

Chapter 4

GOVERNMENT ACTIONS

IN MARKETS

Price controls

- Restrict the price at which a good or service can be sold
- Price ceiling / Price floor

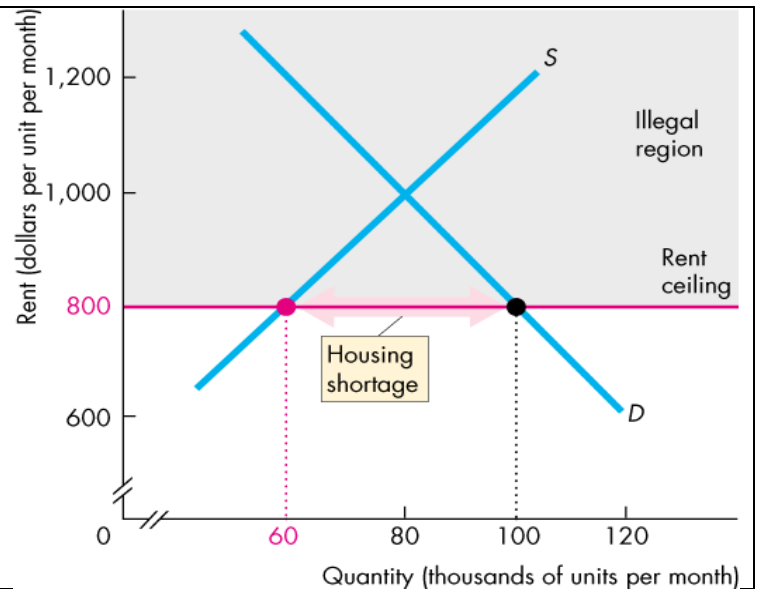
1. What is Price ceiling?

- It is a regulation that makes it illegal to charge a price higher than a specified level
- It is applied to **a housing market** it is called **a rent ceiling**.
- Two outcomes are possible when government imposes price ceiling:
 - If the rent ceiling is set above the equilibrium rent, it has no effect
 - If the rent ceiling is set below the equilibrium rent, it leads to a shortage (illegal)

2. How does Price ceiling lead to a shortage?

A rent ceiling that is set *below* the equilibrium rent.

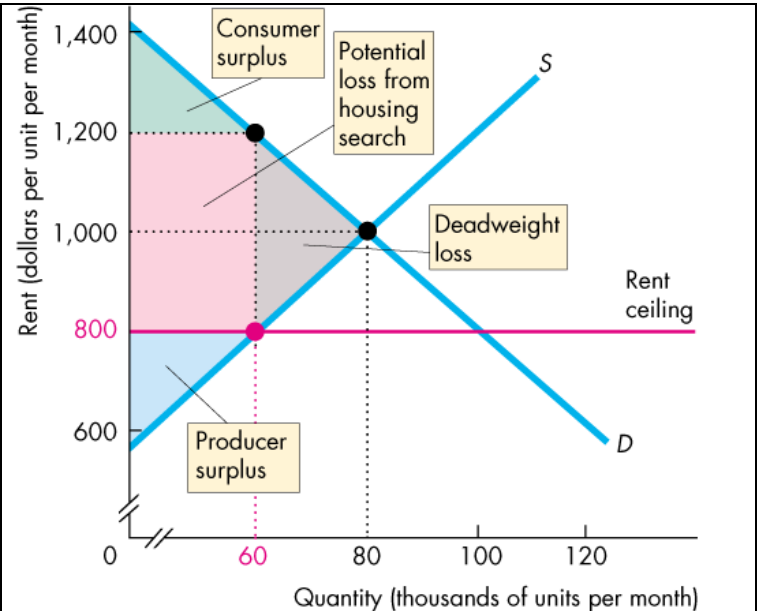
- The equilibrium rent is \$1,000 a month.
- A rent ceiling is set at \$800 a month.
- So, the equilibrium rent is in the illegal region.
- There is a shortage of housing ($Q_s < Q_d$)



3. How is a Rent Ceiling inefficient?

A rent ceiling set below the equilibrium rent leads to:

- An inefficient underproduction of housing services (Shortage) $\rightarrow Q_s < Q_d$
- A **deadweight loss** arises.
 - Producer surplus decreases.
 - Consumer surplus decreases.
 - There is a potential loss from increased search activity.
 - The full loss is the sum of the red and gray areas



4. Are Rent Ceilings Fair?

- 1- According to **the fair rules view**, a rent ceiling is **unfair** because **it blocks voluntary exchange**.
 - 2- According to **the fair results view**, a rent ceiling is **unfair** because **it does not generally benefit the poor**.
 - 3- A rent ceiling decreases the quantity of housing and the scarce housing is allocated by
 - **Lottery**
 - gives scarce housing to the lucky.
 - **First-come, first-served**
 - gives scarce housing to those who have the greatest foresight and get their names on the list first.
 - **Discrimination**
 - gives scarce housing to friends, family members, or those of the selected race or sex.
- None of these methods leads to a fair outcome.**

5. What is Price floor?

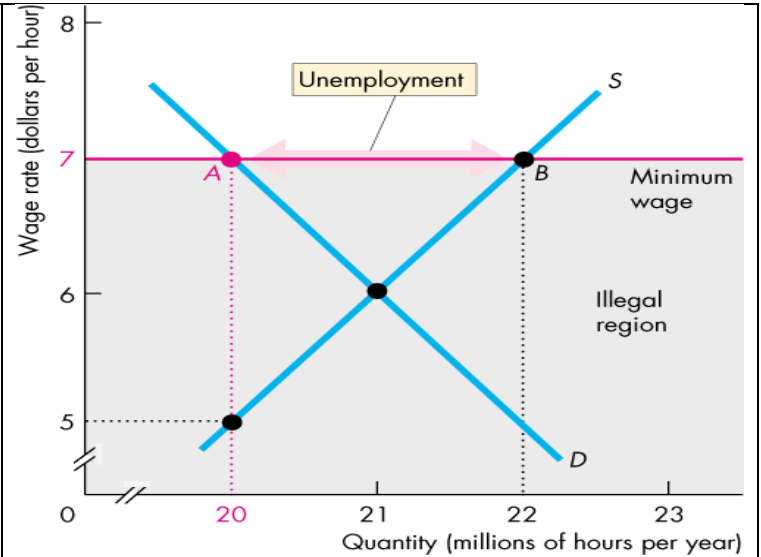
- It is a regulation that makes it illegal to trade at a price lower than a specified level. is a regulation that
- When a price floor is applied to **labor markets**, it is called a **minimum wage**.
- If the minimum wage is set **below** the equilibrium wage rate, **it has no effect**. The market works as if there were no minimum wage.

- If the minimum wage is set **above** the equilibrium wage rate, it leads to a **surplus (illegal)**

6. How does a Minimum Wage lead to Unemployment?

If the minimum wage is set **above** the equilibrium wage rate

- There is **a surplus** of labor (the quantity of labor supplied by workers > the quantity demanded by employers)
- Because the quantity of labor hired at the minimum wage < the quantity that would be hired in an unregulated labor market.
- the legal wage rate cannot eliminate the surplus, the minimum wage creates unemployment



7. How is a minimum wage inefficient?

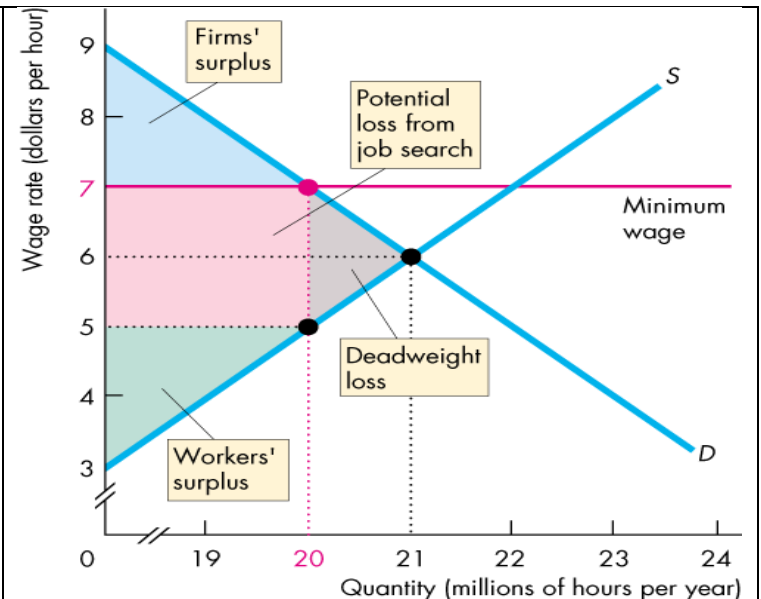
A minimum wage leads to an inefficient outcome.

A minimum wage set above the equilibrium wage decreases the quantity of labor employed.

- The quantity of labor employed is less than the efficient quantity ($20 < 21$)

A deadweight loss arises.

- The potential loss from increased job search decreases both workers' surplus and firms' surplus.
- The full loss is the sum of the red and gray areas.



8. Is the Minimum Wage Fair?

Most economists believe that minimum wage laws **increase the unemployment rate of low-skilled younger workers.**

9. Define tax Incidence.

it is the division of the burden of a tax between buyers and sellers.

- If the price rises by the full amount of the tax,
 - buyers pay the tax.
- If the price rise by a lesser amount than the tax,
 - buyers and sellers share the burden of the tax.
- If the price doesn't rise at all,
 - sellers pay the tax.

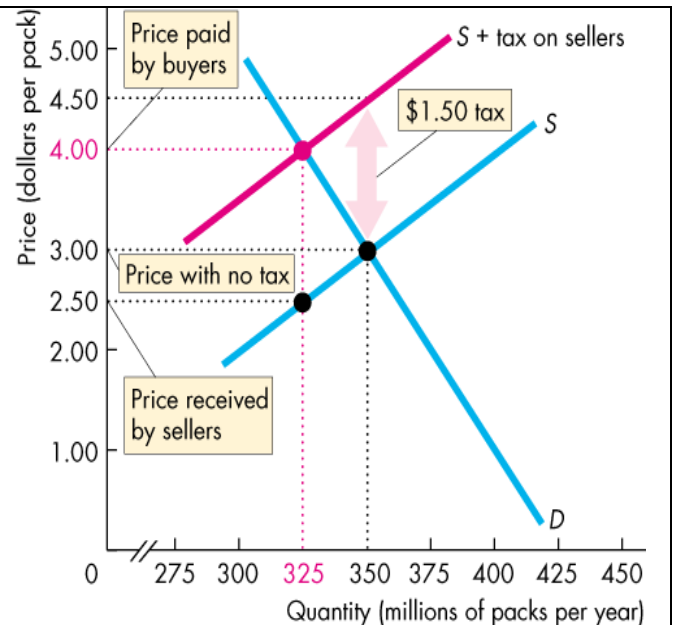
10. How tax incidence is the same regardless of whether the law says sellers pay or buyers pay.

the effect of tax on Sellers

With no tax, the equilibrium price is \$3.00 a pack.

A tax on sellers of \$1.50 a pack is introduced.

- Supply decreases and the curve $S + \text{tax on sellers}$ shows the new supply curve.
- The market price paid by buyers rises to \$4.00 a pack and the quantity bought decreases.
- The price received by the sellers falls to \$2.50 a pack.
- So, with the tax of \$1.50 a pack, buyers pay \$1.00 a pack more and sellers receive 50¢ a pack less.

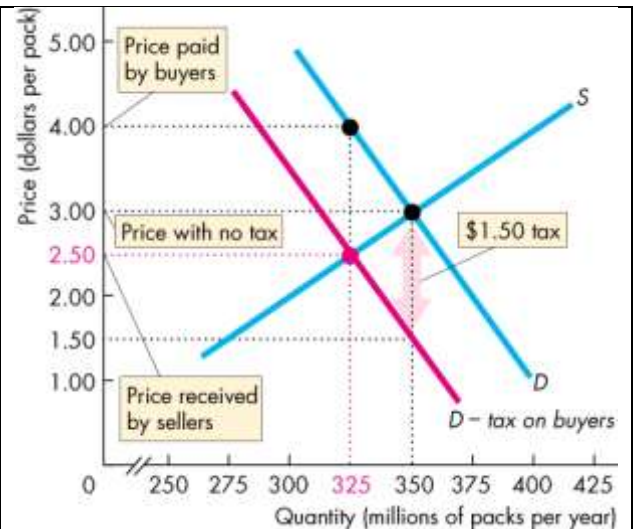


the effect of tax on buyers

With no tax, the equilibrium price is \$3.00 a pack.

A tax on buyers of \$1.50 a pack is introduced.

- Demand decreases and the curve $D - \text{tax on buyers}$ shows the new demand curve.
- The price received by sellers falls to \$2.50 a pack and the quantity decreases.
- The price paid by buyers rises to \$4.00 a pack.
- So, with the tax of \$1.50 a pack, buyers pay \$1.00 a pack more and sellers receive 50¢ a pack less.



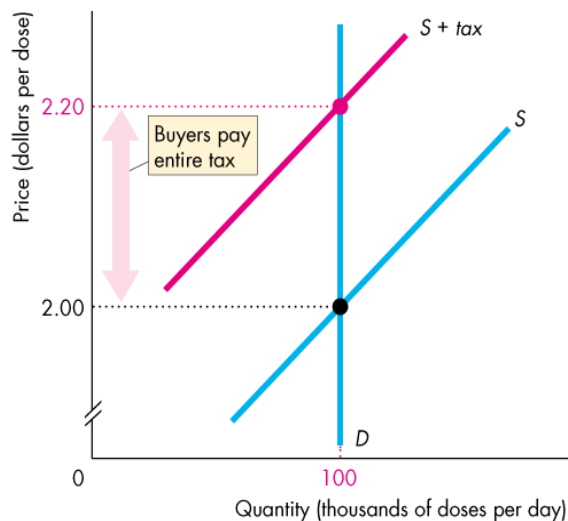
- So, exactly as before when sellers were taxed:

- Buyers pay \$1.00 of the tax.
- Sellers pay the other 50¢ of the tax.

11. How does the division of the tax between buyers and sellers depend on the elasticities of demand and supply?

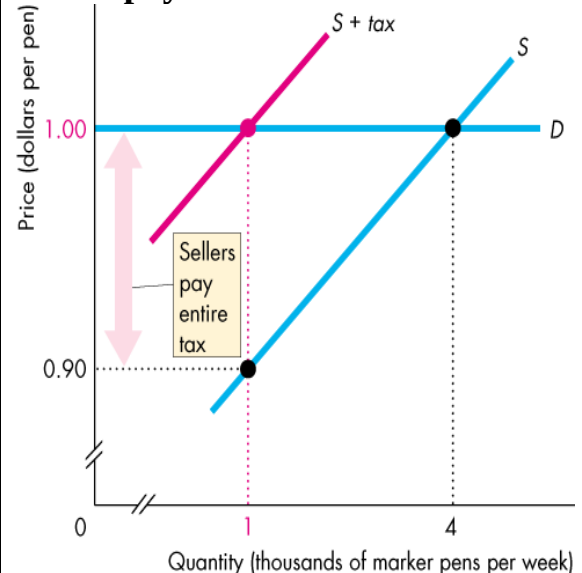
Perfectly Inelastic Demand

Demand for this good is perfectly inelastic—the demand curve is vertical. When a tax is imposed on this good, **buyers pay the entire tax.**



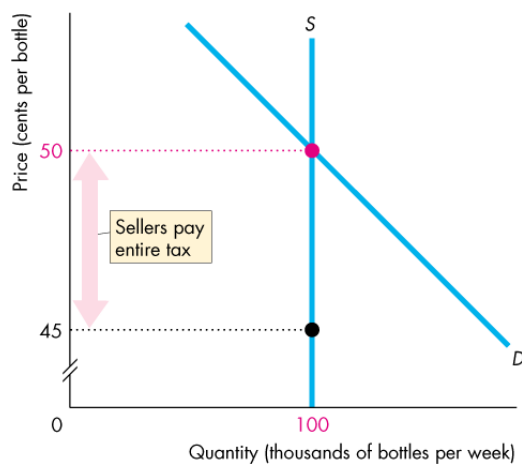
Perfectly Elastic Demand

The demand for this good is perfectly elastic—the demand curve is horizontal. When a tax is imposed on this good, **sellers pay the entire tax.**



Perfectly Inelastic Supply

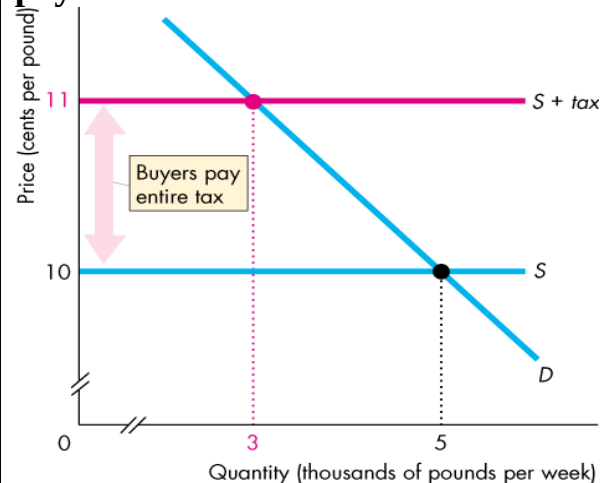
The supply of this good is perfectly inelastic—the supply curve is vertical. When a tax is imposed on this good, **sellers pay the entire tax.**



(a) Perfectly inelastic supply

Perfectly Elastic Supply

The supply of this good is perfectly elastic—the supply curve is horizontal. When a tax is imposed on this good, **buyers pay the entire tax.**



(b) Perfectly elastic supply

The more inelastic the demand, the larger is the buyers' share of the tax.
The more elastic the supply, the larger is the buyers' share of the tax.