CHAPTER 6

Supply, Demand, and Government Policies

PRINCIPLES OF Economics

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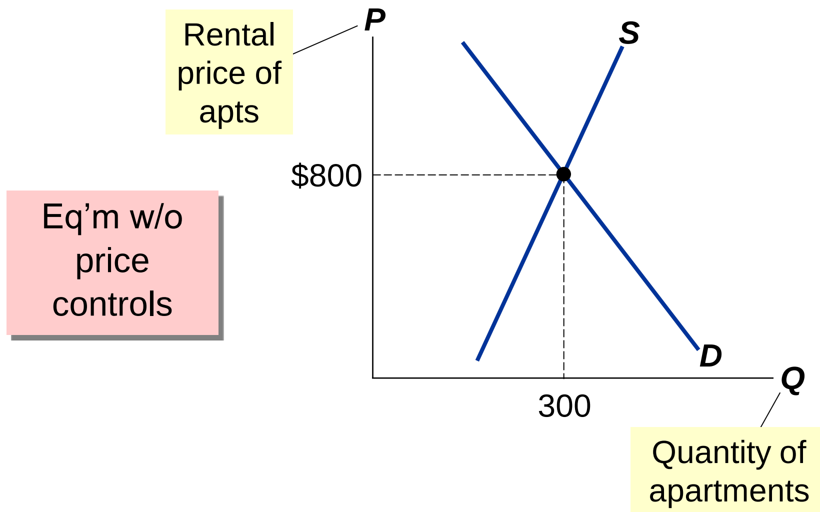
Government Policies That Alter the Private Market Outcome

- Price controls
  - ( ): a legal maximum on the price of a good or service *Example: rent control*
  - ( ): a legal minimum on the price of a good or service *Example: minimum wage*
- Taxes
  - The govt can make buyers or sellers pay a specific amount on each unit bought/sold.

We will use the supply/demand model to see how each policy affects the market outcome (the price buyers pay, the price sellers receive, and eq'm quantity).

EXAMPLE 1: The Market for Apartments

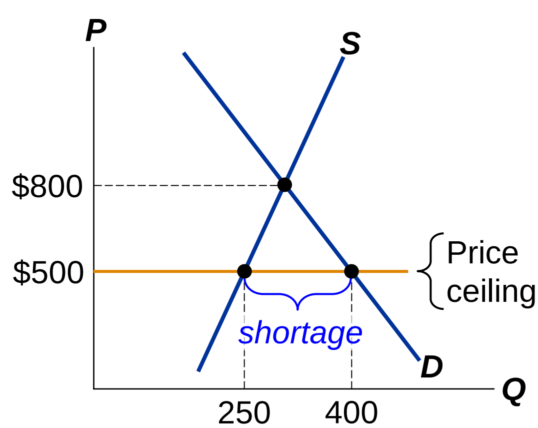


SUPPLY, DEMAND, AND GOVERNMENT POLICIES 2

How Price Ceilings Affect Market Outcomes

The eq'm price ($800) is above the ceiling and therefore illegal.

The ceiling is a **binding constraint** on the price, causes a shortage.

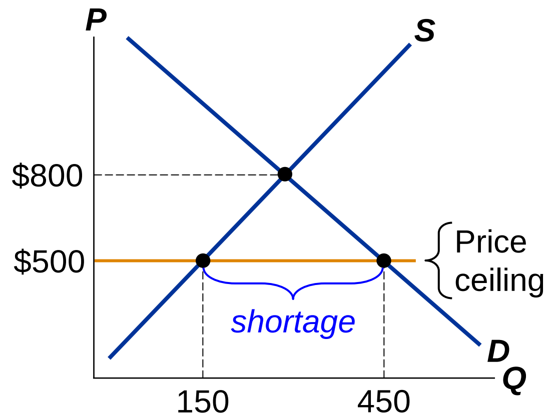


SUPPLY, DEMAND, AND GOVERNMENT POLICIES 3

How Price Ceilings Affect Market Outcomes

In the long run, supply and demand are more price-elastic.

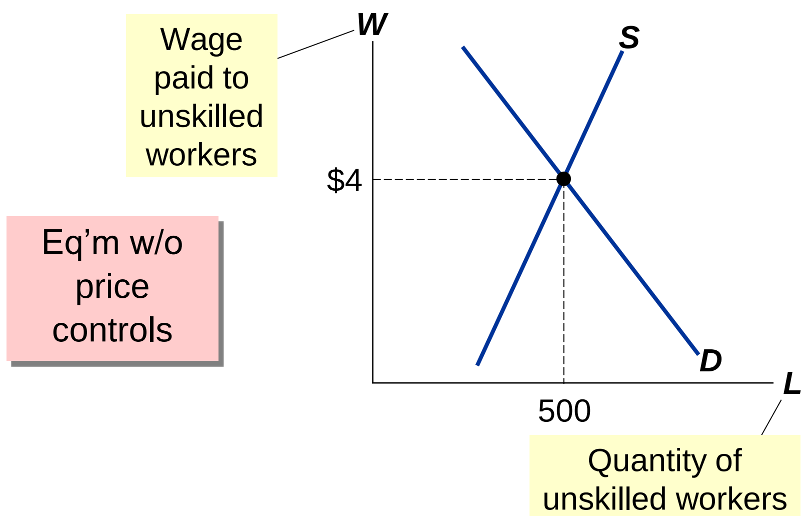
So, the shortage is larger.



Shortages and Rationing

- With a shortage, sellers must ration the goods among buyers.
- Some rationing mechanisms: (1) Long lines (2) Discrimination according to sellers' biases
- These mechanisms are often unfair, and inefficient: the goods do not necessarily go to the buyers who value them most highly.
- In contrast, when prices are not controlled, the rationing mechanism is efficient (the goods go to the buyers that value them most highly) and impersonal (and thus fair).

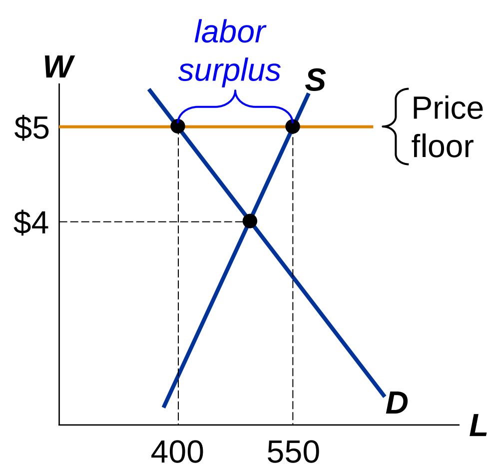
EXAMPLE 2: The Market for Unskilled Labor



How Price Floors Affect Market Outcomes

The eq'm wage ($4) is below the floor and therefore illegal.

The floor is a **binding constraint** on the wage, causes a surplus (*i.e.*, unemployment).

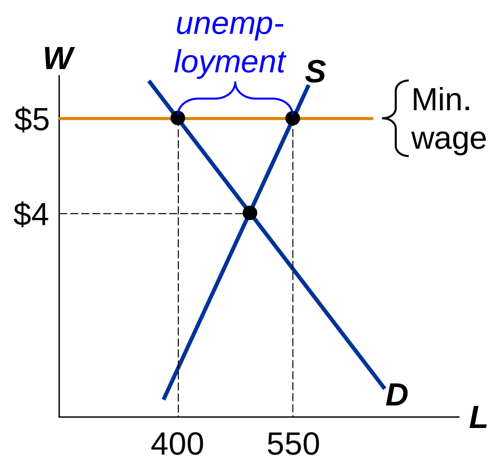


The Minimum Wage

Min wage laws do not affect highly skilled workers.

They do affect teen workers.

Studies:
A 10% increase in the min wage raises teen unemployment by 1-3%.



Evaluating Price Controls

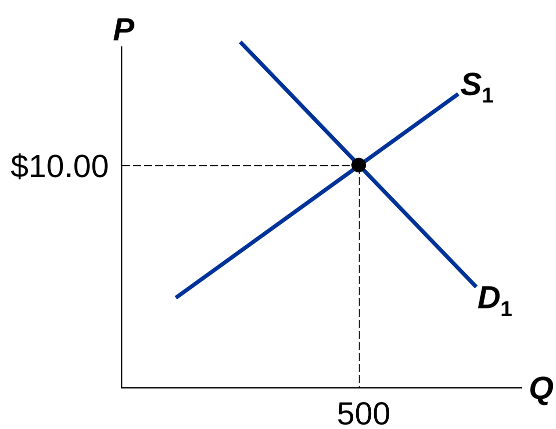
- Recall one of the Ten Principles from Chapter 1:
  Markets are usually a good way to organize economic activity.
- Prices are the signals that guide the allocation of society's resources. This allocation is altered when policymakers restrict prices.
- Price controls often intended to help the poor, but often hurt more than help.

Taxes

- The govt levies taxes on many goods & services to raise revenue to pay for national defense, public schools, etc.
- The govt can make buyers or sellers pay the tax.
- The tax can be a % of the good's price, or a specific amount for each unit sold.
  - For simplicity, we analyze per-unit taxes only.

EXAMPLE 3: The Market for Pizza

Eq'm
w/o tax



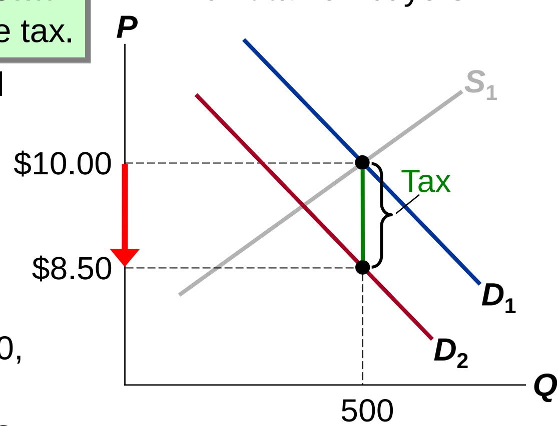
A Tax on Buyers

Hence, a tax on buyers shifts the ***D*** curve down by the amount of the tax.

P would have to fall by $1.50 to make buyers willing to buy same ***Q*** as before.

E.g., if ***P*** falls from $10.00 to $8.50, buyers still willing to purchase 500 pizzas.

Effects of a $1.50 per unit tax on buyers



A Tax on Buyers

<u>New eq'm:</u>

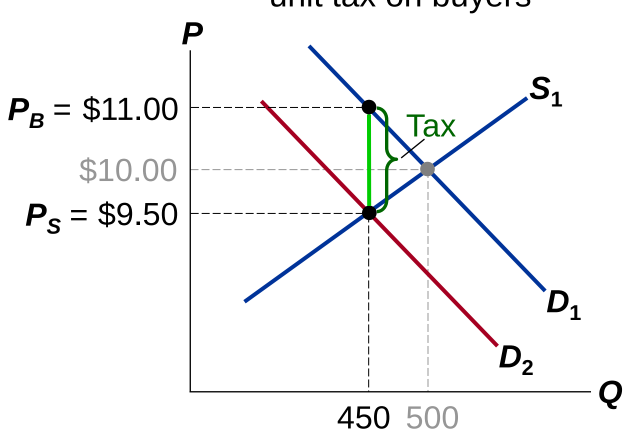
Q = 450

Sellers receive P_S = $9.50

Buyers pay P_B = $11.00

Difference between them = $1.50 = tax

Effects of a $1.50 per unit tax on buyers



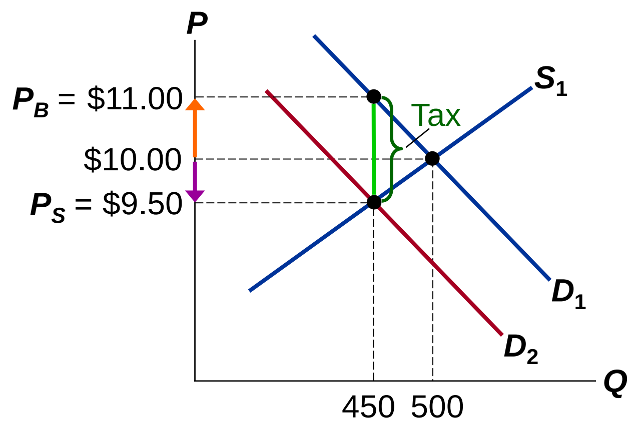
The **Incidence** of a Tax:

how the burden of a tax is shared among market participants

In our example,

buyers pay $1.00 more,

sellers get $0.50 less.

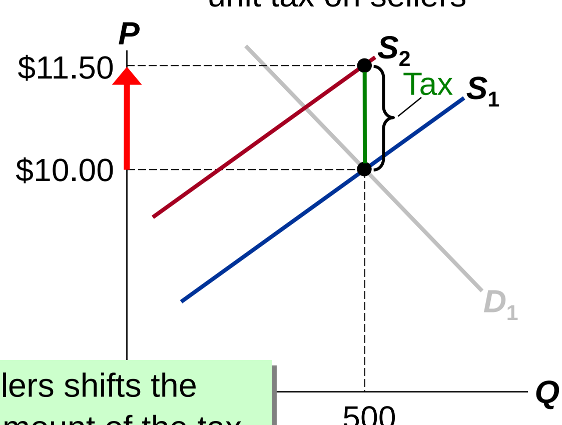


A Tax on Sellers

The tax effectively raises sellers' costs by $1.50 per pizza.

Sellers will supply 500 pizzas only if ***P*** rises to $11.50, to compensate for this cost increase.

Effects of a $1.50 per unit tax on sellers



Hence, a tax on sellers shifts the ***S*** curve up by the amount of the tax.

A Tax on Sellers

New eq'm:

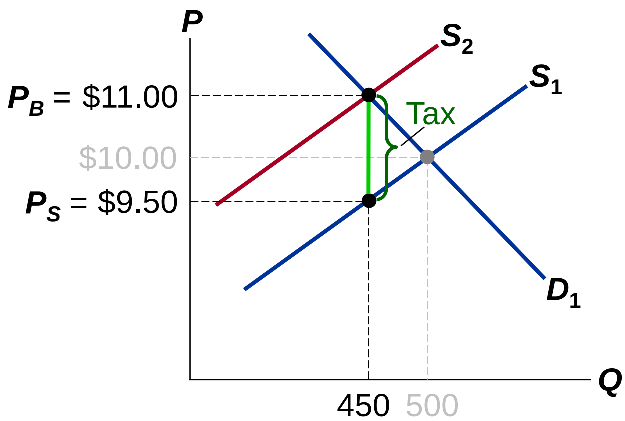
Q = 450

Buyers pay
P_B = \$11.00

Sellers receive
P_S = \$9.50

Difference between them
= \$1.50 = tax

Effects of a \$1.50 per unit tax on sellers

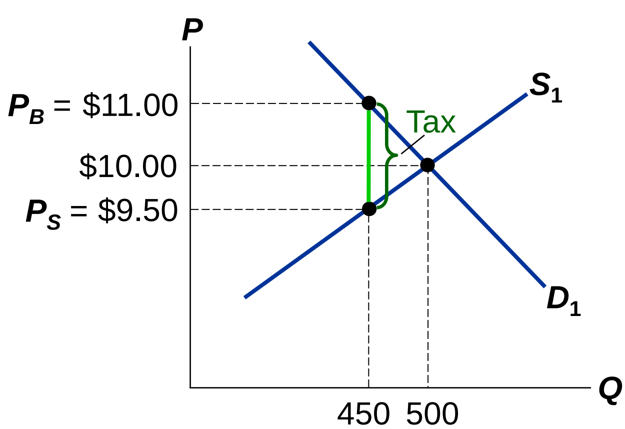


The Outcome Is the Same in Both Cases!

The effects on ***P*** and ***Q***, and the tax incidence are the same whether the tax is imposed on buyers or sellers!

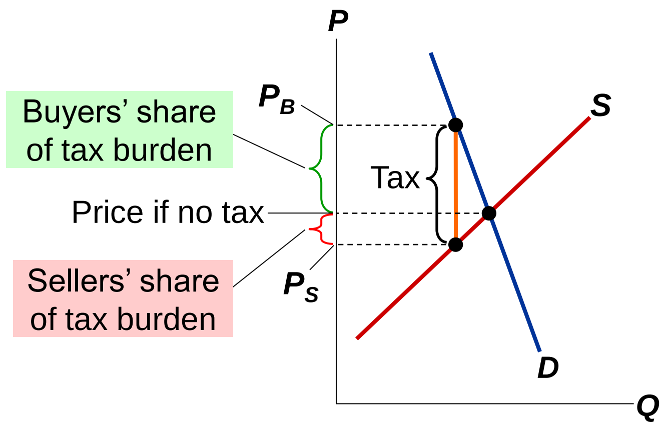
What matters is this:

A tax drives a wedge between the price buyers pay and the price sellers receive.



Elasticity and Tax Incidence

CASE 1: Supply is more elastic than demand

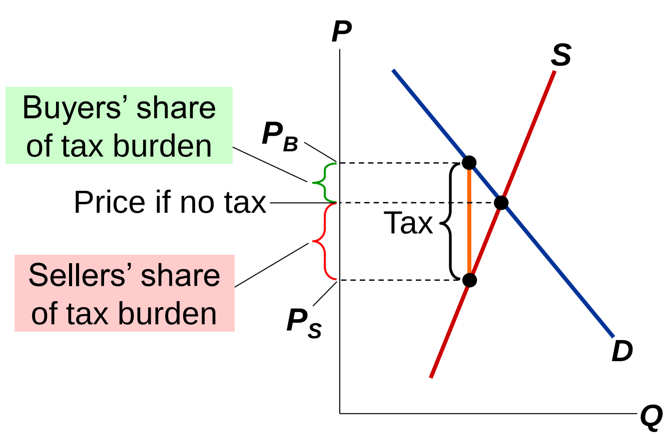


It's easier for sellers than buyers to leave the market.

So buyers bear most of the burden of the tax.

Elasticity and Tax Incidence

CASE 2: Demand is more elastic than supply



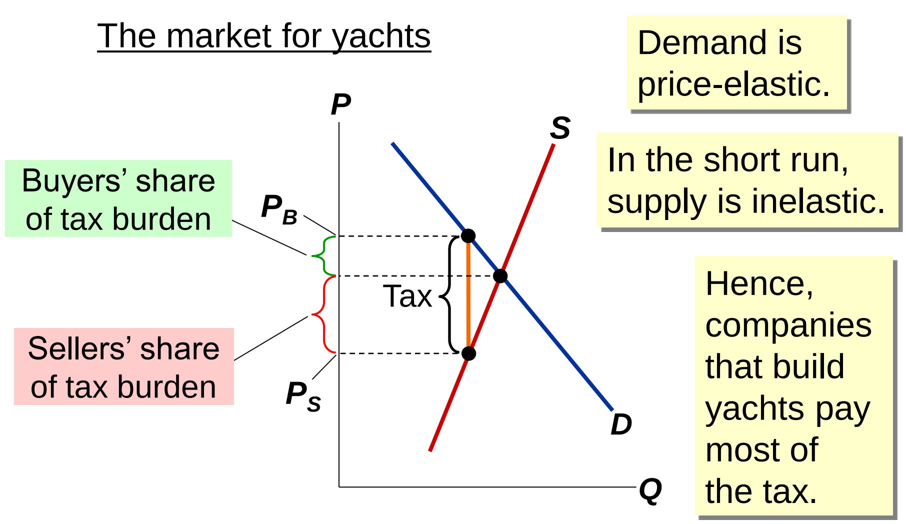
It's easier for buyers than sellers to leave the market.

Sellers bear most of the burden of the tax.

CASE STUDY: Who Pays the Luxury Tax?

- 1990: Congress adopted a luxury tax on yachts, private airplanes, furs, expensive cars, etc.
- Goal of the tax: raise revenue from those who could most easily afford to pay – wealthy consumers.
- But who really pays this tax?

CASE STUDY: Who Pays the Luxury Tax?



CONCLUSION: Government Policies and the Allocation of Resources

- Each of the policies in this chapter affects the allocation of society's resources.
  - *Example 1:* A tax on pizza reduces eq'm ***Q***. With less production of pizza, resources (workers, ovens, cheese) will become available to other industries.
  - *Example 2:* A binding minimum wage causes a surplus of workers, a waste of resources.
- So, it's important for policymakers to apply such policies very carefully.

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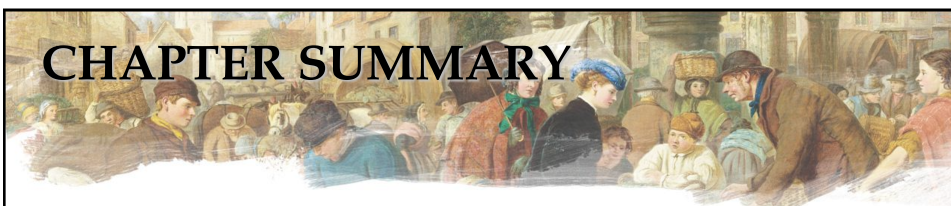

CHAPTER SUMMARY

- A price ceiling is a legal maximum on the price of a good. An example is rent control. If the price ceiling is below the eq'm price, it is binding and causes a shortage.
- A price floor is a legal minimum on the price of a good. An example is the minimum wage. If the price floor is above the eq'm price, it is binding and causes a surplus. The labor surplus caused by the minimum wage is unemployment.

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CHAPTER SUMMARY

- A tax on a good places a wedge between the price buyers pay and the price sellers receive, and causes the eq'm quantity to fall, whether the tax is imposed on buyers or sellers.
- The incidence of a tax is the division of the burden of the tax between buyers and sellers, and does not depend on whether the tax is imposed on buyers or sellers.
- The incidence of the tax depends on the price elasticities of supply and demand.

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