

## Principles of Microeconomics

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2015

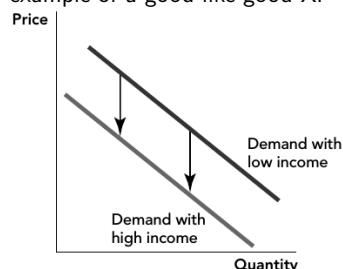
Who has the absolute advantage at each task, and who has the comparative advantage:

In one hour, Ethan can bake 20 cookies or lay the drywall for two rooms.

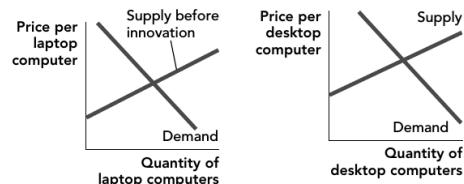
In one hour, Sienna can bake 100 cookies or lay the drywall for three rooms.



If income increases and the demand for good X shifts as shown below, then is good X a normal or inferior good? Is the income elasticity of demand for good X positive or negative? Give an example of a good like good X.



If a business can make the job seem fun (by offering inexpensive pizza lunches) or at least safe (by nagging the city government to put police patrols around the factory), what probably happens to the supply of labor? What happens to the equilibrium wage if a factory or office or laboratory becomes a great place where people "really want to work?"



Immigration is a fact of life in many countries. This will lead to a big boost in the labor supply. What field would you rather be in: A field where the demand for your kind of labor is elastic or a field where the demand for your kind of labor is inelastic? Why?

a Since it's become much easier to build better laptop computers in recent years, laptop supply has increased. What does this do to the price of laptops?

b Laptop and desktop computers are substitutes. Now that the price of laptops has changed, what does this do to the demand for desktop computers?

c And how does that affect the quantity supplied of desktop computers?

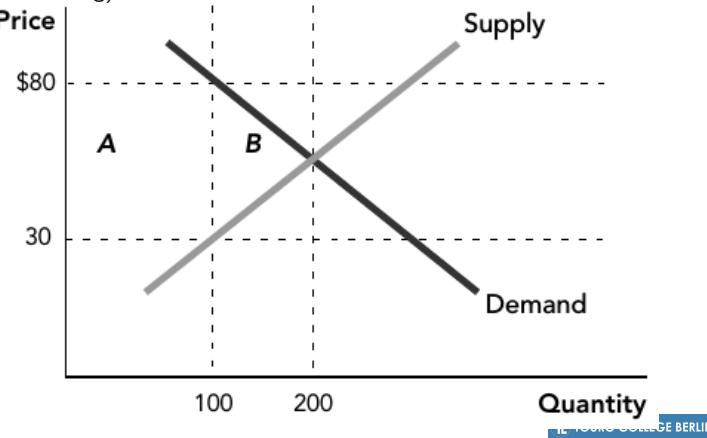
d Now let's look at the final result: Once it became easier to build good laptops, did "invisible hand" forces push more of society's resources into making laptops and push resources away from making desktops?



2. How does the evolution of language illustrate a type of spontaneous order?
3. Business leaders often say that there is a “shortage” of skilled workers, and so they argue that immigrants need to be brought in to do these jobs. For example, an AP article was entitled “New York farmers fear a shortage of skilled workers,” and went on to point out that a special U.S. visa program, the H-2A program, “allows employers to hire foreign workers temporarily if they show that they were not able to find U.S. workers for the jobs.”
- a How do unregulated markets cure a “labor shortage” when there are no immigrants to boost the labor supply?
  - b Why are businesses reluctant to let unregulated markets cure the shortage?

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In the chart, there's a rectangle and a triangle. One represents the value lost from the “deals that don’t get made” and one represents the value lost from “the deals that do get made (in the case of a price ceiling).” Which is which?



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## Price Ceilings

Price ceilings that involve a maximum price below the market price create five important effects.

1. Shortages
2. Wasteful Lines and Other Costs of Search
3. Loss of Gains from Trade
4. Reduction in Product Quality
5. Misallocation of Resources

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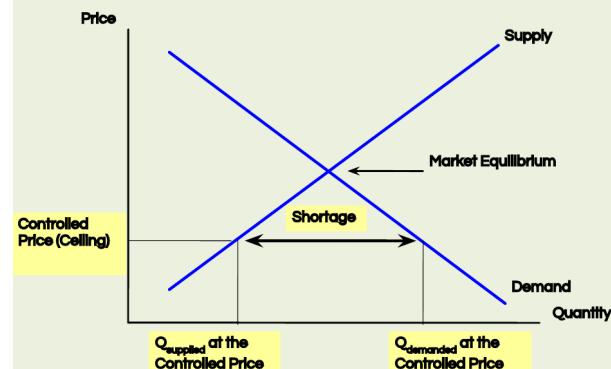
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## 2. Price controls that create shortages lead to bribery and wasteful lines

- Shortages: not all buyers will be able to purchase the good.
- Normally, buyers would compete with each other by offering a higher price.
- If price is not allowed to rise, buyers must compete in other ways...

## 1. When prices are held below the market price shortages are created.

Shortage = difference between  $Q_d$  and  $Q_s$  at the controlled price. The lower the controlled price relative to the market equilibrium price, the larger the shortage.



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## Wasteful Lines and Other Costs of Search

Some buyers may be willing to bribe sellers in order to obtain the good.

- The highest bribe a buyer would pay is the difference between his max price and the price ceiling.
- If bribes are common, then the total price of the good is the legal price plus the bribe.

Buyers can also compete with each other through their willingness to wait in line.

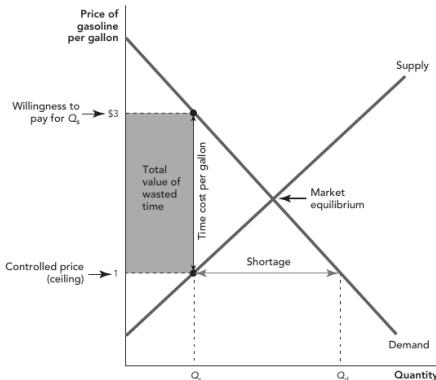
- The maximum wait time (translated into monetary terms) for a buyer is the difference between the max price and the price ceiling.
- So the total price of the good is the legal price plus the time costs.

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## Wasteful Lines and Other Costs of Search

Bribes and waits both lead to a total price that is greater than the controlled price, (but they are different.)



- ▶ Bribes involve a simple transfer from buyers to sellers.
- ▶ The time spent waiting in line, however, is simply lost – paying in time is much more wasteful.

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## 3. Price controls reduce the gains from trade.

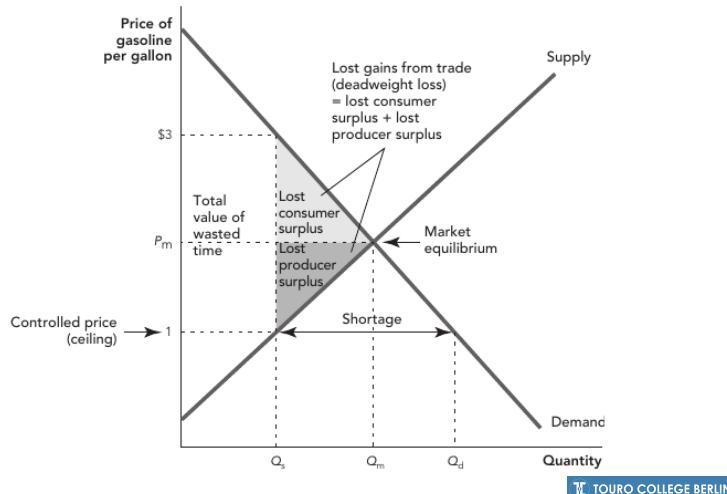
- ▶ Price ceilings set below the market price cause  $Q_s$  to be less than the market  $Q$ .
- ▶ When  $Q$  is below the equilibrium market  $Q$ , consumers value the good more than the cost of its production.
- ▶ This represents a gain from trade that would be exploited (if the market were free).

Dead-weight Loss is the total of lost consumer and producer surplus when all mutually profitable gains from trade are not exploited.

- ▶ Price ceilings create a dead-weight loss by forcing  $Q_s$  below the market  $Q$ .
- ▶ Buyers and sellers would both benefit from trade at a higher price, but cannot since it is illegal for price to rise.

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## 4. Price controls reduce the gains from trade.

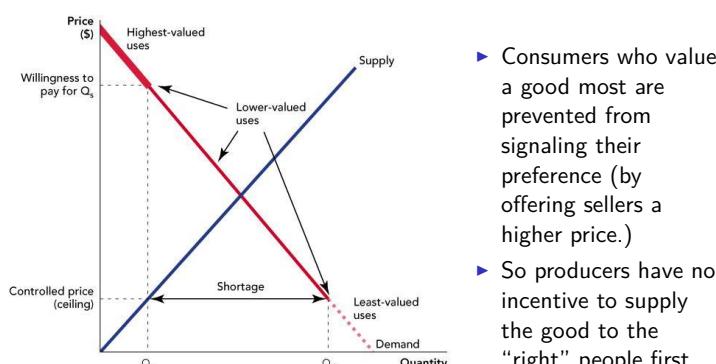


- ▶ At the controlled price, sellers have more customers than goods.
- ▶ In a free market, this would be an opportunity to profit by raising prices.
- ▶ But when prices are controlled, sellers cannot. Sellers respond to this problem in two ways:
  1. Reduce quality
  2. Reduce service

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## 4. Reduction of Product Quality

## 5. Price controls distort signals and eliminate incentives – leading to a misallocation of resources.



- ▶ Consumers who value a good most are prevented from signaling their preference (by offering sellers a higher price.)
- ▶ So producers have no incentive to supply the good to the "right" people first.

- ▶ As a result, goods are misallocated.

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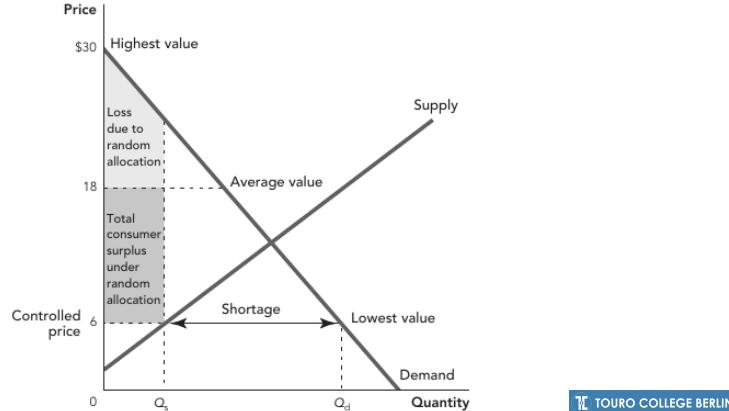
## 5. Price controls distort signals and eliminate incentives – leading to a misallocation of resources.

Lotteries are fair allocation mechanisms.

What happens to society's welfare if the good is randomly assigned to customers willing to pay the regulated price?

## 5. Price controls distort signals and eliminate incentives – leading to a misallocation of resources.

Random allocation among all who are willing to buy at the regulated price



### Consumer lobbying for price controls: Inelastic Supplies and Incentives to Restrict Prices

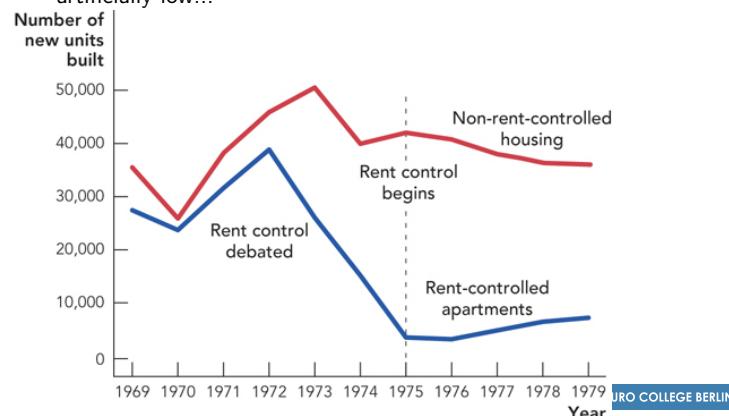
- ▶ When supply is inelastic, consumers have incentives to restrict prices
- ▶ When supply is inelastic and demand increases, prices increase causing consumers to lobby for price controls
- ▶ Rent control in New York City is an example

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## Rent Control

A regulation that prevents rents from rising to equilibrium levels.

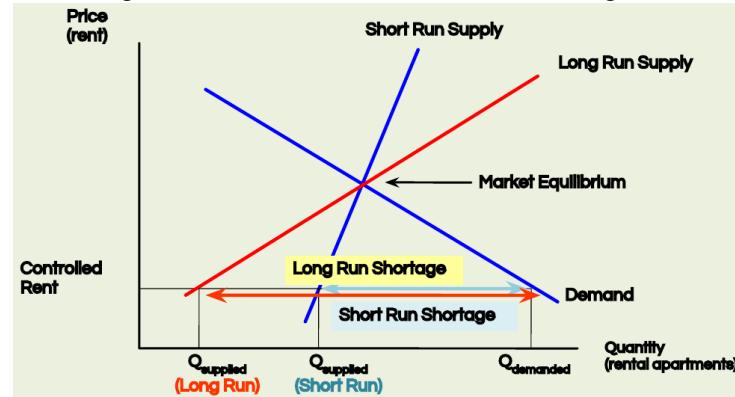
- ▶ Rent control is a price ceiling whose effects worsen over time
- ▶ No one wants to build new apartments if the rents will be artificially low...



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## Rent Control

The shortage is smaller in the Short Run... than in the Long Run

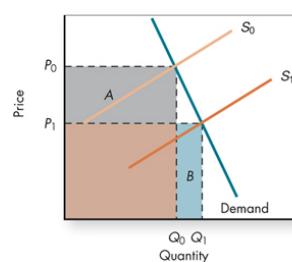


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## So why do price controls ever get passed?

- ▶ The general public may not understand the nasty side-effects of price controls
- ▶ Shortages may benefit the ruling elite...
- ▶ In the former USSR, the communist party elite used Blat to obtain goods.
- ▶ Blat= having connections that can be used to get favors.
- ▶ The party elite can use their connections and power to obtain goods for themselves or others.
- ▶ Without such leverage their power dissipates.

### Producers lobbying for Price controls: Inelastic Demand and Incentives to Restrict Supply



- ▶ When demand is inelastic, increases in productivity that shift the supply curve out result in lower revenue for the suppliers
- ▶ Suppliers have an incentive to restrict supply when demand is inelastic, because, by doing so, they will increase their revenues

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Price floor: a minimum price enforced by law

Price floor: a minimum price enforced by law

What are the negative effects of price floors?

...not as common as price ceilings (but still important)

Price floors have four common effects:

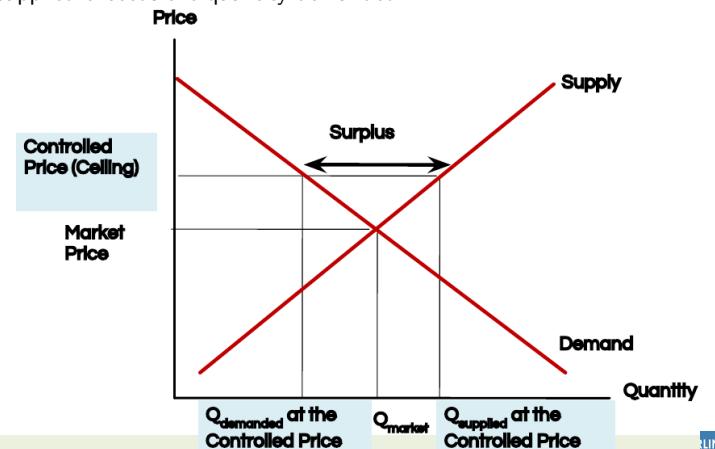
1. Surpluses
2. Lost gains from trade (deadweight loss)
3. Wasteful increases in quality
4. A misallocation of resources

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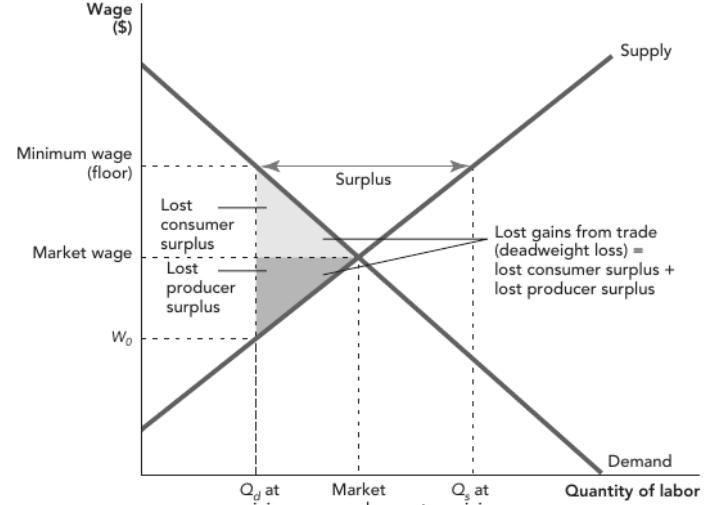
## 1. Surplus

When prices are held above the market price (price floor) quantity supplied exceeds the quantity demanded.



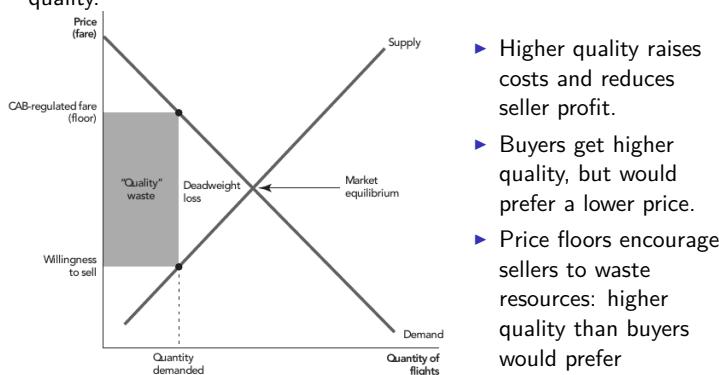
## 2. Lost Gains from Trade

Price floors reduce the gains from trade (create deadweight losses)



## 3. Wasteful Increase in Quality

Price floors that create surpluses lead to wasteful increases in quality.



## 4. Misallocation of Resources

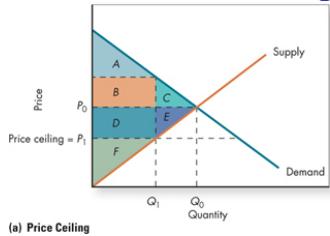
Price floors misallocate resources by:

- ▶ Allowing high-cost firms to operate.
- ▶ Preventing low-cost firms from entering the industry.

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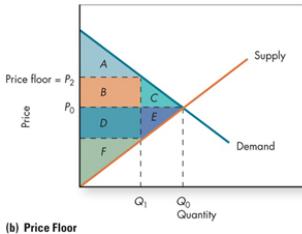
## The Effect of a Price Ceiling / Floor



A price ceiling transfers surplus from producers to consumers, generates deadweight loss, and reduces quantity

### The Difference Between Taxes and Price Controls

- ▶ Price ceilings create shortages and taxes do not
- ▶ Taxes leave people free to choose how much to supply and consume as long as they pay the tax
- ▶ Shortages may also create black markets



A price floor transfers surplus from consumers to producers, generates deadweight loss, and reduces quantity

## Government Intervention as Implicit Taxation

- ▶ Government intervention in the form of price controls could be viewed as a combination tax and subsidy, IFF there were no wasteful lines (time) and search costs, misallocation of resources, and changes in quality.
- ▶ An effective price ceiling is a government set price below the market equilibrium price
  - ▶ It acts as an implicit tax on producers and an implicit subsidy to consumers that causes a welfare loss identical to the loss from taxation
- ▶ An effective price floor is a government set price above the market equilibrium
  - ▶ It acts as a tax on consumers and a subsidy for producers that transfers consumer surplus to producers