Price Controls

PRINCIPLES OF ECONOMICS (ECON 210)

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Introduction

- Price controls take 2 forms:
  - Price ceiling: a legal maximum price for which a good can be (legally!) purchased.
  - Price floor: a legal minimum price for which a good can be (legally!) purchased.
- Price controls are government policies motivated by:
  - A well-intentioned (but usually misguided) effort to get more goods produced.
    - Even well-meaning policymakers usually bungle the task of encouraging more production.
  - Hayek's Fatal Conceit: "that anything produced by evolution could have been done better by the use of human ingenuity."*
    - The urge to plan or "command" the economy's production, practiced under Communism in Russia and other socialist economies.

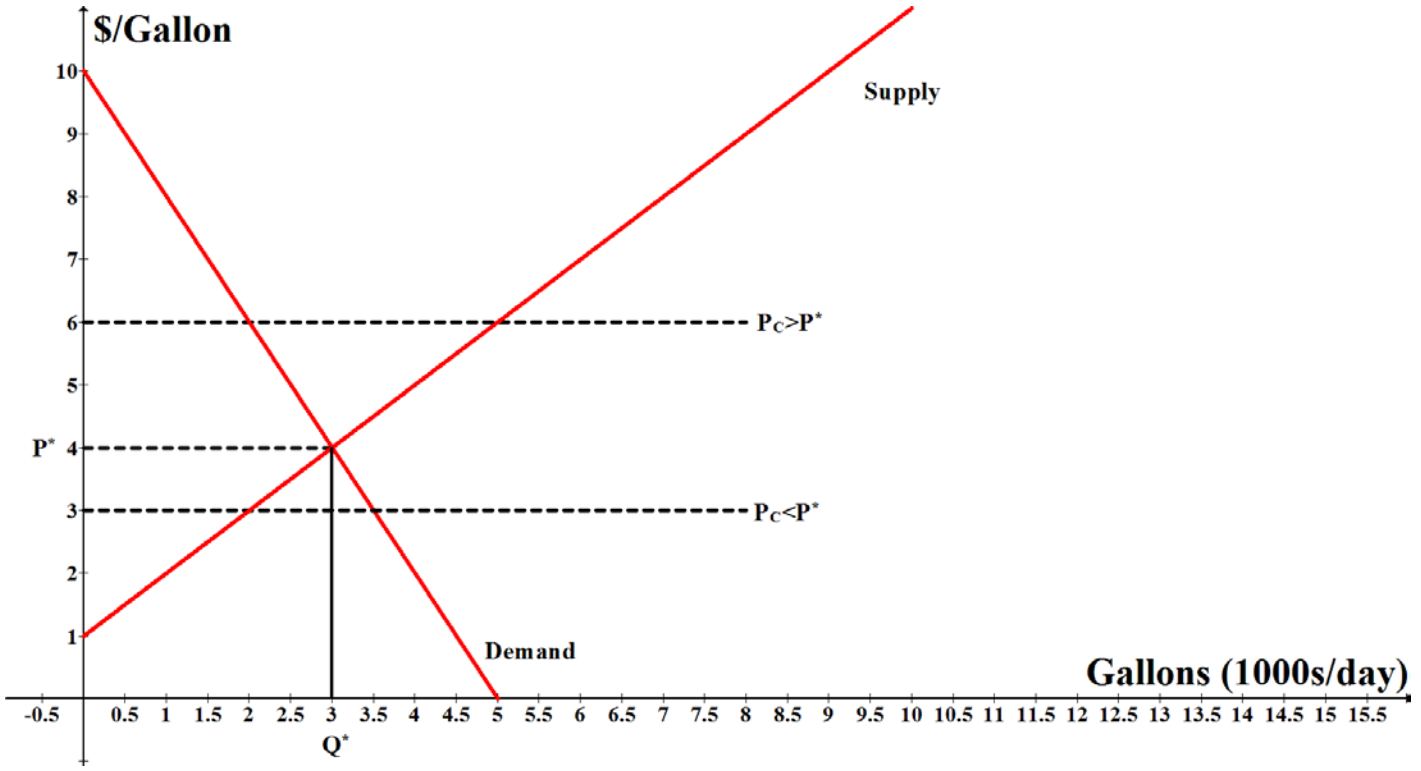
* Hayek, F.A. 1998. The Fatal Conceit: the Errors of Socialism. University of Chicago Press, Chicago. p. 83.

Example

- Gasoline for fuel is considered a necessity.
- Government officials, apparently aware of the law of demand, speculate that more people could afford this necessity <u>if the price were only lower</u>.
- They implement a <u>price ceiling</u> aimed at enabling more consumers to buy gas . . . and at a lower price.
  - Maybe those consumers will remember this fondly next time there is an election?
- What is likely to happen in the market for gas?

Binding or not?

- A price ceiling can be binding (below equilibrium): $P_C < P^*$. Or,
- A price ceiling can be non-binding (above equilibrium): $P_C > P^*$.
  - Nothing happens.

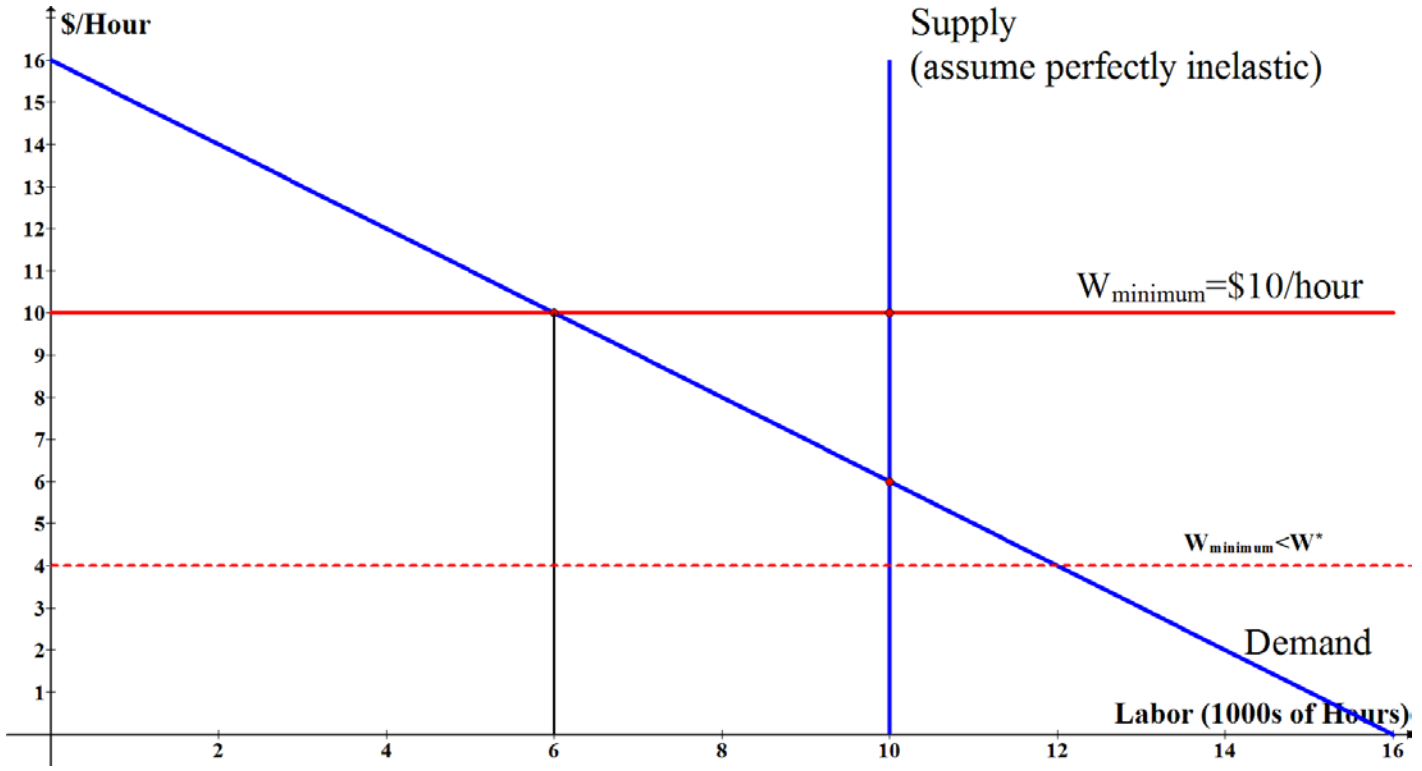


Example (price floors)

- Government wants to increase the incomes of employees with low incomes.
  - Income equals the wage times how much you work.
- "So if we increase the wage," they reason, "incomes will go up!"
- They implement a price floor on the wage.
  - Wage can be thought of as the "price" of labor.
  - A wage floor is more commonly referred to as the "minimum wage".
- What is likely to happen?

Binding or not? (price floors)

- A price <u>floor</u> can be binding (above equilibrium): $P_F > P^*$. Or,
- Non-binding (below equilibrium): $P_F < P^*$.
  - Nothing happens.



Summary

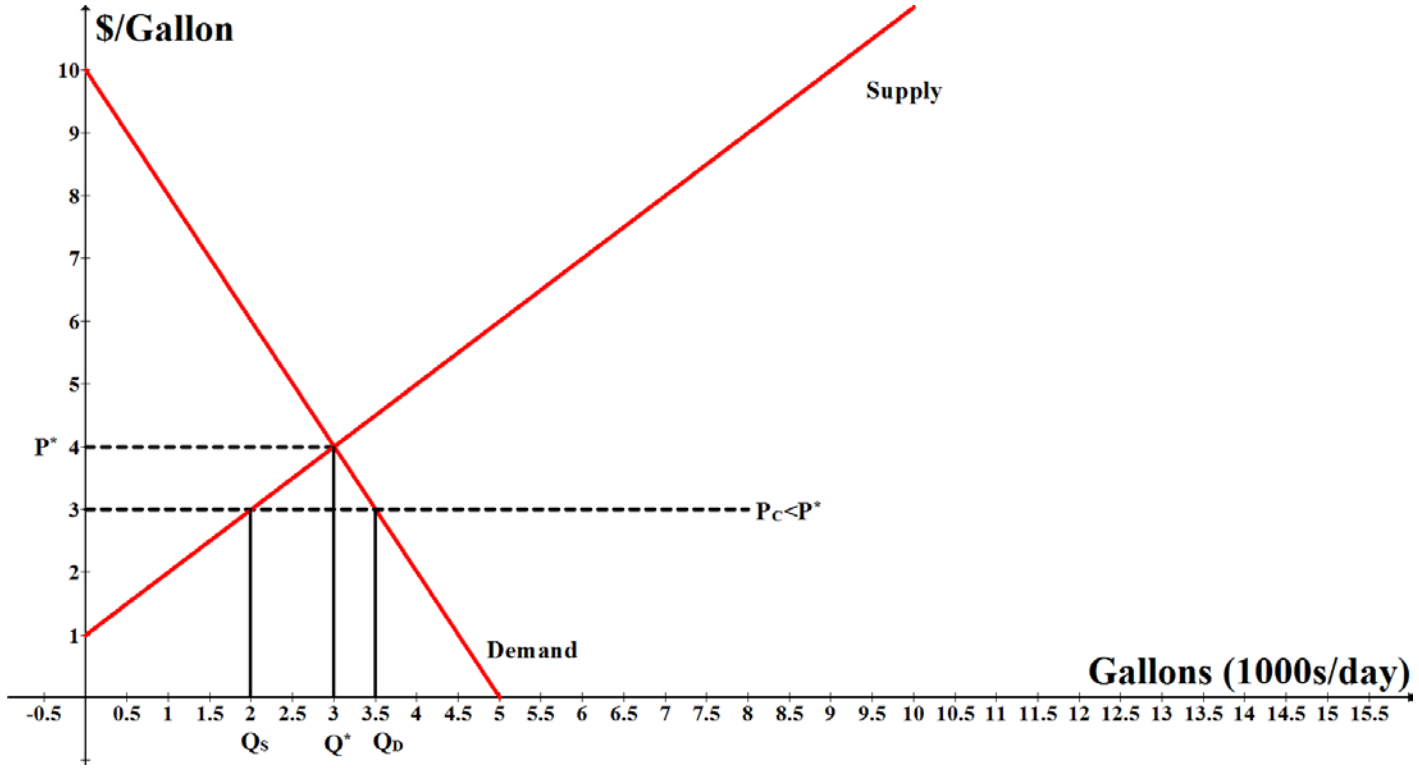
- Only if the price control is binding will it have any effect.
  - Below equilibrium for a ceiling is binding.
  - Above equilibrium for a floor is binding.
- "If you want the price of something to be different, just pass a law that says it has to be higher/lower!" – Guy who never took this class

Price ceilings and shortage

- In a sense, a price ceiling accomplishes its goal by increasing the quantity *demanded*.
- But the fatal flaw is ignoring the law of supply!
  - A binding ceiling means lower quantity supplied.
  - And a shortage: $Q_D > Q_S$.
- Instead of having a larger quantity of the good consumed, the policy has the opposite effect. The market quantity has actually decreased from Q^* to Q_S!!!

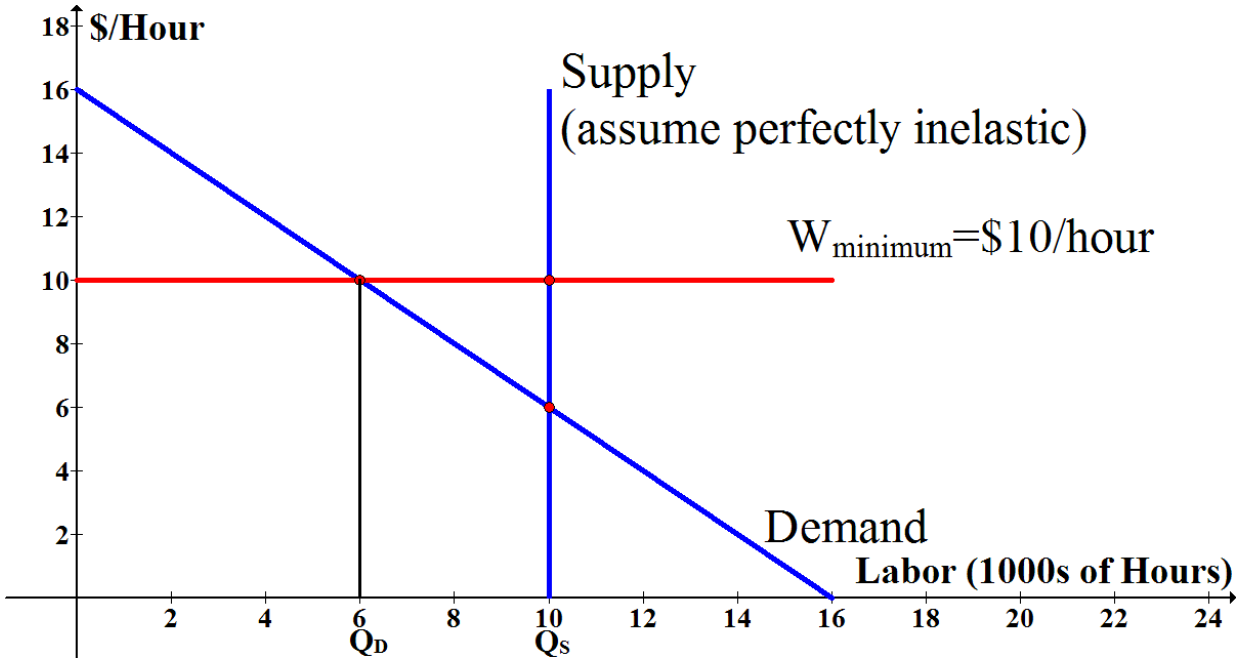
Price ceiling: legally imposed shortage

- The shortage is 1500 gallons $1000 * (3.5 - 2)$ in this example.
- Furthermore, since output is limited by quantity supplied, it's less than before the ceiling by 1000 gallons.



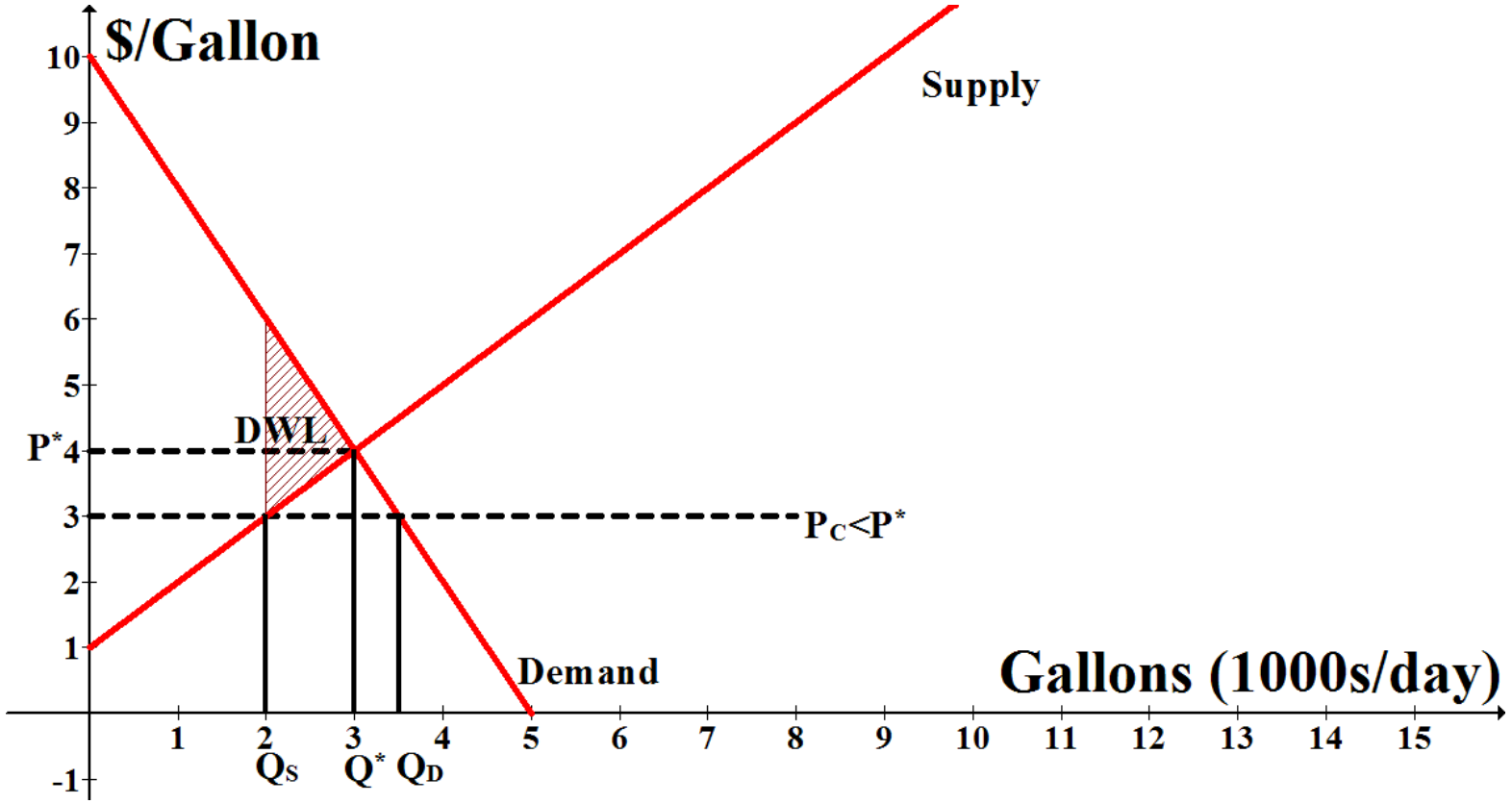
Price floor: legally imposed surplus

- Similarly the minimum works, in the sense of increasing the wage for workers *who are still employed*.
  - But there are fewer of them: 6000 hours instead of 10,000.
  - The 4000 hours (100 people at 40 hours?) could rightly be called "unemployed" as a result of the price floor, i.e., there is a surplus of labor.
- It's highly dubious that unemployment is consistent with the aims of the policy.



Effects on gains from trade

- Under surplus and shortage, output is limited by the smaller of Q_D and Q_S. It is always lower than equilibrium output.
- So there are fewer trades and fewer gains from trade.
  - I.e., there is a deadweight loss (DWL).



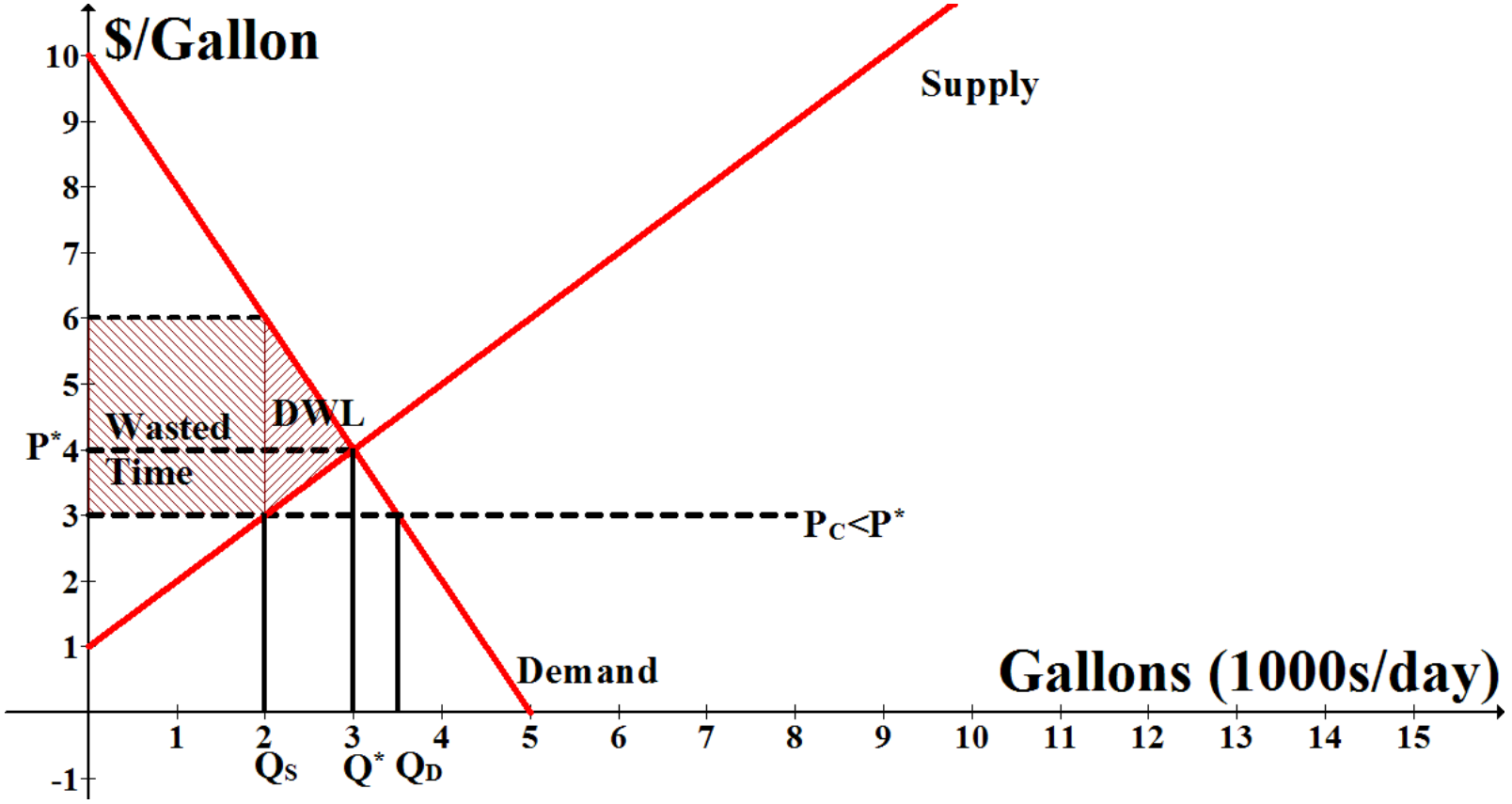
It gets worse . . .

- In a shortage, the units produced are valued by buyers more than sellers are legally allowed to charge.
  - Price can't perform its rationing function anymore.
- The economy has a couple options available for dealing with this problem.
  - Find a new mechanism for rationing, e.g., buyers pay by waiting in line in addition to paying with $.
  - Disobey the law by charging buyers more "under the table", i.e., a bribe.

Wasteful lines and search costs

- Either way buyers end up paying a higher price than at equilibrium.
- They either have to outbid the other buyers' bribery attempts (in this example that would raise the price to $6/gallon). Or,
- They have to waste the equivalent amount of time waiting in a line to ensure they get their ration of gas. Imagine paying an "intern" to save your place in line while you're at work.

Wasteful lines and search costs



- Bribery is actually better for social welfare!
  - Compared to personally waiting in line.
- At least someone gets money that way. Making buyers spend time sitting in a line is a total waste.

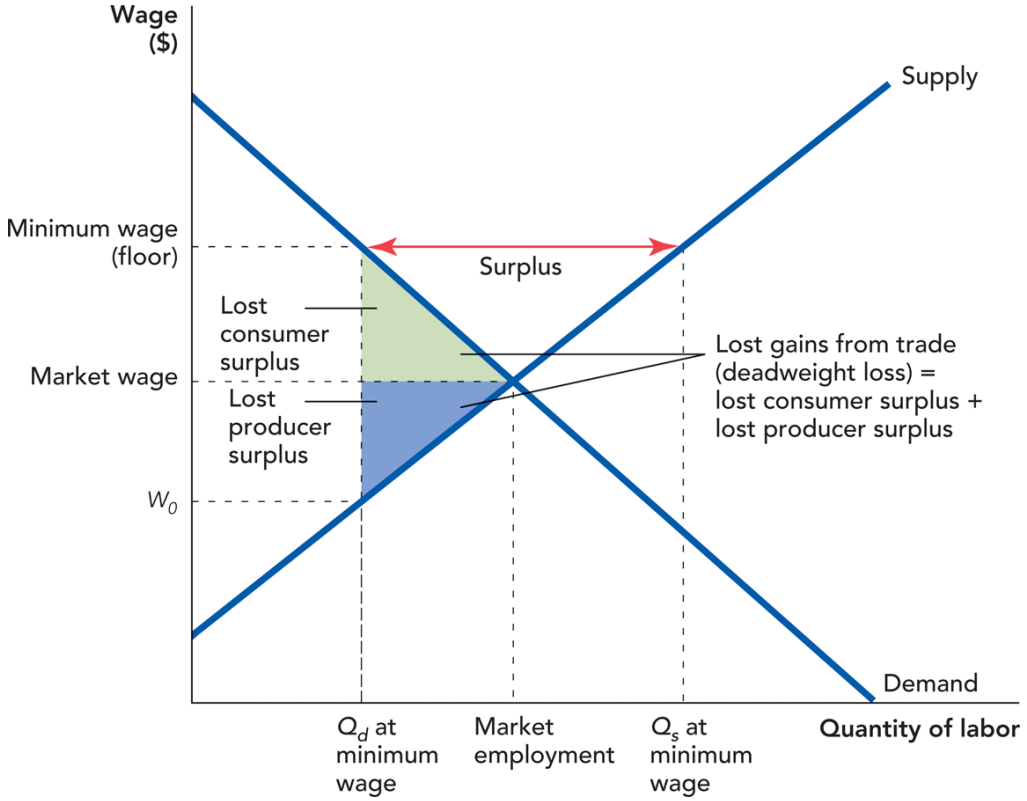
Price floors

- Binding floors have the same efficiency costs as ceilings (DWL).
- Instead of buyers wasting time in lines, sellers waste resources competing for the few buyers willing to pay the floor price.
  - The price is much higher than their cost of producing the good,
  - but unless they outcompete their rivals they won't be able to sell any output.
- So firms spend the excess revenue competing in terms of quality instead of price.

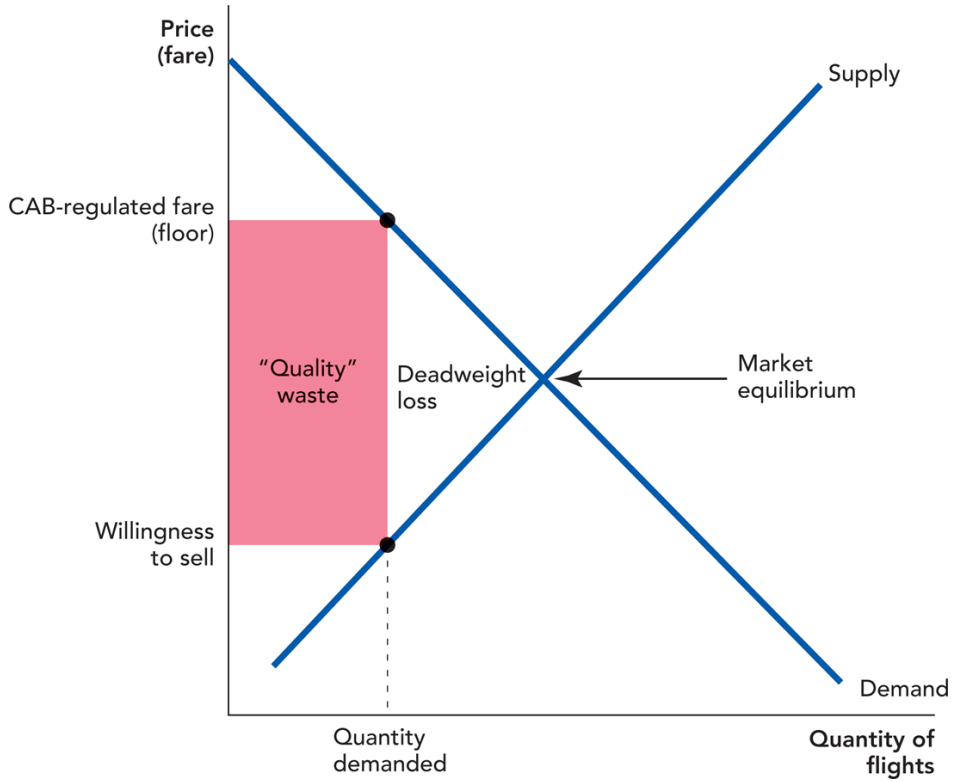
Competing with quality to justify the floor price

- While price floors were in effect in the air travel market, airlines lavished perks on flyers such as spacious seating and full meals, drinks, entertainment, and more frequent service.
- Since these regulations have been removed (in 1978), these perks have disappeared in favor of much lower (inflation adjusted) prices, revealing how unnecessary they were in the first place.
- Coupled with restrictions on entry by new airlines (also part of the regulations before 1978), price floors also have the effect of inhibiting innovations in cost saving technology.
  - Lifting this regulation has further reduced ticket prices by getting airlines to compete at lowering costs.

Losses from price floors



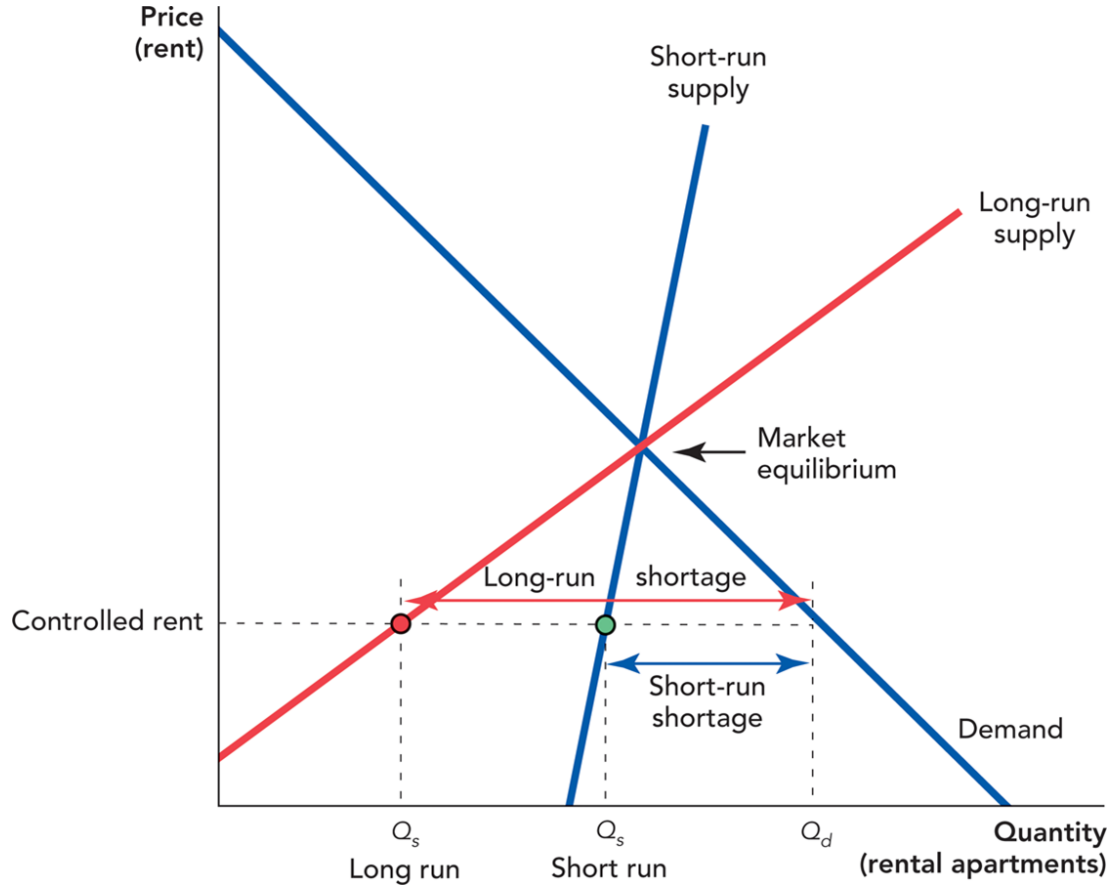
Deadweight loss from lower output



Wasteful quality increases in the air travel market

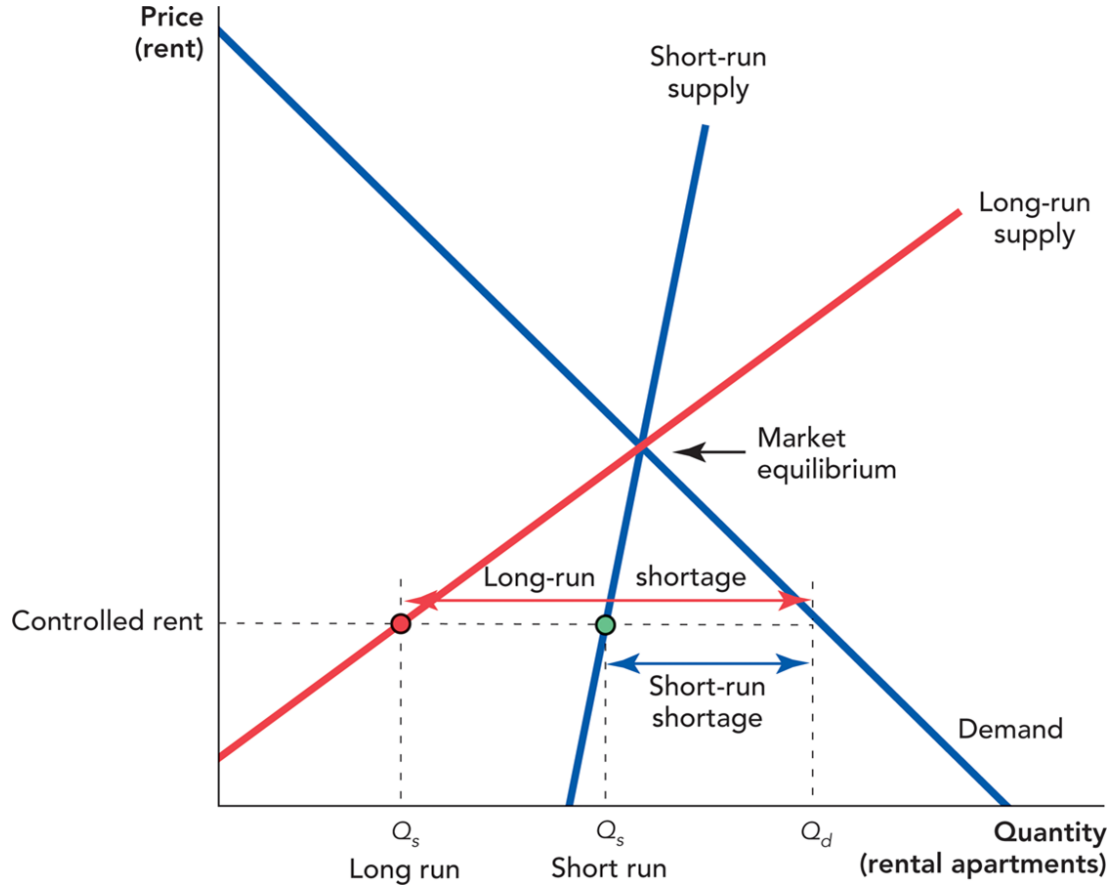
On the bright side

- Just kidding! It gets even worse.
- Supply tends to get more elastic in the long run.
- The longer price controls remain in effect, the larger the shortage will be.



Example: housing supply elasticity

- Consider this example of price ceilings (pictured): rent control.
- In the SR, supply is fairly fixed.
  - Construction of new buildings cannot be accomplished on a short time horizon—no matter how high price (rent) gets.
- But over time, more projects can be begun or cancelled, depending on the price.
  - The latter is what happens when rents are controlled, as old buildings deteriorate and are not replaced by new construction.



And worse . . .

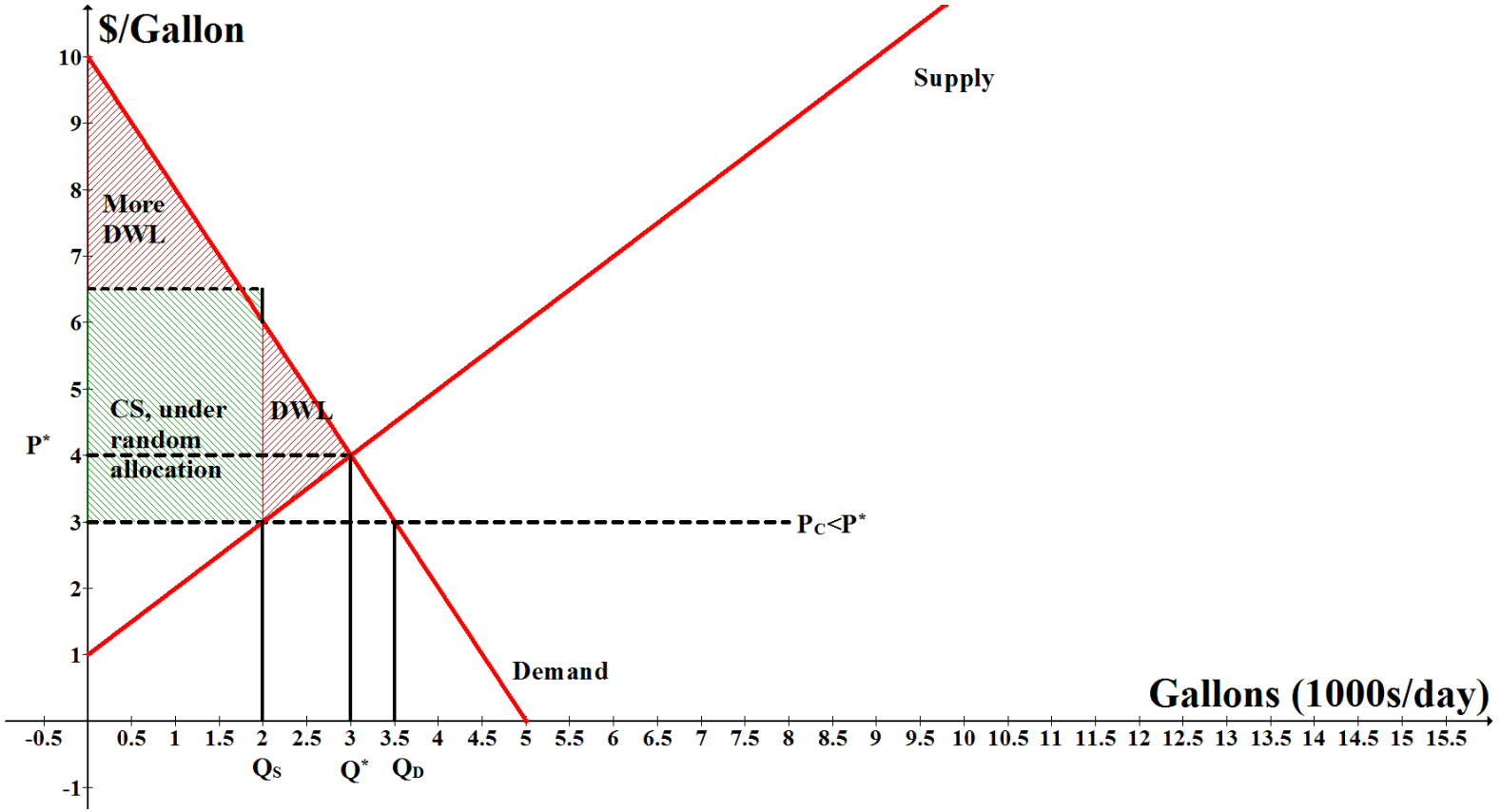
- Another option, if taking bribes is not possible or palatable, is simply to reduce the quality.
- Remember producers lose some of their gains from trade, too, so they could make it up by:
  - Producing more units of lower quality and selling them at the ceiling price. Or,
  - Reducing service.
- Pictured is an advertisement by Leo Burnett, summarizing this phenomenon.
  - At the "Museum of Communism" in Prague, CZ.

Take your Prozac because it gets worse

- The more effective price controls are at preventing rationing (via bribes or lines), the more harmful they are to gains from trade.
  - Say that enforcement is strict and bribes are prevented. And,
  - Each buyer's place in line is independent of how much he is willing to pay for gas.
- The short supply of gas does not even go to the most valuable uses: allocation could be random.
  - If everyone willing to pay at least the ceiling price has an equal chance of being served, the consumer surplus is based on the average willingness to pay.

Random allocation

- Ordinarily consumer surplus would be the whole area under the demand curve and above the ceiling price, up to the quantity produced.
- Under random allocation it is smaller because some of the most valuable uses are foregone in favor of less valuable uses.



Arguments for price controls

- Price controls help the poor.
  - Debatable whether shortages and unemployment are better for them than high prices and low wages.
  - But there are much better ways of helping the poor than price controls!
- Price controls discipline agents with market power: monopolies and monopsonies.
- "I don't understand the principles of economics, so I don't see the connection between price controls and shortages/surpluses." – same guy from before.

The dark side of price controls (just when you thought it couldn't get any worse)

- The largest experiment in history with command economy (the U.S.S.R.) furnishes the term for a phenomenon that is inevitable under widespread binding price controls.
- The phenomenon is an informal economy where blat is the currency instead of money.
- "blat" means favors exchanged by agents in charge of producing goods and enforcing the price controls.
- Access to goods in shortage is a form of *blat*, and its power grows with the severity of shortage.

The power to relax or tighten the price controls is *blat*

- Ordinary people have to do favors for elites to get goods in the informal market.
  - Because they can't get them at all in the formal market.
  - Reinforces the power of the regime that implemented the price controls in the first place.
- The post-communist version of this is "lobbying".
  - Firms "entice" government to eliminate competition, find loopholes in regulations, give them special treatment.

Conclusion

- If the reader is severely depressed at this point, I apologize.
- There simply is not much good economists can say about price controls.
- Prices are the fundamental tools for allocating goods to their highest value uses.
  - When they are prevented from performing their functions of rationing demand and signaling where resources should be shifted, bad things happen.
- They reduce the amount of output in markets where they bind, give agents bizarre incentives like wasting resources to compete over non-price rationed goods, bribing sellers, or transacting goods in an illegal informal economy.
- Even when the motive for price controls is noble, there are better policies available to accomplish the goal.

Applications

ECON 210: PRINCIPLES OF ECONOMICS

Cowen and Tabarrok Facts & Tools #10

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, a recent 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."

Cowen and Tabarrok Facts & Tools #10a

How do unregulated markets cure a “labor shortage” when there areno immigrants to boost the labor supply?

Solution:

Unregulated markets cure a labor shortage by pushing up the wage.

Cowen and Tabarrok Facts & Tools #10b

Why are businesses reluctant to let unregulated markets cure the shortage?

Solution:

Businesses don’t like paying higher wages. They’d rather increase the supply of labor.

Cowen and Tabarrok Thinking and Problem Solving #9a

In the town of Freedonia, the government declares that all street parking must be free: There can be no parking meters. In an almost identical town of Meterville, parking costs $5 per hour (or $1.25 per 15 minutes).

Where will it be easier to find parking: in Freedonia or Meterville?

Solution:

Meterville. In Freedonia, there will be a shortage of parking spots. In Meterville, there will be parking for those willing to pay the price.

Cowen and Tabarrok Thinking and Problem Solving #9b, 9c

b. One town will tend to attract shoppers who hate driving around looking for parking. Which one?

Solution:

Meterville, again. Their stronger preference for easy-to-find parking suggests a higher willingness to pay for it. Thus, the meters are a worthwhile price to pay to ensure a parking space.

c. Why will the town from part b also attract shoppers with higher incomes?

Solution:

People who have money to spend on meters typically have a higheropportunity cost for their free time. That typically means they earn higher wages.

Cowen and Tabarrok Challenges #7

Labor unions are some of the strongest proponents of the minimum wage. Yet in 2008, the median full-time union member earned $886 per week, an average of over $22 per hour (http://www.bls.gov/news.release/union2.nr0.htm).

Therefore, a rise in the minimum wage doesn't directly raise the wage of many union workers.

So why do unions support minimum wage laws?

Cowen and Tabarrok Challenges #7a

Skilled and unskilled labor are substitutes: For example, imagine that you can hire four low-skilled workers to move dirt with shovels at $5 an hour, or you can hire one skilled worker at $24 an hour to move the same amount of dirt with a skid loader.

Using the tools developed in Chapter 4, what will happen to the demand for skilled labor if the price of unskilled labor increases to $6.50 per hour?

Solution:

At a wage of $5, it is cheaper to hire 4 low-skilled workers than to hire one skilled worker. However, if the wage is $6.50, then 4 low-skilled workers would cost $26, making the skilled worker cheaper. This increase in the wage of low-skilled workers will reduce the demand for this type of work.

Cowen and Tabarrok Challenges #7b

If the minimum wage rises, will that increase or decrease the demand for the average union worker's labor? Why?

Solution:

If the minimum wage rises, that will increase the demand for the average union worker's labor, because the competition (unskilled labor) is getting priced out of the market.

Cowen and Tabarrok Challenges #7c

Now, let's put the pieces together: Why might high-wage labor unions support an increase in the minimum wage?

Solution:

Unions might support a rise in the minimum wage because it makes high-wage union labor more attractive than lower-wage labor.

Alternatives to price controls

- Wage subsidies like the EITC raise the incomes of low wage workers without moving up the labor demand curve. Increase employment rather than decreasing it!
- Subsidies for rent and food have similar effects, increasing consumption rather than creating shortages.
- Gas should probably not be subsidized though, because of its massive negative externalities: pollution, congestion, sprawl.

Back.