

Efficiency and Exchange

CHAPTER 7

Market Equilibrium and Efficiency

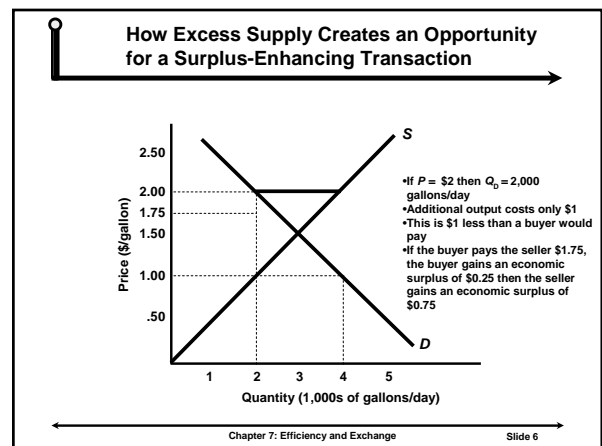
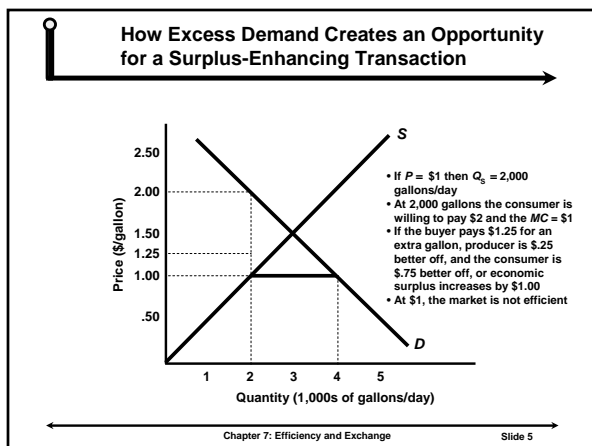
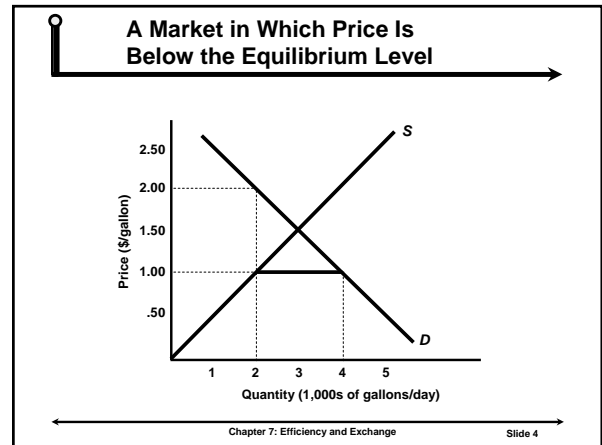
- Are markets always efficient and equitable?

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Market Equilibrium and Efficiency

- A market equilibrium is efficient
 - If price and quantity take any other than their equilibrium values, a transaction that will make at least some people better off without harming others can always be found.
 - When economic surplus is maximized.

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Market Equilibrium and Efficiency

- Observations on Efficiency
 - When price is above or below the equilibrium, the quantity exchanged will be below the equilibrium.
 - The vertical value on the demand curve (marginal benefit) is greater than the vertical value on the supply curve (*MC*).
 - Only the equilibrium will maximize economic surplus.

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Market Equilibrium and Efficiency

- Markets will be efficient when
 - Buyers and sellers are well informed.
 - Markets are perfectly competitive.
 - Supply measures all relevant costs.
 - Demand measures all relevant benefits.

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Market Equilibrium and Efficiency

- Why is efficiency a useful goal?
- Should efficiency be the only goal?

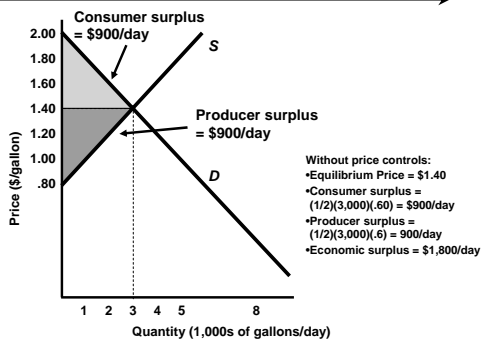
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The Cost of Preventing Price Adjustments

- Price Ceilings: Do They Help the Poor?
 - Example: Price Ceiling for Home Heating Oil

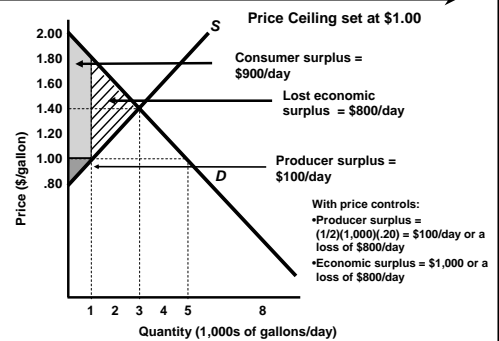
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Economic Surplus in an Unregulated Market for Home Heating Oil



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The Waste Caused by Price Controls



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The Cost of Preventing Price Adjustments

- The reduction in economic surplus from a price ceiling will be underestimated when
 - The consumers who receive the product are not the consumers who value it the most.
 - Consumers take costly actions to enhance their chances of being served.

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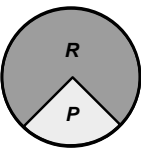
The Cost of Preventing Price Adjustments

- What program could be used to help the poor get heating oil that would be more efficient than a price ceiling?

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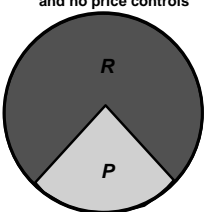
When the Pie Is Larger, Everyone Can Have a Bigger Slice

Surplus with price controls



With price controls set at \$1.00 the economic surplus is \$1,000/day
 *R = economic surplus received by rich people
 *P = economic surplus received by poor people

Surplus with income transfers and no price controls



Without price controls & with income transfers economic surplus is \$1,800/day
 *R & P have the same share and a much larger economic surplus

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The Cost of Preventing Price Adjustments

- What would be a potential cost of income transfers?

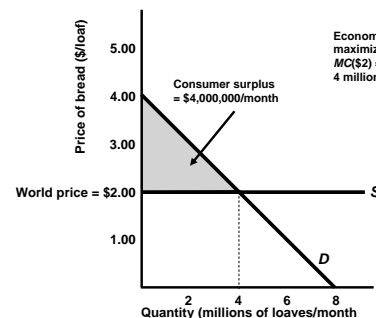
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The Cost of Preventing Price Adjustments

- Price Subsidies: Do They Help the Poor?
 - By how much do subsidies reduce total economic surplus in the market for bread?
 - Assume a small nation imports all its bread at the world price of \$2.00

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Economic Surplus in a Bread Market Without Subsidy

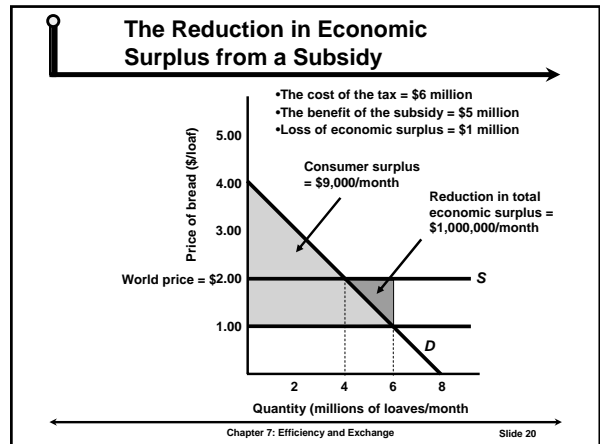


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The Reduction in Economic Surplus from a Subsidy

- Assume a \$1/loaf subsidy
 - Consumers buy 6 million loaves
 - Consumer surplus will increase to \$9 million
 - Economic surplus will fall by \$1 million

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The Cost of Preventing Price Adjustments

- How could we provide assistance to low income consumers more efficiently?

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The Cost of Preventing Price Adjustments

Economic Naturalist

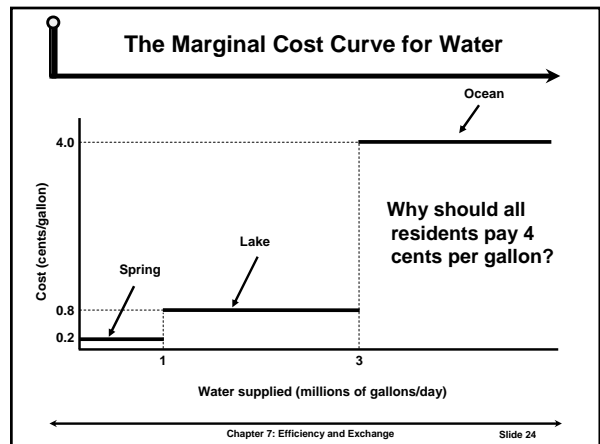
- First-Come, First-Served Policies
 - Why does no one complain any longer about being bumped from an overbooked flight?
- Why offer compensation when the cost of first-come, first-served to the seller is zero?

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The Marginal Cost Pricing of Public Services

- How much should a city charge for water?
 - Three sources of water
 - Spring: 1 million gallons/day, .02 cents/gallon
 - Lake: 2 million gallons/day, .08 cents/gallon
 - Ocean: 4 cents/gallon
 - Assume if $P = 4$ cents/gallon, $Q = 4$ million gallons

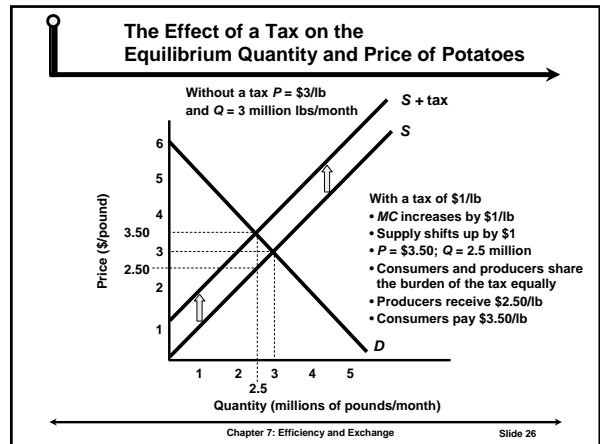
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Taxes and Efficiency

- Who Pays A Tax Imposed On Sellers of a Good?

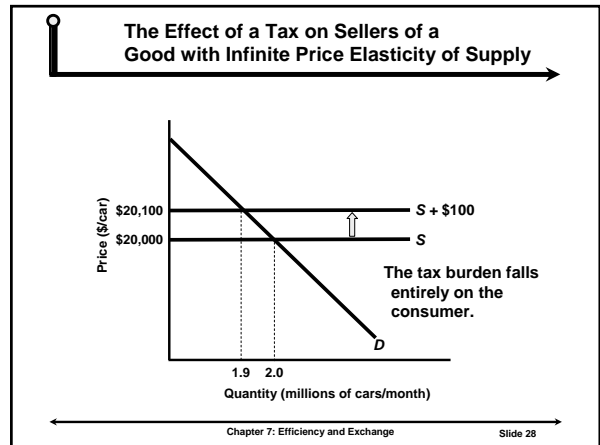
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Taxes and Efficiency

- How will a tax on cars affect their prices in the long run?
 - Impose tax of $\$100$ per car.
 - Suppose supply of cars perfectly elastic at $\$20,000$.
 - Supply shifts to $\$20,100$.

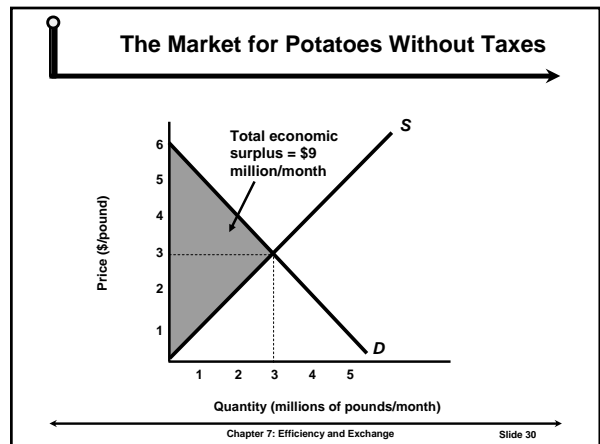
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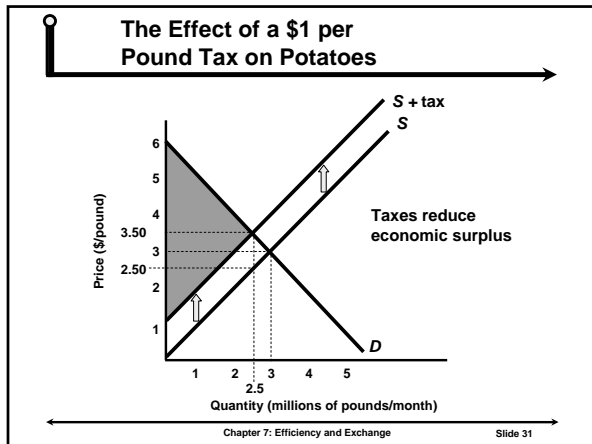


Taxes and Efficiency

- Who Pays a Tax?
 - When supply is perfectly elastic, the tax burden will fall entirely on the consumer.

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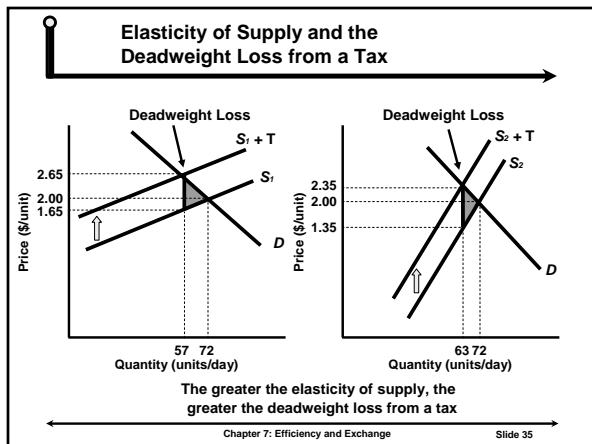
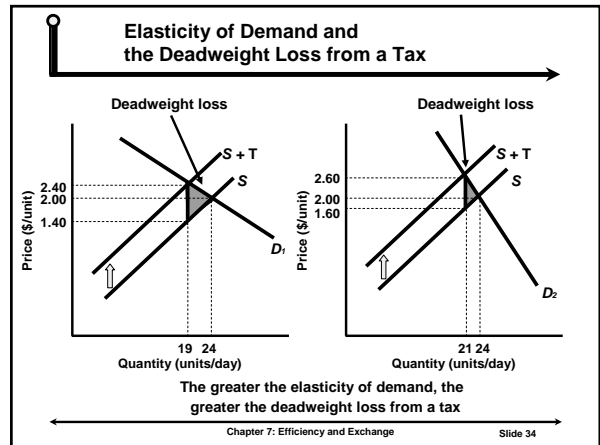
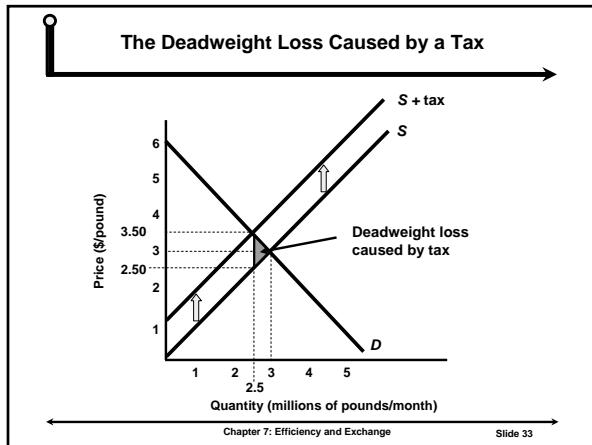




Taxes and Efficiency

- Deadweight Loss
 - The reduction in total economic surplus that results from the adoption of a policy

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Taxes and Efficiency

- Could a tax on land be efficient?
- Could a tax on pollution increase economic surplus?

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