4.3: Price Ceilings

Learning Objectives

- Analyze the consequences of the government setting a binding price ceiling, including the economic impact on price, quantity demanded and quantity supplied
- Compute and demonstrate the market shortage resulting from a price ceiling

Supply and Demand Model

Economists believe there are a small number of fundamental principles that explain how economic agents respond in different situations. Two of these principles, which we have already introduced, are the laws of supply and demand. Governments can pass laws affecting market outcomes, but no law can negate these economic principles. Rather, the laws of supply and demand often become apparent in sometimes unexpected ways, which may undermine the intent of the government policy. This is one of the major conclusions of this section.

Controversy sometimes surrounds the prices and quantities established by supply and demand, especially for products that are considered necessities. In some cases, discontent over prices turns into public pressure on politicians, who may then pass legislation to prevent a certain price from climbing "too high" or falling "too low."

Watch It

Watch this video to see a historical example of what happened to the U.S. economy because of government-enacted price controls in the 1970s.

A link to an interactive elements can be found at the bottom of this page.

The supply and demand model shows how people and firms will react to the incentives that laws provide to control prices, in ways that will often lead to undesirable consequences. Alternative policy tools can often achieve the desired goals of price control laws, while avoiding at least some of their same costs and tradeoffs.

Price Ceilings

Laws that government enacts to regulate prices are called *Price Controls*. Price controls come in two flavors. A **price ceiling** keeps a price from rising above a certain level (the "ceiling"), while a **price floor** keeps a price from falling below a certain level (the "floor"). First, let's use the supply and demand framework to analyze price ceilings.

A price ceiling is a legal maximum price that one pays for some good or service. A government imposes price ceilings in order to keep the price of some necessary good or service affordable. For example, in 2005 during Hurricane Katrina, the price of bottled water increased above $5 per gallon. As a result, many people called for price controls on bottled water to prevent the price from rising so high. In this particular case, the government did not impose a price ceiling, but there are other examples of where price ceilings did occur.

In many markets for goods and services, demanders outnumber suppliers. Consumers, who are also potential voters, sometimes unite behind a political proposal to hold down a certain price. In some cities, such as Albany, renters have pressed political leaders to pass rent control laws, a price ceiling that usually works by stating that rents can be raised by only a certain maximum percentage each year. Some of the best examples of rent controls occur in urban areas, such as New York, Washington D.C., or San Francisco.

Rent control becomes a politically hot topic when rents begin to rise rapidly. Everyone needs an affordable place to live. Perhaps a change in tastes makes a certain suburb or town a more popular place to live. Perhaps locally-based businesses expand, bringing higher incomes and more people into the area. Changes of this sort can cause a change in the demand for rental housing. The interactive graph below (Figure 1) explains how this happens.

A link to an interactive elements can be found at the bottom of this page.

Figure 1 (Interactive Graph). A Price Ceiling Example—Rent Control.

The following table shows the changes in quantity supplied and quantity demanded at each price for the above graphs.

Table 1. Rent Control			
Price	Original Quantity Supplied	Original Quantity Demanded	New Quantity Demanded
$400	12,000	18,000	23,000
$500	15,000	15,000	19,000
$600	17,000	13,000	17,000
$700	19,000	11,000	15,000
$800	20,000	10,000	14,000

In the graphs above, we saw what happens when a rent control law is passed to keep the price at the original equilibrium of $500 for a typical apartment. The horizontal line at the price of $500 shows the legally fixed maximum price set by the rent control law. However, the underlying forces that shifted the demand curve to the right are still there. At that price ($500), the quantity supplied remains at the same 15,000 rental units, but the quantity demanded is 19,000 rental units. In other words, the quantity demanded exceeds the quantity supplied, so there is a shortage of rental housing. One of the ironies of price ceilings is that while the price ceiling was intended to help renters, there are actually fewer apartments rented out under the price ceiling (15,000 rental units) than would be the case at the market rent of $600 (17,000 rental units). When a price ceiling is set below the equilibrium price, as in this example, it is considered a **binding price ceiling**, thereby resulting in a shortage.

Price ceilings do not simply benefit renters at the expense of landlords. Rather, some renters (or potential renters) lose their housing as landlords convert apartments to co-ops and condos. Even when the housing remains in the rental market, landlords tend to spend less on maintenance and on essentials like heating, cooling, hot water, and lighting. The first rule of economics is you do not get something for nothing—everything has an opportunity cost. So if renters get "cheaper" housing than the market requires, they tend to also end up with lower quality housing.

Price ceilings have been proposed for other products, for example, for prescription drugs, doctor and hospital fees, the charges made by some automatic teller bank machines, and auto insurance rates. The general results of any price ceiling are the same: price ceilings are enacted in an attempt to keep prices low for those who need the product. But when the market price is not allowed to rise to the equilibrium level, quantity demanded exceeds quantity supplied, and thus a shortage occurs. Those who manage to purchase the product at the lower price given by the price ceiling will benefit, but sellers of the product will suffer, along with those who are not able to purchase the product at all. To the extent that producers cannot easily reduce the quantity supplied, they will tend to allow the quality to decline.

Try It

https://assessments.lumenlearning.co...sessments/6973

https://assessments.lumenlearning.co...sessments/6975

Watch It

The following video explores the effects of price ceilings. The speakers identify five major consequences:

1. Shortages
2. Reduced quality
3. Wasted time and resources
4. Deadweight loss, or a loss of gains from trade
5. Misallocation of resources

The first two consequences are explained in the video. We'll address the others later in the module in the discussion of efficiency.

A link to an interactive elements can be found at the bottom of this page.

Glossary

[glossary-term]binding price ceiling[/glossary-term][glossary-definition]when a price ceiling is set below the equilibrium price, resulting in a shortage[/glossary-definition][glossary-term]price ceiling: [/glossary-term][glossary-definition]a legal maximum price for a product [/glossary-definition][glossary-term]price floor: [/glossary-term][glossary-definition]a legal minimum price for a product[/glossary-definition]

Contributors and Attributions