When you have clothes dry-cleaned, pay the price to see a movie, buy a ticket to Disney World, or put your coins into a video machine, you are buying a service.

Demand for both goods and services can be either elastic or inelastic. For example, going to a movie represents an elastic demand for a service. Depending upon the price of a movie, you will make your decision to go to the movies or substitute some other form of



entertainment for the movie. Using the *services* of a hospital emergency room after you have had an accident would be an example of an *inelastic* demand for a service. There's no way to substitute for the medical treatment you would receive at a hospital.

The Law of Supply and Demand: The Forces That Balance the Market

The price of goods and services is determined by the give and take between buyers and sellers. Buyers usually wish to get the best goods at the lowest price, and sellers usually wish to sell the most goods they can at the highest price. This interaction is described by the *law of supply and demand*.

The *law of supply and demand* is not a law written by the legislature. Instead, it is an economic theory. The theory states the following: Consumers will increase their quantity demand for a product as the price decreases and will decrease quantity demand as the price increases. Producers will increase their quantity supply as the price increases and will decrease quantity demand as the price decreases. Stated another way, as the price for a product increases, the quantity demand for the product will decrease. And as the quantity demand for a product increases, producers will increase its price.

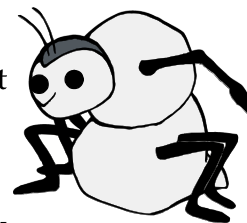
The following case study illustrates the law of supply and demand through the story of Ralph the Ant and his widget business.

Case Study: Supply and Demand

Ralph and the Widget Business—A Fable about Supply and Demand

Definition: A *widget* is a fictional product used as an example by economics teachers to explain some basic principles. Widgets have been used for this purpose for such a long time that some people have gone so far as to produce things they call widgets. Forget it! Widgets do not exist. They are just an imaginary product we use in examples about buying and selling.

Once upon a time, my pet ant Ralph and I were talking about old times. Ralph was reminiscing about the time he went into the widget business.



After a careful survey of the market, Ralph had discovered that while everyone needed widgets, only a few companies were manufacturing them. Ralph, being a smart ant, realized that a **profit** could be made by going into the widget business.



Ralph began to supply widgets to consumers at a price of \$3.00. During the first month demand was so high Ralph sold 1,000,000 of the handy little things. Now I want to tell you, Ralph was one happy ant. I still remember the day he

knocked at the bottom of the door to invite me downstairs into the basement to look at all the money he had earned.

The next month Ralph raised the price to \$5.00. Sales dropped to 500,000 widgets. Ralph was so upset that my invitation to come up for pizza was met with a shrug of his shoulders and a faintly heard, “Buzz off, Human.”



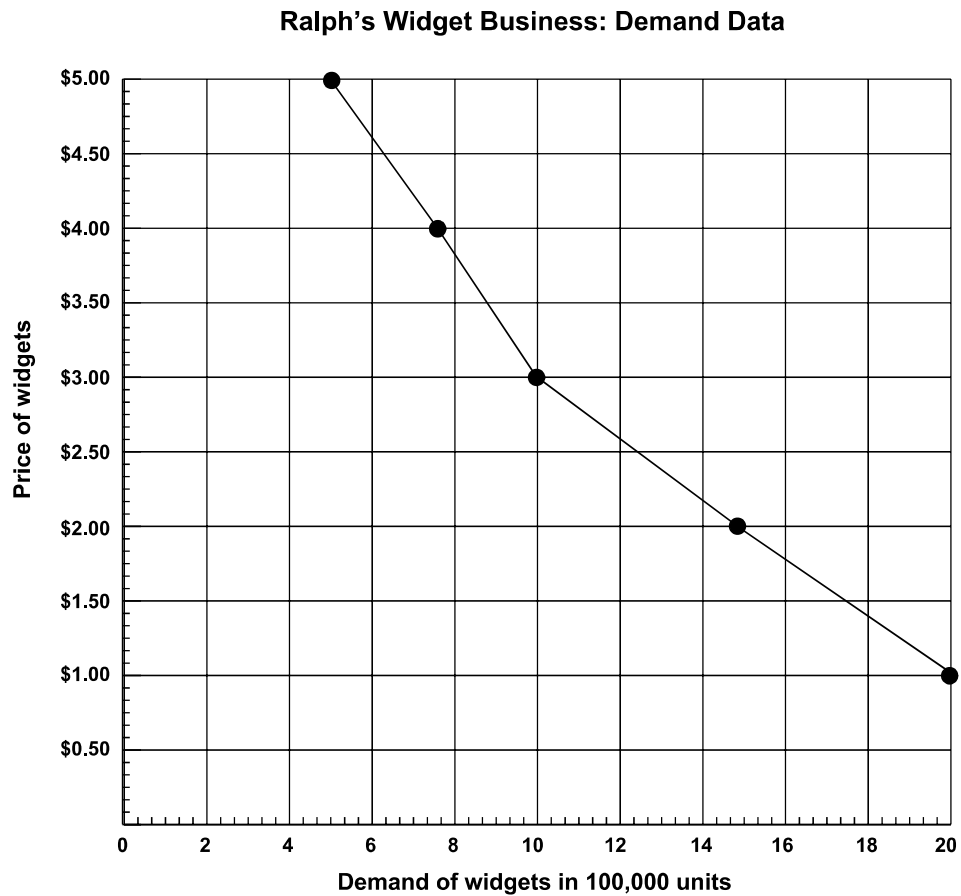
“Why not lower the price and see what happens?” I suggested to him.

Ralph lowered the price to \$1.00, and in the next month, widget sales jumped to 2,000,000. In his enthusiasm to rip off some humans, and since the widgets were selling again, Ralph raised the price to \$4.00. He was astounded to see widget sales drop to 750,000. Quickly Ralph dropped the price to \$2.00, and widget sales soared to 1,500,000. I have put Ralph’s numbers into a chart. It’s one way to represent Ralph’s widget sales.

Ralph’s Widget Sales

	January	February	March	April	May
\$5.00		500,000			
\$4.00				750,000	
\$3.00	1,000,000				
\$2.00					1,500,000
\$1.00			2,000,000		

Another way to represent Ralph's widget sales is by graphing the data. The *demand data* graph below shows how *demand* for widgets changed as Ralph's *price* changed.



Fair Market Price: How Markets Are Created

Ralph was creating widgets for consumers who wanted to buy his products. However, Ralph had to concern himself with turning out a good product at a competitive price. Economists use particular terms to describe the relationship between manufacturers like Ralph who produce products and consumers who buy those products.

When the supply line and the demand line intersect on a graph, producers and consumers come together in a *market*. The price where the two lines intersect is called the *fair market price*. The key words are *market price*. *Market price* refers to the price at which the consumer is willing to buy the product and the producer is willing to supply the product.

Other names for *fair market price* are often used in economic textbooks. One of those names is *competitive market price*. *Competitive market price* is used when emphasizing competition between the buyer and the seller. The buyer (consumer) is trying to buy the good at the lowest price he can; the seller (supplier or producer) is trying to sell the product at the highest price she can. Therefore, it is by competition between buyer and seller that a competitive market price is reached.

Still another name for this point is called the *market clearing price*. This name is used because producers have found that they can sell, or *clear*, most of the goods at this price. We say, therefore, that the market clearing price is one at which the producer will not be left with unsold goods.

Fair market price, *competitive market price*, and *market clearing price* are therefore just different names for the point at which the supply and demand lines *intersect* on a graph. Economists have found out another interesting fact about this intersection point: It is also the point of highest profit for the producer. One seller's search for the fair market price is illustrated below.



What if the fair market price for gasoline was \$1.57 a gallon for regular, unleaded gas at most gas stations? If a station went up to \$1.60 cents a gallon, would it lose so many customers that it would make less profit than it made at \$1.57? If the gas station indeed made more money at \$1.60 than at \$1.57, it seems only logical that it would raise its prices. If the consumer was willing to pay

the higher price of \$1.20, then that would be the fair market price. But if the profit went down when the price went to \$1.20, then the gas station would lower the price again to \$1.17. In other words, the producer is going to adjust his price to make the highest profit. That point of highest profit is the place where the most consumers are willing to buy his product, and he is willing to sell. That point is the fair market price.

Profit: The Fuel That Drives the System

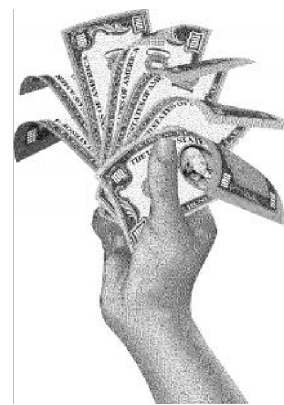
What is *profit*? In general, *profit* is the difference between money received (revenue) and money spent (expenses). If there is not sufficient revenue to pay its expenses, a company will lose money. Most companies cannot lose money for a long period of time without going out of business.

Profit can be defined as the money remaining after a company has paid all of its costs. A company uses this definition to figure out what it should charge its customers for the goods it manufactures. The company calculates the costs of the materials, labor, and the interest it must pay to borrow money with which to buy resources. After making the best guess it can on what all of the costs will be to manufacture the goods, the company can then calculate how much money it should charge the customers in order to earn a profit.

Profit is also further explained as either *gross* total profit or *net* profit. One of the costs a company has is payment of taxes. The amount of money a company earns before paying taxes is called *gross profit*. The money a company earns after paying all costs, including taxes, is called *net profit*.

The company must risk its money when it make *goods*. If people do not like the *goods* a company makes, the company will not make a profit. If the public really likes the *goods*, a large profit can be made. Some companies take a high risk by producing goods or services that the public may not find desirable.

For example, companies that are in the fashion business take a big risk every time they show retail store buyers their new clothes. What if the buyers don't like a company's new fashions? That company may lose money or even go out of business. If the



consumers like what the company makes, the company will most likely earn a profit. This creates the second definition for *profit*: A *profit* is the reward a company earns for taking risks.

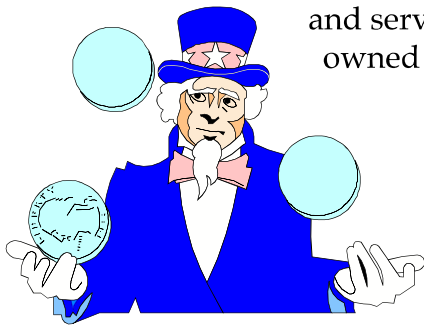
The bigger the risk, the more a company will want to earn in profits. A grocery store, which takes few risks, may earn a profit of one percent on total sales. A manufacturer of experimental medicines is taking a big risk and may demand a profit of 200 percent or 300 percent on the cost of making the medicine.

Public (Shared) Goods vs. Private (Personal) Goods

All citizens in our society share or have access to certain things. We all have use of the public parks, public schools, libraries, museums, and even the streets. The types of things available to everyone but managed by government are called **public goods**. Public goods must be paid for and maintained by **tax revenue**. Many goods and services purchased by citizens such as electrical power, water, and bus transportation are also examples of public goods.

Private goods are those things that citizens own for themselves. Homes, cars, and personal belongings are examples of private goods.

Sometimes it is difficult to find the dividing line between what is considered a public good and what is considered a private good. When a private company provides goods or services that are essential for the welfare and safety of the public, do we call it a public or private good? Hospitals, TV stations, and bottled-gas companies are often regulated by the government because they provide essential goods and services. So these products may be privately owned but publicly managed.



In general, private goods are bought by individuals and belong to them; public goods are paid for by tax revenue, are shared by the public, and managed by government.