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NEWSLETTER

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Prices: The Marketplace's Communication System

Erin A. Yetter, *Economic Education Specialist*

"You should leave your Grox home
when you travel by air.
If you take him along,
they charge double fare."
—Dr. Seuss[1]

In the past, airlines did not charge customers to check their bags; the cost of checking baggage was already included in the price of the airline ticket. However, this is no longer the case for most of the largest U.S. airlines. Fees for checked bags range from $20 to $25 for the first bag, $20 to $40 for the second bag, and $20 to $125 for each bag thereafter.[2] What do you think happened to the number of checked bags when this change occurred? And what happened to the availability of in-cabin overhead and underseat storage space? Answering these questions requires an understanding of the pivotal role price plays in a market economy.

The Dual Role of Prices

Prices serve two main purposes in a market economy. First, they send signals. A **signal** is a way to reveal credible information to another party. Prices send signals to buyers and sellers about the relative scarcity of a good or service. In the case of the airlines, when they started to charge fees for checked bags, they were signaling buyers to check fewer bags. Second, prices provide incentives to buyers and sellers. Generally, an **incentive** is anything that motivates action; an incentive can be either positive or negative. The airlines introduced a negative incentive when they implemented checked bagged fees to reduce the number of checked bags on their flights.

How Prices Are Determined

Interaction between buyers and sellers determines prices in market economies through the invisible forces of supply and demand.[3] When a market is in equilibrium, the quantity that buyers are willing and able to buy (demand) is equal to the quantity that sellers are willing and able to produce (supply). The price at which supply equals demand at any moment is known as the market-clearing or **equilibrium price**. At this price, sellers have sold all they want to sell and buyers have purchased all they want to buy.

To understand how and why prices adjust to the equilibrium price, let's consider when the market price is not in equilibrium. When the market price exceeds the equilibrium price, the quantity supplied of a good will exceed the quantity demanded of a good. That is, there will be a **surplus**. In this case, sellers must decrease their prices to get rid of their excess supply. Buyers will respond to this decrease in price by buying more of the good until the excess supply is gone and the market is back to equilibrium.

Conversely, when the price of a good is too low, a **shortage** will occur. That is, the quantity demanded of a good will be greater than the quantity supplied. In this case, more buyers will be willing and able to buy the good at the low price than there will be sellers willing and able to supply it. Sellers will view the shortage as a signal that they can raise prices; buyers will then demand less of the good or buy another, similar good instead.

A good example of buyers demanding less of a good is the reduced number of checked bags on airlines. More passengers are now choosing to carry on their baggage to avoid paying checked baggage fees. But the subsequent increase in carry-on baggage has caused a shortage of overhead and underseat storage space on flights. In response to this shortage, some airlines now charge fees for carry-on baggage as well. Buyers who check baggage will respond by packing fewer bags overall or by switching to an airline with no baggage fees. They will continue to do so until the excess demand for the overhead and underseat storage space on flights is alleviated and the market is back to equilibrium.

Government Intervention

As discussed previously, the laws of supply and demand determine prices, at least insofar as government rules permit them to do so. Governments sometimes intervene to control prices for a variety of reasons. For example, the government may control prices for political reasons or in an attempt to ensure equitable distribution of resources. The two major types of government price controls are price ceilings and price floors.

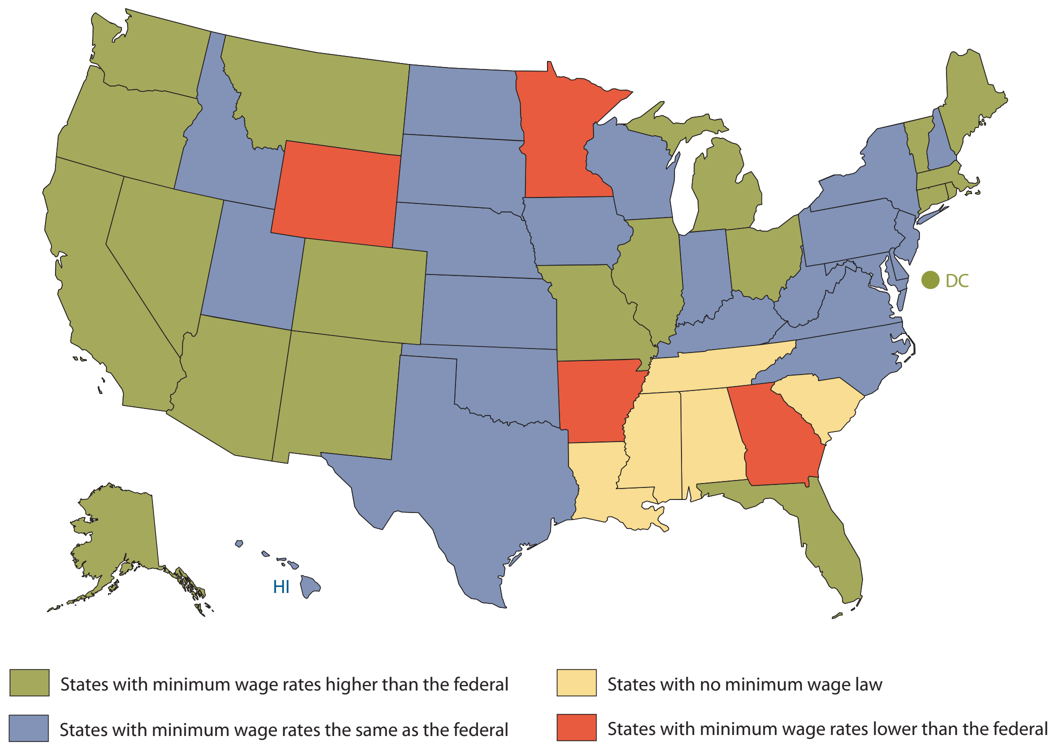
A **price ceiling** is a government-mandated maximum price that can be charged for a good or service. A price ceiling holds if the equilibrium price exceeds the price ceiling and there is a shortage of the good. Rent control is an example of a price ceiling specific to the housing market. From our previous discussion of supply and demand, we know rent control will result in a shortage of apartments, because at the lower price the quantity of housing demanded by renters will exceed the quantity supplied by landlords.

The second type of price control is a **price floor**, which is a government-mandated minimum price that must be paid for a good or service. The minimum wage is a well-known example of a price floor in the labor market. The minimum wage is the minimum price an employer can pay a worker for one hour of labor. The federal government sets a national minimum wage, but individual states can also set their state minimum wages at different levels; however, the higher rate prevails (see the chart).[4] When the market price for labor is set above the equilibrium price for labor, as is often the case with minimum wage, a surplus will ensue. There will be more people willing to work at the minimum wage than there are employers willing to hire them.

Conclusion

Prices are determined in response to the forces of supply and demand. Governments sometimes intervene to control prices for a variety of reasons. Regardless of whether prices are too high or too low, the interaction between buyers and sellers in the market, through a series of invisible connections, pushes the market price toward the equilibrium price. In equilibrium, no desired trades go unmade. That is, all buyer and seller pairs can trade if they want to, so there is no incentive for prices to change. ■

Minimum Wage Laws in the United States (January 1, 2013)



NOTE: Where federal and state laws have different minimum wage rates, the higher rate applies. The federal minimum wage for covered nonexempt employees is currently $7.25 per hour.

SOURCE: U.S. Department of Labor, Wage and Hour Division (http://www.dol.gov/whd/minwage/america.htm).

NOTES

[1] Dr. Seuss. *Oh Say Can You Say?* New York: Random House, 1979, p. 10. Special thanks to Ben Miller and Michael Watts for inspiring this discussion in their paper "Oh, the Economics You Will Find in Dr. Seuss!" *Journal of Economic Education*, 2011, *42*(2), pp. 147-67.

[2] See the airfarewatchdog website (http://www.airfarewatchdog.com). Prices referenced are accurate as of February 2013.

[3] For more information on the forces of supply and demand, access the St. Louis Fed's Economic Lowdown Podcast Series for supply (http://www.stlouisfed.org/education_resources/economic-lowdown-podcast-series/supply/) and demand (http://www.stlouisfed.org/education_resources/economic-lowdown-podcast-series/demand/).

[4] The higher wage rate prevails for businesses whose employees engage in interstate commerce, produce goods for interstate commerce, or handle, sell, or work on goods or materials that have been moved in or produced for interstate commerce only. See the Department of Labor's "Wages and Hours Worked: Minimum Wage and Overtime Pay" (http://www.dol.gov/compliance/guide/minwage.htm).

GLOSSARY

Equilibrium price: The price at which quantity demanded and quantity supplied are equal.

Incentive: Anything that motivates action; an incentive can be positive or negative.

Price ceiling: A government-mandated maximum price that can be charged for a good or service.

Price floor: A government-mandated minimum price that must be paid for a good or service.

Shortage: When the quantity demanded of a good or service exceeds the quantity supplied.

Signal: A way to reveal credible information to another party.

Surplus: When the quantity supplied of a good or service exceeds the quantity demanded.

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