

chapter:

5

>> Market Strikes Back

**Krugman/Wells
Economics**

Thinking like an economist

Better light with less energy

Household lighting in Europe is becoming greener as the European Union sets higher energy efficiency standards.

On 1 September 2009, incandescent light bulbs and other energy inefficient lamps started to be gradually replaced by more energy efficient lamps in Europe. By switching to more energy efficient lighting products, European households can save energy and contribute to reaching the EU's climate protection targets.

http://ec.europa.eu/energy/lumen/index_en.htm

Thinking like an economist

In 2009 the European Commission also passed legislation requiring automakers to reduce the average per-kilometer carbon dioxide (CO₂) emissions of newly registered automobiles to 130g/km by 2015 (EC, 2009), with an even stricter standard of 95g/km now set for 2020.

The new legislation would “reduce the average emissions of CO₂ from new passenger cars in the EU from around 160 grams per kilometer to 130 grams per kilometer,” which would “translate into a 19% reduction of CO₂ emissions” (EC, 2007).

Thinking like an economist

- What happens to demand when the unit costs of a good or service decreases, as occurs when efficiency increases?
 - That is, what happens to your demand for light when the unit cost of light decreases? You demand more light!
 - Hence, the energy savings gained from an increase in efficiency is at least partially offset by higher demand, an effect known as the “rebound effect.”
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Thinking like an economist

- The critical question for policy is how big is this rebound effect. To the extent that it is large, it may undercut the purported effectiveness of a policy in reducing emissions.
 - The size is ultimately an empirical question, one that we can only answer by looking at behavioral data.
 - Empirical evidence suggests that the size of the rebound depends, among other things, on the service in question. For automobile travel, it ranges between roughly 10%-60% (depending on country).
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WHAT YOU WILL LEARN IN THIS CHAPTER

- The meaning of **price controls** and **quantity controls**, two kinds of government interventions in markets.
 - How price and quantity controls create problems and can make a market inefficient.
 - What **deadweight** loss is.
 - Why the predictable side effects of intervention in markets often lead economists to be skeptical of its usefulness.
 - Who benefits and who loses from market interventions, and why they are used despite their well-known problems.
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Homelessness in California



<https://www.nytimes.com/2019/09/28/us/homeless-san-francisco.html?action=click&module=Top%20Stories&pgtype=Homepage>

Poverty

- At 18.2%, California has the highest poverty rate of any state in the US.
 - San Francisco's homeless population has grown by 17 percent since 2017, while the count in Los Angeles has increased by 16 percent since 2018.
 - Over all, the state accounts for about half of the country's unsheltered homeless population of roughly 200,000.
 - As of January 1, 2020, California introduced statewide rent control that places limits on rent hikes. What is the likely effect?
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Why Governments Control Prices

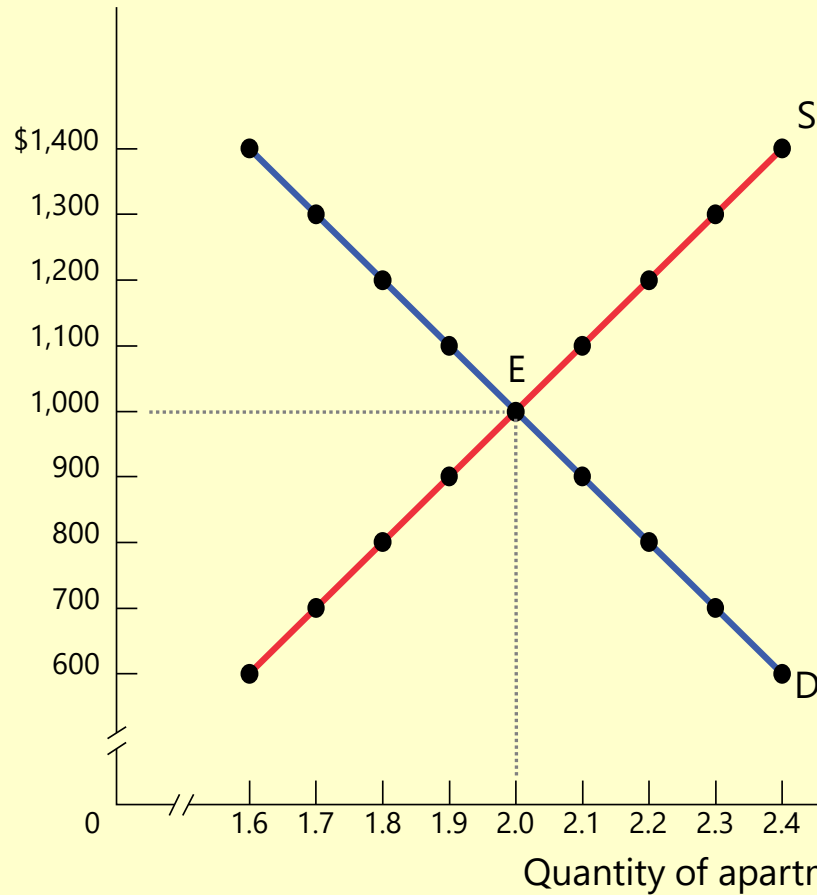
- The market price moves to the level at which the quantity supplied equals the quantity demanded. BUT this equilibrium price does not necessarily please either buyers or sellers.
 - Therefore, the government intervenes to regulate prices by imposing **price controls**, which are legal restrictions on how high or low a market price may go.
 - **Price ceiling** is the maximum price sellers are allowed to charge for a good or service.
 - **Price floor** is the minimum price buyers are required to pay for a good or service.
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Price Ceilings

- Price ceilings are typically imposed during crises because these events often lead to sudden price increases that hurt many people but produce big gains for a lucky few.

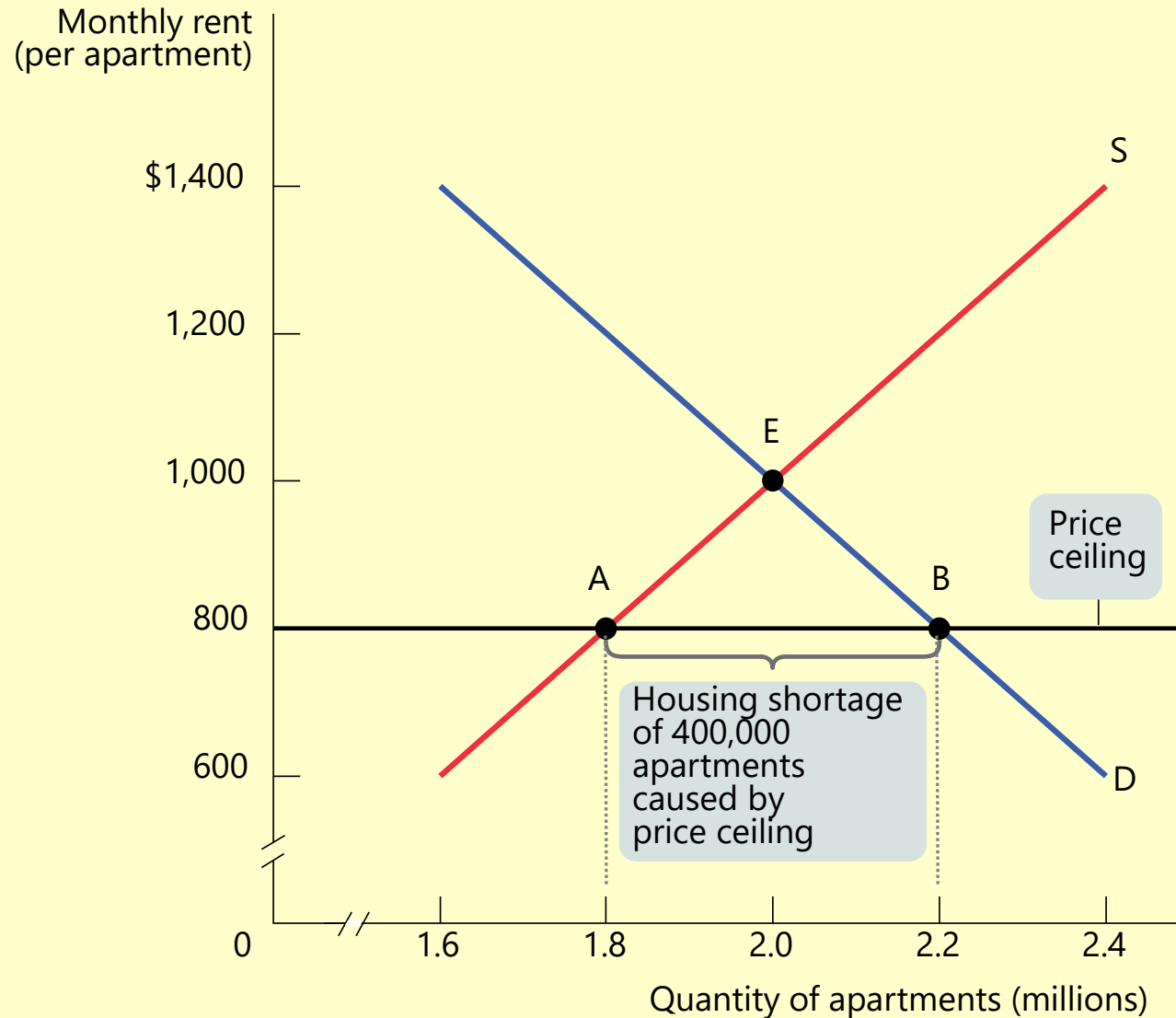
The Market for Apartments in the Absence of Government Controls

Monthly rent (per apartment)



Monthly rent (per apartment)	Quantity of apartments (millions)	
	Quantity demanded	Quantity supplied
\$1,400	1.6	2.4
1,300	1.7	2.3
1,200	1.8	2.2
1,100	1.9	2.1
1,000	2.0	2.0
900	2.1	1.9
800	2.2	1.8
700	2.3	1.7
600	2.4	1.6

The Effects of a Price Ceiling

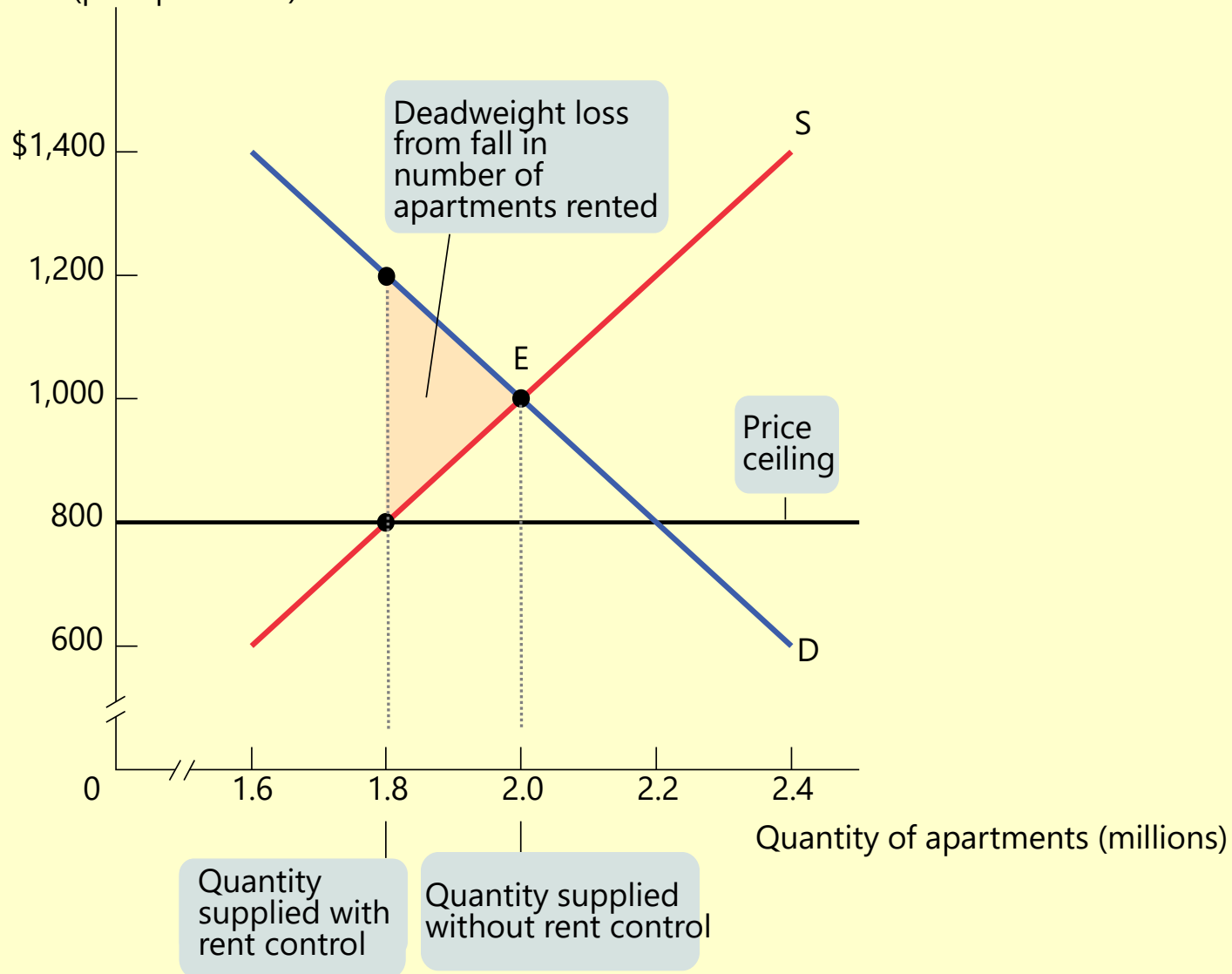


How Price Ceilings Cause Inefficiency

- Deadweight loss is the loss in total surplus that occurs whenever an action or a policy reduces the quantity transacted below the efficient market equilibrium quantity
 - Inefficient Allocation to Customers
 - Wasted Resources
 - Inefficiently Low Quality
 - Black Markets
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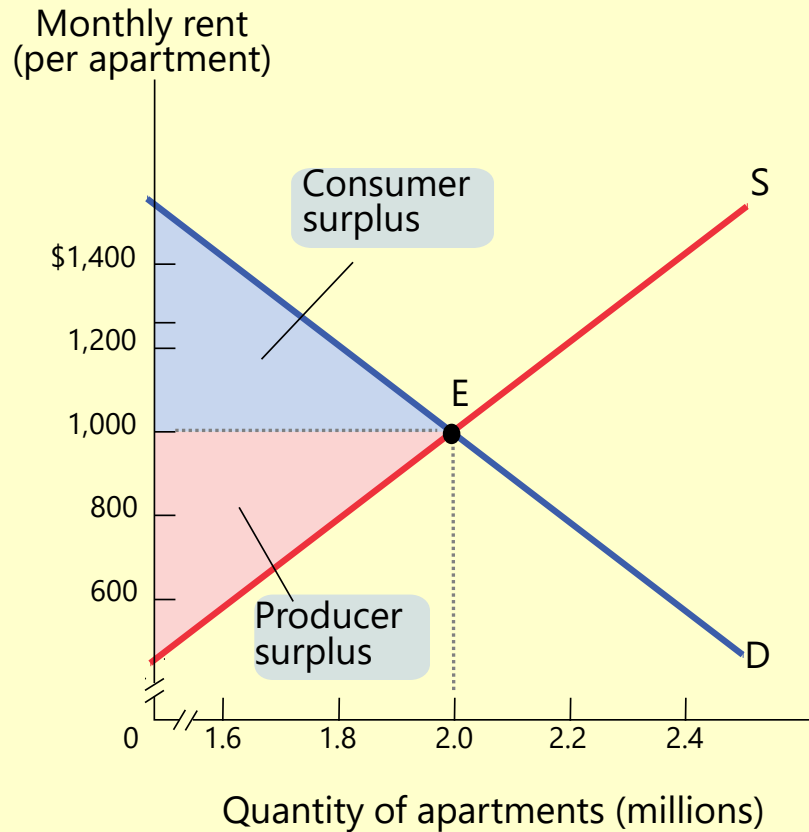
Deadweight Loss from a Price Ceiling

Monthly rent (per apartment)

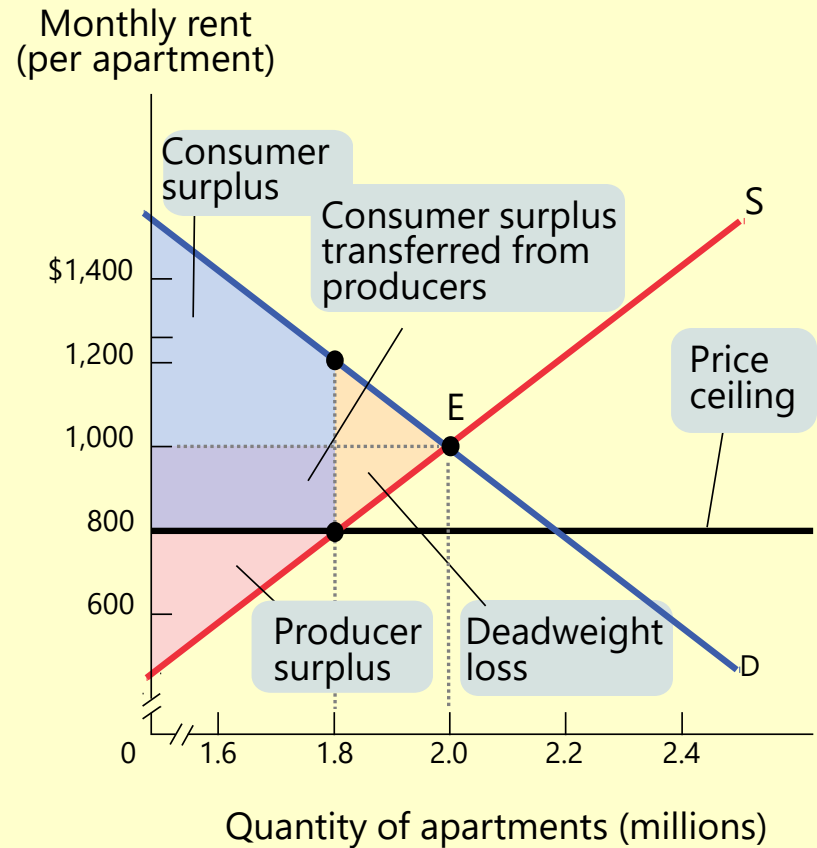


Winners and Losers from Rent Control

(a) Before Rent Control



(b) After Rent Control



How Price Ceilings Cause Inefficiency

- Price ceilings often lead to inefficiency in the form of **inefficient allocation to consumers**: people who want the good badly and are willing to pay a high price don't get it, and those who care relatively little about the good and are only willing to pay a low price do get it.
 - Price ceilings typically lead to inefficiency in the form of **wasted resources**: people expend money, effort and time to cope with the shortages caused by the price ceiling.
 - Price ceilings often lead to inefficiency in that the goods being offered are of **inefficiently low quality**: sellers offer low-quality goods at a low price even though buyers would prefer a higher quality at a higher price.
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How Price Ceilings Cause Inefficiency

- A **black market** is a market in which goods or services are bought and sold illegally—either because it is illegal to sell them at all or because the prices charged are legally prohibited by a price ceiling.
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What is CA doing about high rents?

- Last year, California lawmakers approved a statewide rent cap covering millions of tenants.
 - The bill limits annual rent increases to 5 percent after inflation and offers new barriers to eviction, providing a bit of housing security in a state with the nation's highest housing prices and a swelling homeless population.
 - The result is depressingly predictable: even more acute housing shortages.
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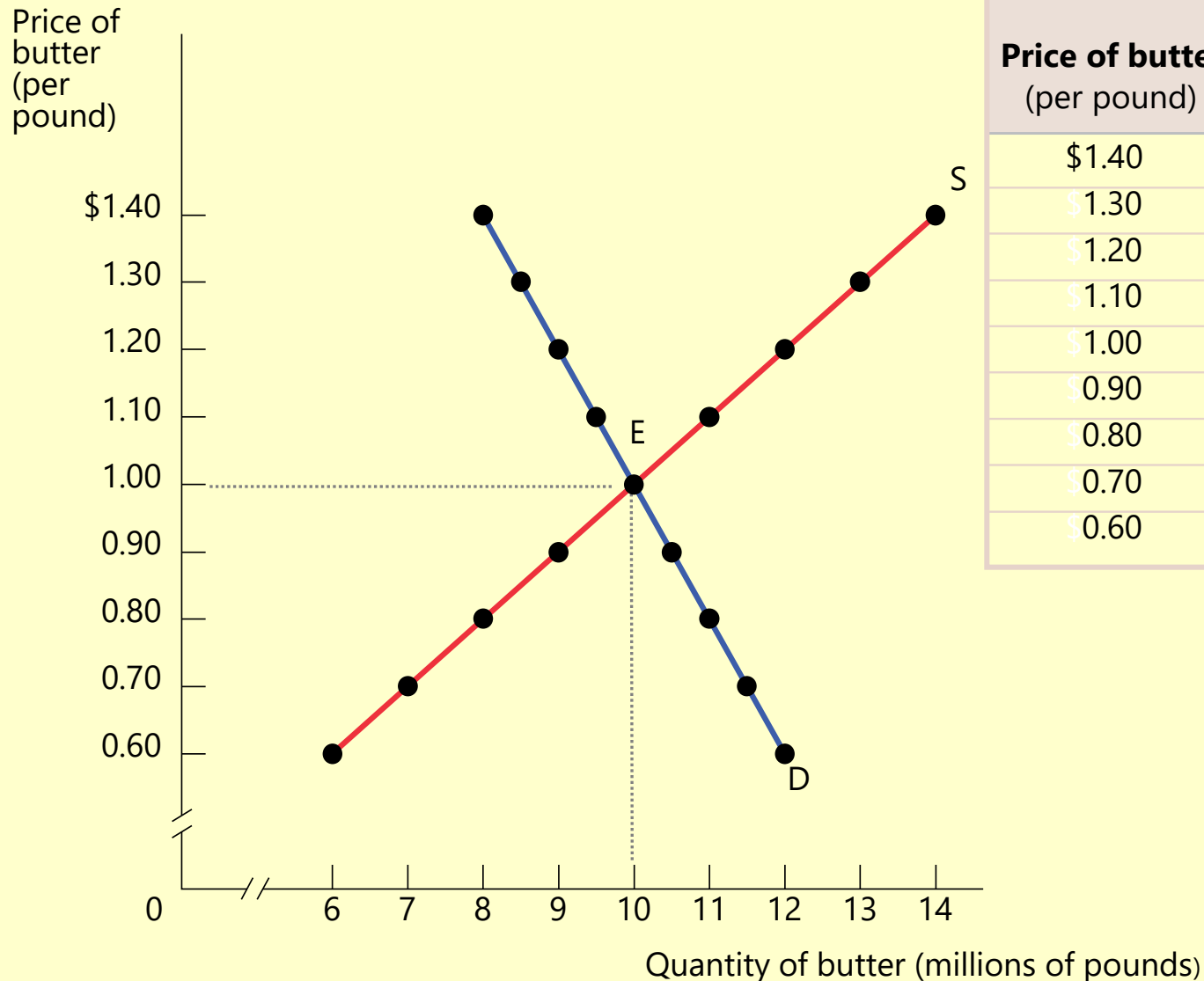
What is CA not doing about high rents?

- California is not doing what would actually solve the problem: overriding local zoning to allow multiple-unit housing around transit stops and in suburbs where single-family homes are considered sacrosanct.
 - Why? Basically, because the rich folks who live in the suburbs can't abide the idea of poorer folks moving into their neighborhoods.
 - Laws to allow relaxed zoning have all been voted down.
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Price Floors

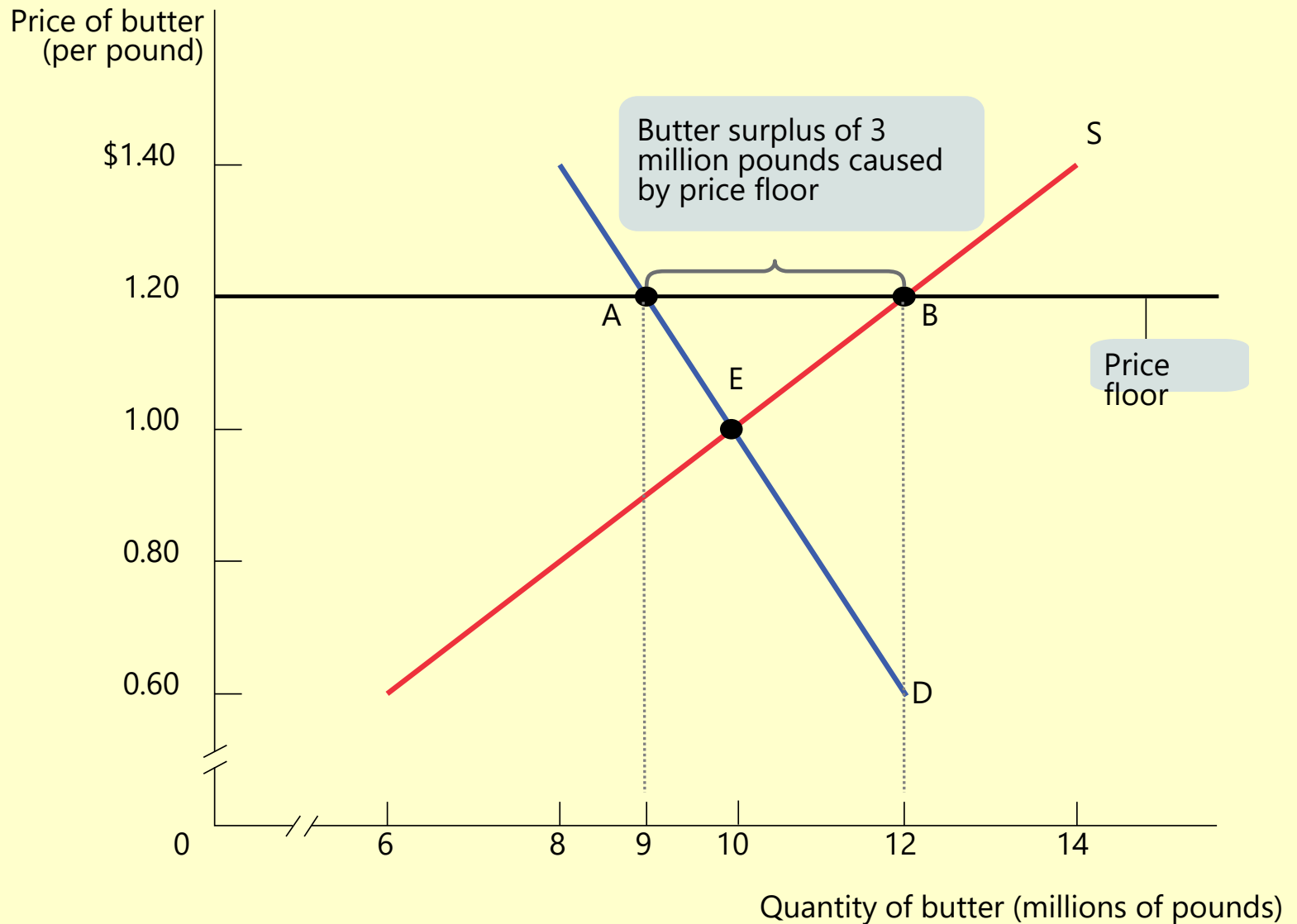
- Sometimes governments intervene to push market prices up instead of down.
 - The **minimum wage** is a legal floor on the wage rate, which is the market price of labor.
 - Just like price ceilings, price floors are intended to help some people but generate predictable and undesirable side effects.
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The Market for Butter in the Absence of Government Controls



Price of butter (per pound)	Quantity of butter (millions of pounds)	
	Quantity demanded	Quantity supplied
\$1.40	8.0	14.0
\$1.30	8.5	13.0
\$1.20	9.0	12.0
\$1.10	9.5	11.0
\$1.00	10.0	10.0
\$0.90	10.5	9.0
\$0.80	11.0	8.0
\$0.70	11.5	7.0
\$0.60	12.0	6.0

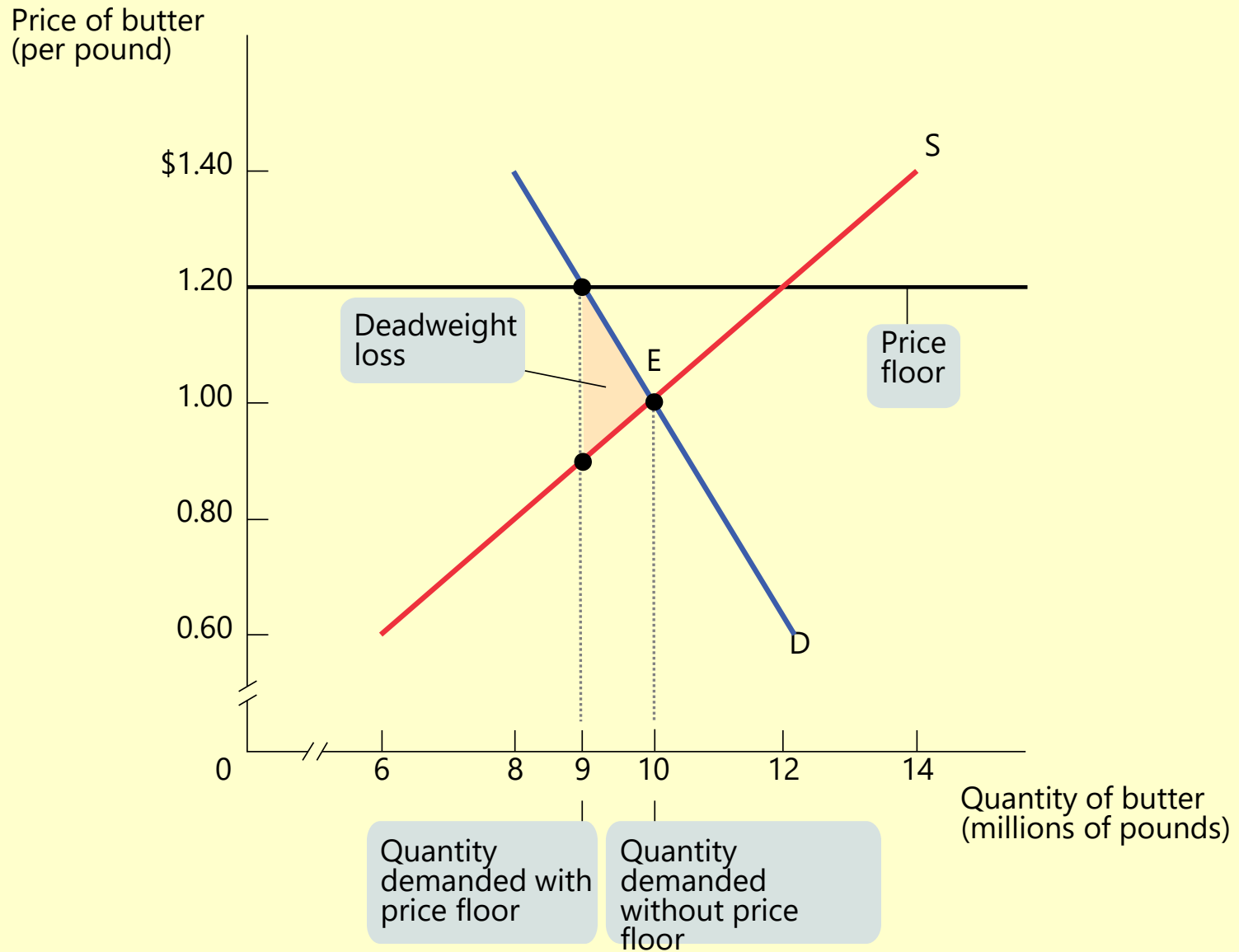
The Effects of a Price Floor



How a Price Floor Causes Inefficiency

- The persistent surplus that results from a price floor creates missed opportunities—inefficiencies—that resemble those created by the shortage that results from a price ceiling. These include:
 - Deadweight loss from inefficiently low quantity
 - Inefficient allocation of sales among sellers
 - Wasted resources
 - Inefficiently high quality
 - Temptation to break the law by selling below the legal price
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A Price Floor Causes Inefficiently Low Quantity



How a Price Floor Causes Inefficiency

- Price floors lead to **inefficient allocation of sales among sellers**: those who would be willing to sell the good at the lowest price are not always those who actually manage to sell it.
 - Price floors often lead to inefficiency in that goods of **inefficiently high quality** are offered: sellers offer high-quality goods at a high price, even though buyers would prefer a lower quality at a lower price.
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Enough with theory...

- How did Germany's price floor in the labor market – aka the minimum wage – work out, which was introduced in 2015? Did unemployment result, as would be predicted by theory?
 - According to a recent report from the Centre for Economic Policy Research of the London School of Economics, no: the policy did not lead to an increase in unemployment (see: https://cepr.org/active/publications/discussion_papers/dp.php?dpno=13005)
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Enough with theory...

- Why? Basically because the labor market was not competitive to begin with.
 - As summarized by Gabriel Ahlfeldt, one of the authors: “The fact that we observe policy-enforced increases in wages without job losses implies that workers were paid below their marginal product. This is not consistent with the standard labour economics model and suggests that employers could afford paying higher wages to low-wage earners.”
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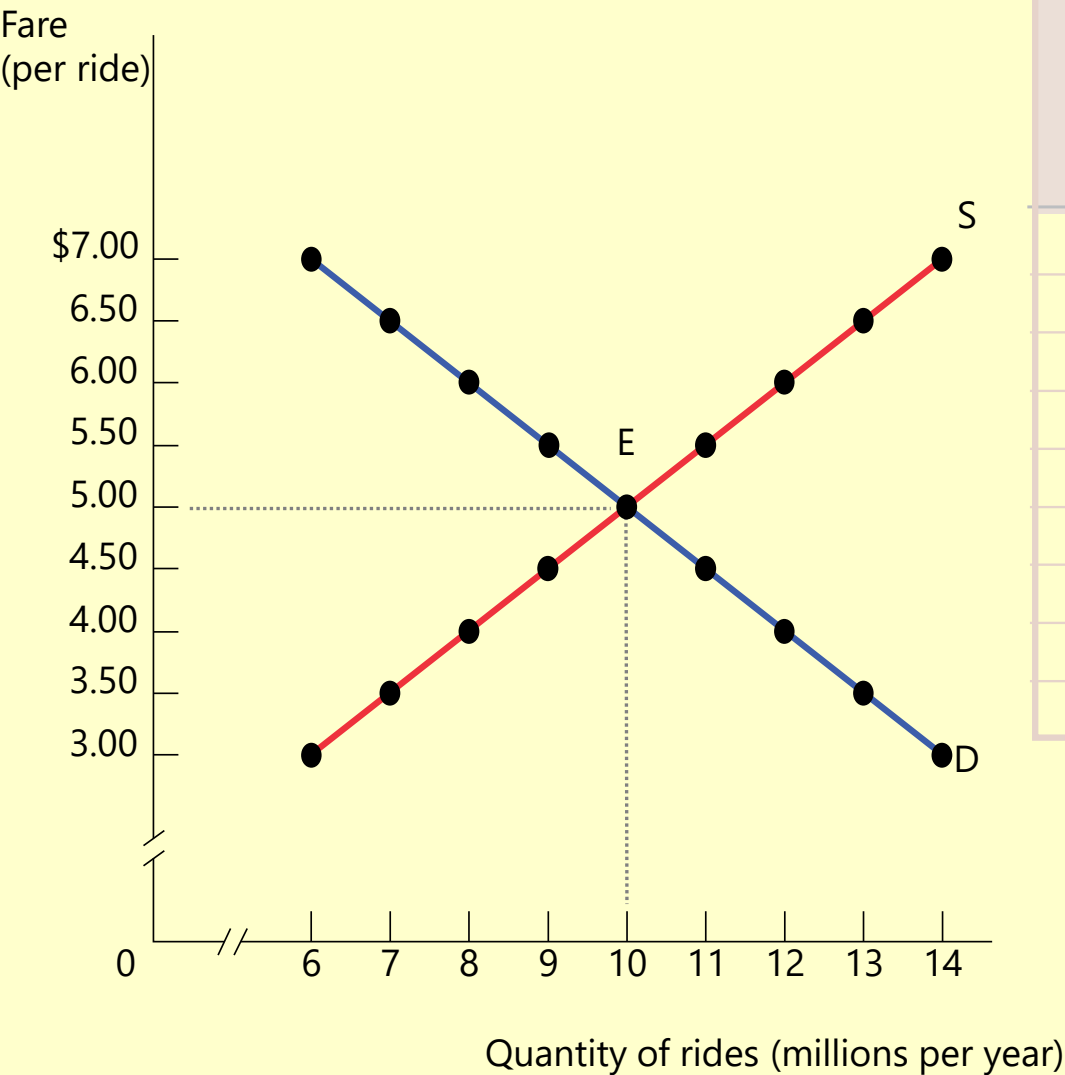
Enough with theory...

- Germany's experience does not mean that the theory is wrong.
 - Rather, it means that in this particular case, the assumptions that underpin the theory are incorrect.
 - Note also that Paul Krugman – notwithstanding anecdotes in the textbook – is a big fan of minimum wages (see: <https://www.nytimes.com/2015/07/17/opinion/paul-krugman-liberals-and-wages.html>)
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Controlling Quantities

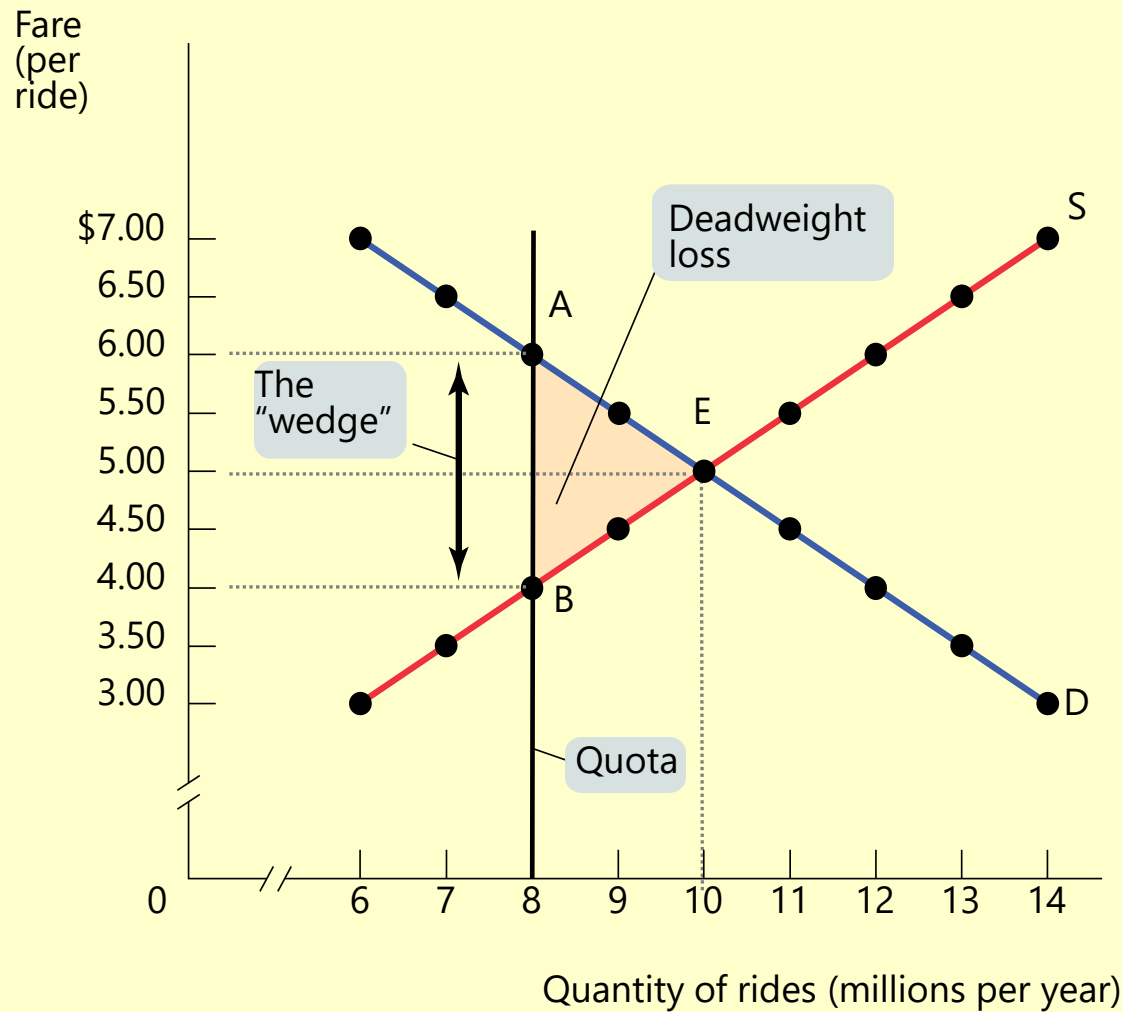
- A **quantity control**, or **quota**, is an upper limit on the quantity of some good that can be bought or sold. The total amount of the good that can be legally transacted is the **quota limit**. An example is the taxi medallion system in New York.
 - A **license** gives its owner the right to supply a good.
 - The **demand price** of a given quantity is the price at which consumers will demand that quantity.
 - The **supply price** of a given quantity is the price at which producers will supply that quantity.
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The Market for Taxi Rides in the Absence of Government Controls



Fare (per ride)	Quantity of rides (millions per year)	
	Quantity demanded	Quantity supplied
\$7.00	6	14
\$6.50	7	13
\$6.00	8	12
\$5.50	9	11
\$5.00	10	10
\$4.50	11	9
\$4.00	12	8
\$3.50	13	7
\$3.00	14	6

Effect of a Quota on the Market for Taxi Rides



Fare (per ride)	Quantity of rides (millions per year)	
	Quantity demanded	Quantity supplied
\$7.00	6	14
\$6.50	7	13
\$6.00	8	12
\$5.50	9	11
\$5.00	10	10
\$4.50	11	9
\$4.00	12	8
\$3.50	13	7
\$3.00	14	6

The Anatomy of Quantity Controls

- A quantity control, or quota, drives a **wedge** between the demand price and the supply price of a good.
 - The difference between the demand and supply price at the quota limit is the **quota rent**, the earnings that accrue to the license-holder from ownership of the right to sell the good.
 - It is equal to the market price of the license when the licenses are traded.
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The Costs of Quantity Controls

- Deadweight loss because some mutually beneficial transactions don't occur.
- Incentives for illegal activities.