

Chapter 6

Supply, Demand, and Government Policies

Review Questions

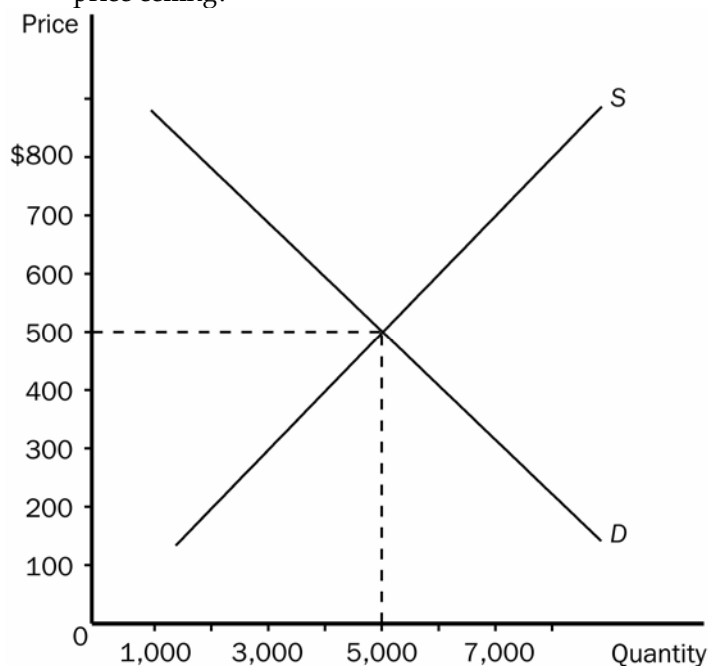
Using supply-demand diagrams, show the difference between a non-binding price ceiling and a binding price ceiling in the wheat market.

ANSWER: The diagrams should look like panels (a) and (b) of Figure 6-1 in the text.

Who benefits from a binding price ceiling? Who is hurt by a binding price ceiling?

ANSWER: The buyers of the good or service subject to a price ceiling benefit from the ceiling, if they are still able to purchase the product. Sellers of a good or service subject to a price ceiling are hurt by the ceiling, as are the workers who produce the product, and those buyers unable to purchase the product because of the shortage caused by the price ceiling. In the long run, even successful buyers of the product may be hurt by the price ceiling because of deterioration in the quality of the product, as often occurs under rent control.

Using the graph shown, analyze the effect a \$300 price ceiling would have on the market for ten-speed bicycles. Would this be a binding price ceiling? Why would policymakers choose to impose a price ceiling?



ANSWER: For this example, a \$300 price ceiling would cause a shortage of 4,000 bicycles. Since the equilibrium price in the market is \$500, this would be a binding price ceiling. More than one reason may exist for policymakers to impose a price ceiling in a market. Often this is done in an attempt to increase equity.

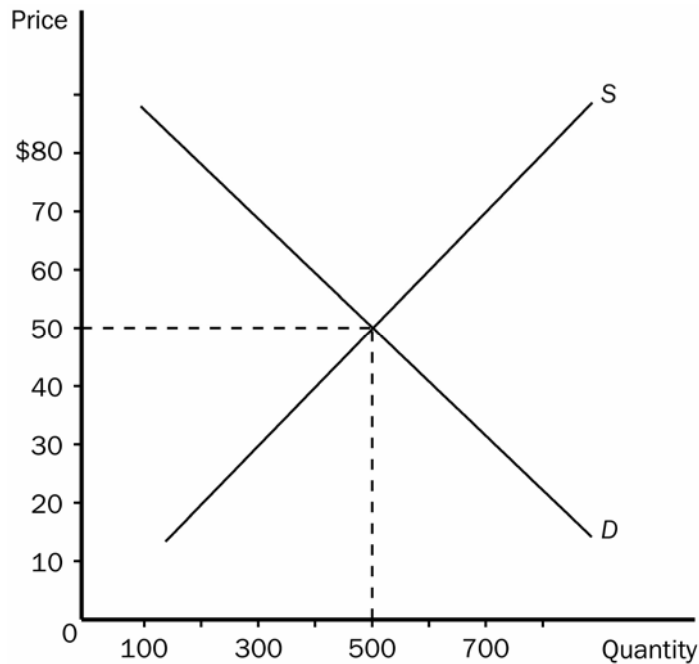
If prices are prevented from rationing a product because of a binding price ceiling, how is the scarce product rationed among potential buyers?

ANSWER: Mechanisms for rationing a product subject to a binding price ceiling include rationing through long lines and rationing by discrimination according to race, age, sex, family circumstances, etc. As an alternative to informal rationing mechanisms, government may enforce a formal rationing system of some sort.

What is the goal of rent control, and what do economists think of rent control as a mechanism for achieving the goal?

ANSWER: The goal of rent control is to help the poor by making housing more affordable. Economists often criticize rent control as a highly inefficient way of helping the poor raise their standard of living.

Using the graph shown, analyze the effect a \$70 price floor would have on the market for tennis shoes. Would this be a binding price floor? Why would policymakers choose to impose a price floor?



ANSWER: For this example, a \$70 price floor would cause a surplus of 400 pairs of tennis shoes. Since the equilibrium price in the market is \$50, this would be a binding price floor. More than one reason may exist for policymakers to impose a price floor in a market. Often times this is done in an attempt to increase equity.

How do the effects of rent control differ in the short run and the long run?

ANSWER: In the short run, the primary effect of rent control is to reduce rents. Shortages created are small. In the long run, rent control creates greater housing shortages, reduces the supply of housing, and also reduces the quality of housing.

Who benefits from a binding price floor? Who is hurt by a binding price floor?

ANSWER: A binding price floor benefits the sellers of the good or service who are still able to sell their product at the higher price. A binding price floor hurts the buyers of the good or service, and those sellers who are no longer able to sell their product at the higher price because of the surplus created by the price floor.

Why are economists nearly always opposed to price controls?

ANSWER: Economists oppose price controls because they obscure the price signals that normally guide the allocation of society's scarce resources. Also, price controls often hurt those very individuals they are designed to help.

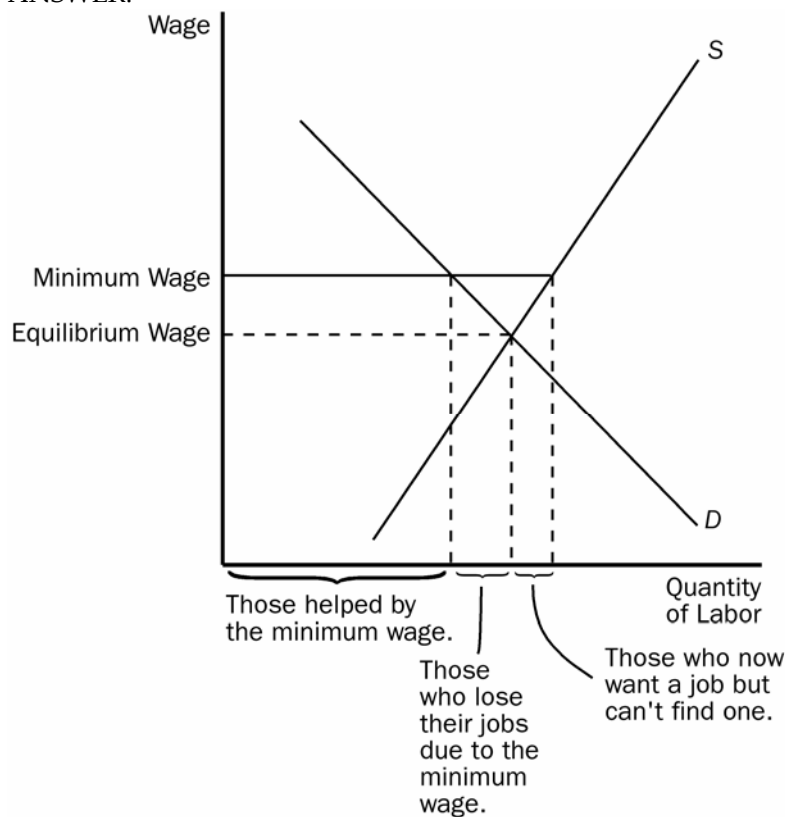
Mankiw: Principles of Economics

One economist called rent control "the best way to destroy a city, other than bombing." What do you think he meant by that?

ANSWER: While it is true that the major impact of rent control in the short run is to reduce rents, in the long run, rent control has many effects that help "destroy a city." Because buyers and sellers respond to incentives, buyers will supply less housing in the long run because of lower rents. Many existing apartment buildings will deteriorate, both because some landlords can no longer afford to maintain the apartments, and because there is excess demand for apartments in general. In some cases, landlords simply abandon apartment buildings because they cannot earn a profit operating them at the controlled rents. The shortage of apartments is made more severe in the long run as the demand for rental housing increases in response to the low rents. Hence, the number of homeless people in the city is likely to increase. Market power on the side of landlords may lead to discrimination and bribery. These conditions lead to further costly regulation and social programs.

Using a supply-demand diagram, show a labor market with a binding minimum wage. Now, use the diagram to show those who are helped by the minimum wage, and those who are hurt by the minimum wage.

ANSWER:

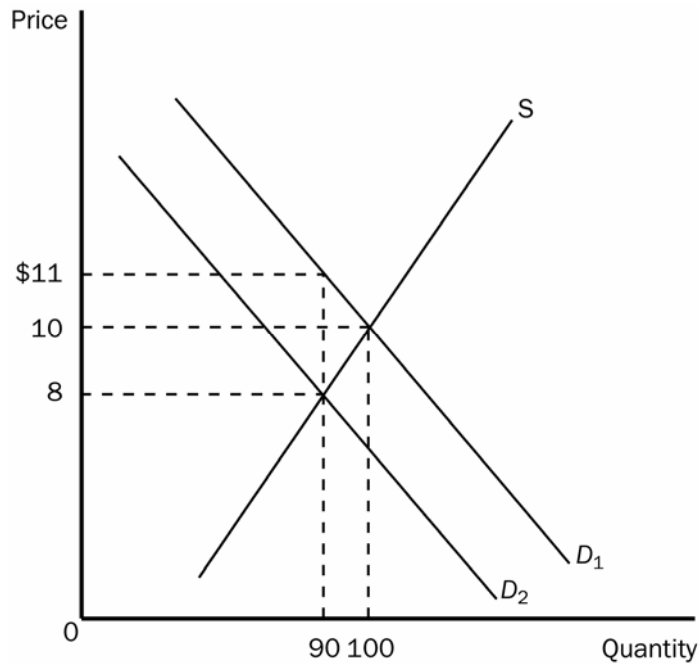


Those helped by the minimum wage are the workers who are still employed, but now receive the higher wage. In the diagram, those would be measured by the quantity of labor demanded at the minimum wage. Those who are hurt by the minimum wage are those who are now unemployed. These workers are measured as the difference between the quantity of labor supplied and the quantity demanded at the minimum wage. You might note that the unemployed group can be divided into those who lose their jobs as a result of the minimum wage (the competitive equilibrium quantity of labor minus the quantity demanded at the minimum wage), and those who enter the market as a result of the higher wage, but cannot find employment (quantity of labor supplied at the minimum wage minus the competitive equilibrium quantity). The buyers of the labor (employers) are also worse off because they have to pay a higher wage for labor, hence, hire a smaller quantity.

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To what does the term "tax incidence" refer?

ANSWER: Tax incidence refers to how the burden of a tax is shared by buyers and sellers.



Using the graph shown, answer the following questions.

- What was the equilibrium price in this market before the tax?
- What is the amount of the tax?
- How much of the tax will the buyers pay?
- How much of the tax will the sellers pay?
- How much will the buyer pay for the product after the tax is imposed?
- How much will the seller receive after the tax is imposed?
- As a result of the tax, what has happened to the level of market activity?

ANSWER: A. \$10

- \$3
- \$1
- \$2
- \$11
- \$8

G. As a result of the tax, the level of market activity has fallen, from 100 units being bought and sold to only 90 units being bought and sold.

How does a tax affect market activity? How does a tax affect the amount paid by buyers and the amount received by sellers as a result of a tax on a good?

ANSWER: A tax reduces market activity. When a good is taxed, the equilibrium quantity of the good sold is smaller than without the tax. When a tax is imposed, the amount paid by buyers for the taxed good increases, and the amount received by sellers falls.

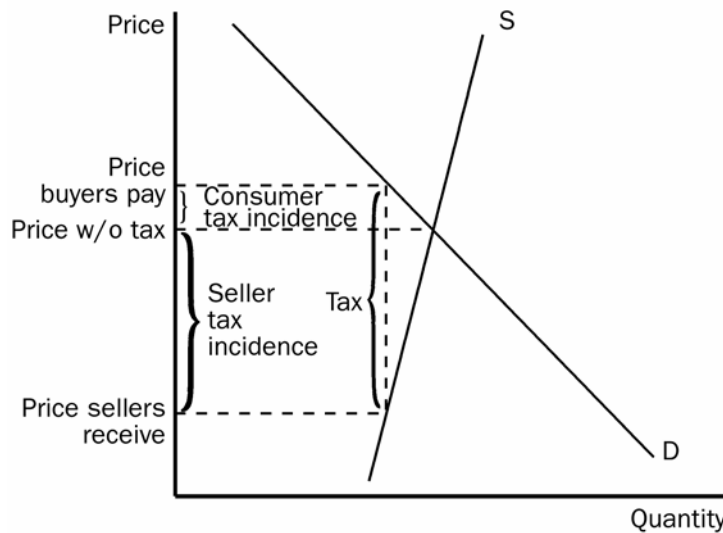
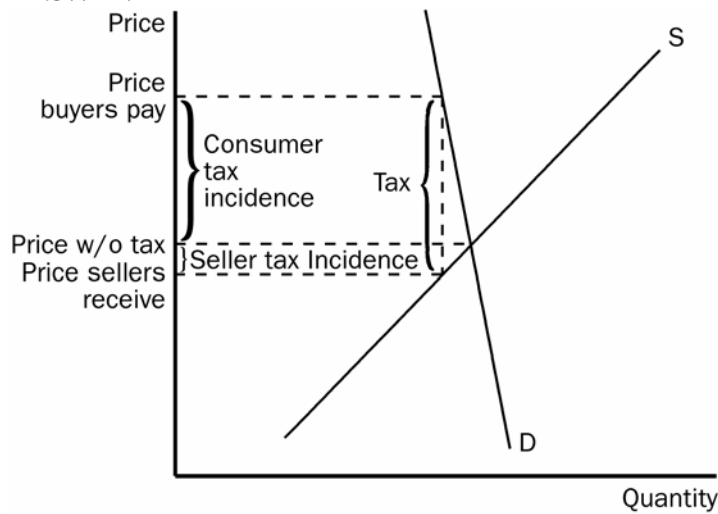
How does the legal tax liability affect the incidence of taxation?

ANSWER: The incidence of taxation is the same regardless of whether it is the buyer or the seller who has the legal responsibility of turning the tax over to the government, i.e., taxes on buyers and taxes on sellers are equivalent.

Mankiw: Principles of Economics

How does elasticity affect the burden of a tax? Justify your answer using supply-demand diagrams.

ANSWER:



A tax burden falls more heavily on the side of the market that is less elastic.

What are the advantages of rent subsidies and wage subsidies as alternatives to rent control and minimum wage laws? Are these alternatives costless to society?

ANSWER: Rent subsidies do not cause reductions in the quantity of housing supplied and, therefore, do not lead to housing shortages. Wage subsidies do not discourage firms from hiring workers and, therefore, do not lead to unemployment. These alternatives are not costless, however, since they require government expenditures, hence, taxes.

Why didn't the 1990 luxury tax which US Congress placed on buyers of yachts, private airplanes, furs, jewelry, expensive cars, and similar items succeed in raising revenue primarily from the rich?

ANSWER: Even though the items affected by the luxury tax are, indeed, bought primarily by the wealthiest taxpayers, the price elasticity of demand for luxury goods is high relative to the price elasticity of supply. Hence, when the tax was imposed on those goods, there was a significant reduction in quantity demanded and only a slight increase in equilibrium market price. The burden of the tax fell mostly on the suppliers, who suffered a substantial reduction in the price they received, and a substantial reduction in the quantity sold and in total revenue.