Lecture 5
Chapter 4: Economic Efficiency, Government Price Setting, and Taxes
Economic Surplus: An Introduction

- Economists like markets. **WHY?**
  - __________________________________________
  - __________________________________________
  - __________________________________________
  - __________________________________________

- **Example:**
  - Please share when you got a good deal on something
    - Willingness to pay above market price is called **Consumer Surplus**
    - **Commercial** Illustrating this idea
    - Need two things: (1) How much you are willing to pay and (2) Price
  - Ebay – Please share when you sold something for more than you were expecting
    - Received more for a good than the minimum you would have accepted → **Producer Surplus**
Consumer Surplus

• How Many cups would be Sold at a Price of $3.50?
  
• ____________________________

• Does Each person have to pay their willingness to pay?
  
• ____________________________

• Note: The demand curve can be thought of as the marginal benefit curve
Consumer Surplus

- **Consumer Surplus:** The difference between the highest price a consumer is willing to pay and the price the consumer actually pays.

- **Example:** New chair

- Measures the net benefits from participating in the market (i.e., what you would pay minus what it actually costs.)

![Graph showing consumer surplus with a market price of $3.50](a)
Consumer Surplus

• How do we measure the value to consumers of a change in price?

(a) Consumer surplus with a market price of $3.50
(b) Consumer surplus with a market price of $3.00
Consumer Surplus for an Entire Market.

![Graph showing consumer surplus]

- **Price (dollars per cup)**
- **$3.50**
- **Demand**
- **Quantity (cups per week)**
  - 15,000
Producer Surplus

- When will a producer supply a cup of tea?

Why isn’t this area part of the Producer’s Surplus?
**Producer Surplus:** Difference between the price a firm receives and the lowest amount it would be willing to accept

- Measures the *net benefit* to producers of participating in the market (i.e. Amount Firms receive from consumers – Costs)
**Economic Surplus**

**Economic surplus**  The sum of consumer surplus and producer surplus.

CS: Area Below _______ Curve and above _______.

PS: Above _______ Curve, Below _________

Blue area + Red Area = Economic Surplus
Economic Efficiency and Deadweight Loss

- When **Surplus** (our measure of better-off-ness) is as big as possible → **Economic Efficiency**
  - Marginal Benefit = Marginal Cost
  - Equilibrium

- **Deadweight Loss**
  - Def: The surplus lost from the market not being at the best point.
Deadweight Loss

- At 14,000 cups, there is surplus that society could be enjoying, but they are not.
  - Extra Benefits
  - Extra Costs
  - Should society consume the 14,000\textsuperscript{th} unit? A good Deal?
    - __________
    - __________
    - __________
    - If ___ produced/consumed, that surplus will be **lost**
Deadweight Loss

- 16,000 cups is too much!
  - Extra Benefits = $
  - Extra Costs = $
  - Should society consume the 16,000\text{th} \text{ unit? A good deal}

- ________
  ________
  ________

- If produced/consumed, that surplus will be \text{lost}

- The \text{lost} triangle is subtracted from surplus
Economic Efficiency

• At a Price of $2.20, where is CS?
• Where is PS?
• What do C and E represent?

**Deadweight loss** The reduction in economic surplus resulting from a market not being in competitive equilibrium.
Application

Class Discussion

- What do you think about minimum wage?
  - Should the minimum wage be raised? Why?
  - Should the minimum wage be lowered? Why?
- Is this ever discussed on a political level?

Minimum Wage

- **Def:** When government intervenes and sets the lowest legal wage that can be paid to workers.
• Notice, the blue line tells us how many people firms want to hire at every wage.
• Who are the people that benefit from the minimum wage?
  • ______________________
• Who are the losers from minimum wage?
  • ______________________
  • ______________________
• Are these people likely to be low or high skilled?
  • ______________________
  • ______________________
  • ______________________
• Email
Price Floor Minimum Wage

- **Notice**: Reduction in the Number of workers
- **Appearance of Unemployment**
Price Floor

- Price Floor at $3.50
- How Much wheat is sold at a price of $3.50?
  - 1.8 billion bushels

- Compared to a Price of $3.00 what has happened to Consumer Surplus?
  - __________
  - __________

- Compared to $3.00 what happened to overall Surplus
  - ________________

- What would happen to price if Government had set a price floor of $2.50?
  - _______ Why?
  - ________________

- In other words, price naturally stops at $3.00. Price won’t naturally go below $3.00

2 Key Points
1. Prices floors cause DWL
2. Price Floors have to be set above Equilibrium to be binding
Price Ceiling – Rent Control

• What do you think about rent control?
  ◦ Do you think that rent control would be good in Ogden? Why?

• Rent Control is a type of Price Ceiling
  ◦ Def: When the government intervenes in a market and forces price to be below equilibrium
Price Ceilings – Rent Control

• Price Ceiling of $1,000
• How many units rented at a price of $1,000?
  • __________

Compared to a Price of $1,500 what has happened to Producer Surplus?
• ______________
• ______________

Compared to $1,500 what happened to overall Surplus
• ______________

• What would happen to price if Government had set a price Ceiling of $2,000?
  • __________ Why?
  • ______________

In other words, price naturally stops at $1,500. Price won’t naturally go above $1,500

2 Key Points (1) Prices ceilings cause DWL

(2) Price ceilings have to be set below Equilibrium to be binding
Example

- Rent Control – What is it + Examples SMRC GM Y SMBM WPV
Taxes and Surplus

- Surplus, a measure of how well off we are as consumers
  - What do you think happens to surplus in the case of a tax?
Taxes and Deadweight Loss
Assume the government requires sellers to pay a dollar tax per pack, what is going to happen to our graph?

Why?

Does Equilibrium price increase by more or less than the amount of the tax?

Why?

Consumers pay $4.90, How much do producers receive?

$______, WHY?

Result: Taxes Cause a DWL Loss in Competitive Markets
Taxes DWL and Volkswagen

- Who like Volkswagen products?
- What if VW made a truck? Would you like to try it out?
- Guess what! They just started but it will not be imported to the US
- Why? – TAXES!
- DWL of taxation!
Tax Incidence

- In terms of lost Surplus, who bears the burden of the Tax?
  - Is it the person who pays the tax to the government?
  - What does it depend on?
    - Consumers *relatively more inelastic*, consumers bear the burden
    - Suppliers *relatively more inelastic*, suppliers bear the burden.
  - Is the demand for cigarettes inelastic?
  - Who would bear the burden of Cigarettes?
Tax Incidence

Price the consumer pays after the $1.00-per-pack tax is imposed

Price received by producers after paying the tax

$1.00-per-pack federal tax on cigarettes shifts the supply curve up by $1.00.

Deadweight loss or excess burden from tax