

Thursday, Oct 14, Lecture 11

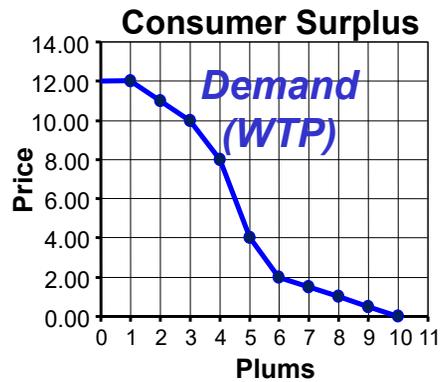
Government Intervention in Competitive Markets



Clicker Question

If the price in this market is \$7, the consumer surplus would be approximately _____.

- a. \$100
- b. \$13
- c. \$6
- d. \$4



Social Surplus and Deadweight Loss (*DWL*)

- Social Surplus (*SS*) is the sum of Consumer Surplus (*CS*) and Producer Surplus (*PS*).

$$SS = CS + PS$$

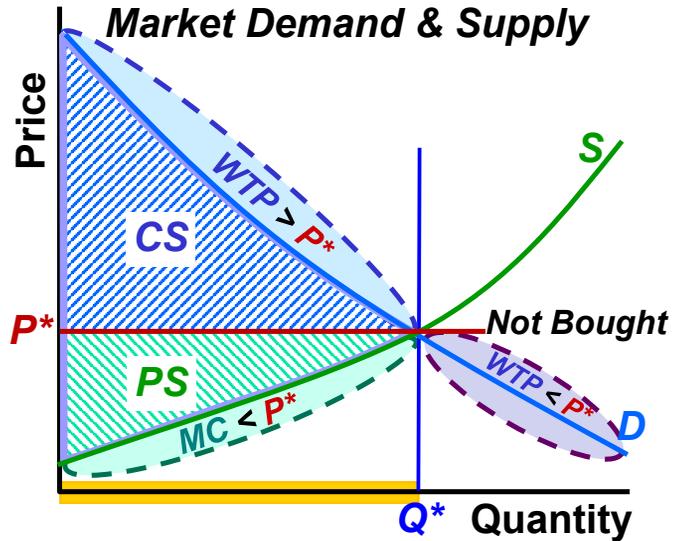
- In ideal conditions, perfect competition creates the maximum possible social surplus.
- However, market imperfections or government intervention can reduce the social surplus to a level below the maximum.
- The social surplus that could have been created but was lost is called the deadweight loss (*DWL*).

Free Markets: Allocation with Prices

- Every economic system has a process for deciding on the allocation of goods and services (who gets what, who does the work).
- In a free-market system, this is normally done with prices.
- In a free market with perfect competition, using prices will maximize social surplus.
- But the results may not be equitable, or some markets may be socially undesirable,...
- ...so governments may decide to intervene in the market even if a *DWL* is created.

Review: Social Surplus at Equilibrium Prices

- When goods are allocated with equilibrium prices P^* ,
- ...consumers with $WTP > P^*$...
- ...acquire goods with $MC < P^*$.
- Consumers with WTP less than P^* do not acquire any goods.
- Allocation with prices maximizes surplus, because the competitive-equilibrium quantity Q^* is produced,...
- and goods with the lowest MC go to consumers with the highest WTP .



Dissatisfaction with Market Outcomes

- Free markets are very good at creating surplus and reducing deadweight loss,...
- ...even when they deviate from the perfectly competitive model.
- But sometimes free markets fail (e.g. economic crisis of 2008-10),...
- or they may produce unacceptable results.
- Free-market economies may have outcomes that seem unfair (inequitable), because free markets may yield
 - many poor people who lack basic necessities, or
 - individuals receiving more, or less, than they deserve.

- Also, in many cultures, some markets are thought to be socially undesirable (repugnant):
 - heroin, cocaine, alcoholic beverages
 - prostitution
 - body parts
 - babies
 - babysitting (??)
- For the opinion of a free-market supporter, read Alex Tabarrok on the subject [*Course Schedule*].
- Most economists think that some interference with markets is necessary,...
- but we believe that policymakers should be cautious about doing so, because of efficiency loss.

Government Intervention

- Government intervention in competitive markets usually reduces economic efficiency,...
- ...but government intervention may create outcomes that are more acceptable to members of society.
- Common forms of government intervention:
 - price controls
 - nonprice rationing
 - taxes and subsidies applied to specific goods and services
 - income and wealth redistribution

Price Controls

■ Large groups of people are often unhappy with the market-equilibrium price.

- Farmers, when the price of corn is too low.
- Renters in Boston, when apartment rental prices are too high.

- Consumers, when the prices of bread and other food items are too high.

■ In such situations, governments may intervene to place **upper limits** or **lower limits** on prices.

Types of Price Control

■ Price Ceiling

- a government-set **maximum** price
- effective only if **below** the equilibrium price
- **Example:** rent control

■ Price Floor

- a government-set **minimum** price
- effective only if **above** the equilibrium price
- **Example:** legal minimum wages

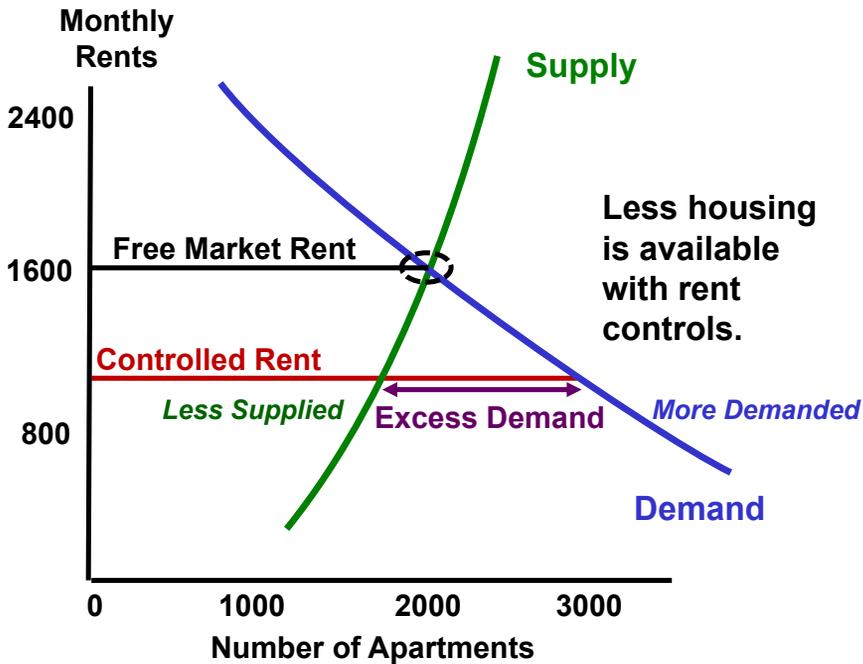
■ In the past, these market interventions were common, even in wealthy countries,...

■ ...but they've been much less common in recent years.

Example: Rent Controls

- When apartment rental prices are too high, or rise too quickly, local governments sometimes impose **rent controls**.
- Rent controls are legal regulations that control apartment rental prices (a type of **price ceiling**).
- Rent controls are often enacted in times of emergencies or crises, (for example, during wars).
- In 2020 the Massachusetts legislature considered rent control again, but they did not approve it.

Rent Control and Excess Demand



Positive Effects of Rent Control

■ Rent control may...

- help poor families pay for their housing,
- soften the effects of economic shocks, allowing people to stay in their apartments when rents increase.

Evicting people from their homes has very high opportunity costs that are considered by the market.

■ Rent controls may stabilize neighborhoods,

- preventing them from becoming **mostly rich** (if the poor are forced to move out),
- or **mostly poor** (when the poor move in).

Negative Effects of Rent Control

- Rent control creates excess demand.
 - Some people who would have been able to rent apartments without rent control...
 - ...will not be able to find them with rent control.
- When there is excess demand, the price does not determine who gets available apartments,...
- ...but distributing apartments without using prices causes many problems.

Negative Effects of Rent Control

- Problems caused excess demand for apartments
 - bribes or illegal payments that exceed rent limits
 - ◆ “You can have the apartment if you secretly pay me more.”
 - poor maintenance of existing apartments
 - ◆ “If you’re not happy, I’ll give the apartment to someone else.”
 - decline in the quality of new apartments
 - difficulty in changing apartments
 - discrimination by landlords against racial or religious minorities
 - ◆ Lots of people want my apartment, so I’ll give it to someone of my own race and religion.

- But keep in mind that free rental markets are not a Pareto improvement over rent-controlled markets,...
- ...because some renters would be worse off if rent controls are removed.
- This means that there will be strong opposition to removing rent controls once they are in place.

Nonprice Rationing

- When there is excess demand, the price does not determine who gets what,...
- ... so societies distribute goods and services without using prices (nonprice rationing).
- There are many spontaneous nonprice rationing mechanisms.
 - Queues (lines)
 - ◆ in polite societies
 - first-come, first-served
 - ◆ in many societies

■ Other spontaneous mechanisms...

- bribery and “under-the-table” payments
 - ◆ common without strict enforcement
- personal connections
 - ◆ almost everywhere

■ Government-enforced nonprice rationing

- Ration books
 - ◆ Requires planning and punishment for cheating

Nonprice Rationing: Advantages

- In situations of uncertainty and danger, nonprice rationing may be safer than letting markets work.
 - Distribution of food during wars or famines.
 - Vaccination to protect not only the people who are vaccinated...
 - ...but other members of society as well!
 - Should vaccination be required?
 - ◆ Why or why not?

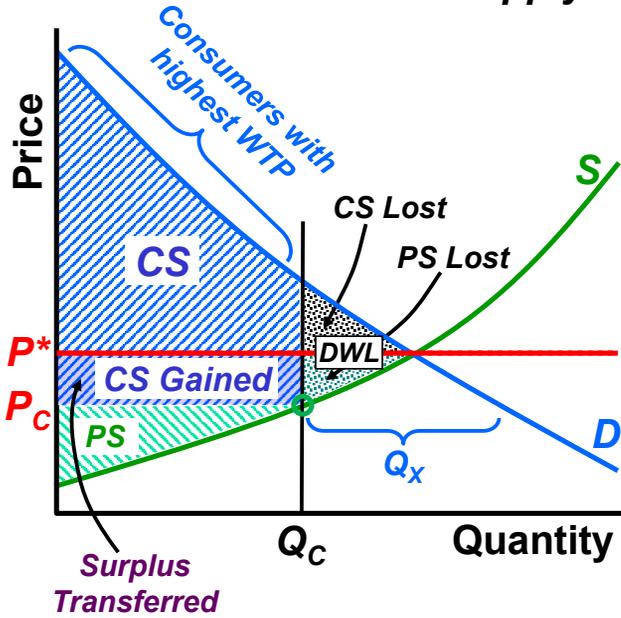
- The right type of nonprice rationing may increase efficiency when people are asked to pay less than cost.
 - General medical services. If the doctor doesn't think the matter is important, you may not get an appointment.
- In emergencies, nonprice rationing may work faster than markets.
 - Police and fire department services.

Nonprice Rationing: Disadvantages

- Nonprice rationing is usually not efficient.
- *People with lower WTP (less need) may be more successful at obtaining goods than those with higher WTP (greater need).*
 - This lowers consumer surplus.
- Nonprice rationing mechanisms are costly to use.
 - **Example:** Under rent control, potential renters may waste a lot of time trying to convince landlords to let them have apartments.
 - These costs are called **transaction costs**.
 - Transaction costs lower consumer surplus.

Example: Rent Controls for Apartments

Market Demand & Supply



■ The market for apartments:

- equilibrium rent P^*
- controlled rent P_C
- transacted quantity Q_C ("short-side rule")
- excess demand Q_x

■ Suppose consumers with highest WTP get apartments.

■ Rent controls have caused a transfer of surplus from landlords to renters,

■ but controls also cause both renters and landlords to lose surplus because quantity is reduced.

■ Total surplus decreased (DWL), but CS may increase.

For outline

■ The previous graph of rent controls showed DWL from quantity reduction,...

■ but did not include efficiency losses from nonprice rationing.

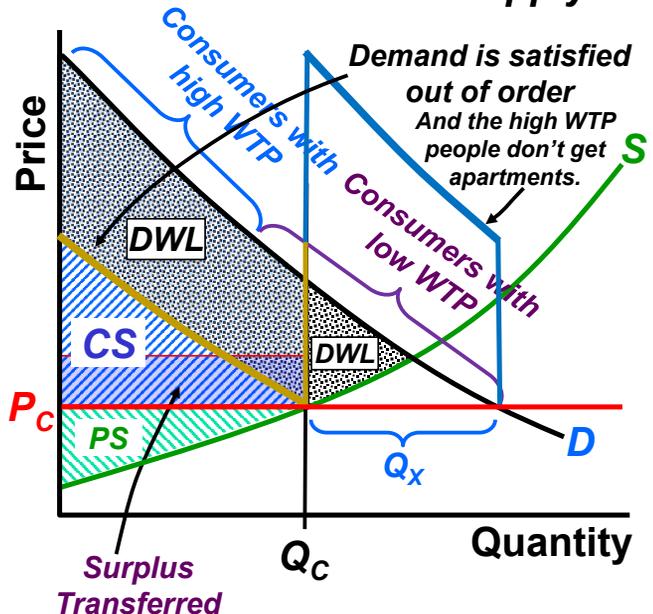
■ In reality, rent controls reduce surplus even more than was indicated there.

■ **Example:** The guys with low WTP may get the apartments...

■ ...instead of the guys with high WTP.

- Demand would be satisfied out of order.
- A lot more surplus will be lost!

Market Demand & Supply



Summary of DWL from Price Controls

- When the distribution of income is very unequal, WTP is not a good measure of consumer value .
 - Then CS and SS aren't great measures of efficiency.
- But suppose the distribution of income is equitable and WTP is a good measure of consumer value.
 - Then $SS = WTP - MC$
 - Raising or lowering the price with price controls, causes a fall in the quantity sold from Q^* to Q_C .

- If price controls reduce the price, then there is excess demand and nonprice rationing.
 - If the goods are obtained by those with the **highest WTP**, the only **DWL** is the area of the triangle and transaction costs.
 - But if the goods are obtained by those with a **lower WTP**, there will be more **DWL**, and social surplus is reduced even more.

Taxes on Goods and Services

- Like other kinds of government intervention in markets for goods and services, taxes tend to reduce social surplus.
- But in general, economists prefer taxes to other kinds of intervention...
- ...because taxes lead to market-clearing* prices (*no excess demand or supply),...
- ...and do not result in nonprice rationing.

Clicker Question

In competitive equilibrium, when goods are allocated **with prices**,

- a. consumers with low WTP may try to bribe sellers.
- b. consumers who obtain the goods have higher WTP than those who do not.
- c. consumers are likely to wait in long lines.
- d. equity is guaranteed.

End of Lecture 11