

CHAPTER 7: Welfare Economics

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Econ 130(3)
Fall 2009

September 25 and 28, 2009

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Welfare Economics

Welfare economics is the study of how the allocation of resources affects economic well-being.

- ◆ Buyers and sellers receive benefits from taking part in the market.
- ◆ The equilibrium in a competitive market (but not in other types of markets) maximizes the total welfare of buyers and sellers.

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Welfare Economics

- ◆ Consumer surplus measures economic welfare from the buyer's side.
- ◆ Producer surplus measures economic welfare from the seller's side.

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Consumer Surplus

Consumer surplus is the amount a buyer is willing to pay for a good minus the amount the buyer actually pays for it.

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Four Possible Buyers' Willingness to Pay...

| Buyer | Willingness to Pay |
|--------|--------------------|
| John | \$100 |
| Paul | 80 |
| George | 70 |
| Ringo | 50 |

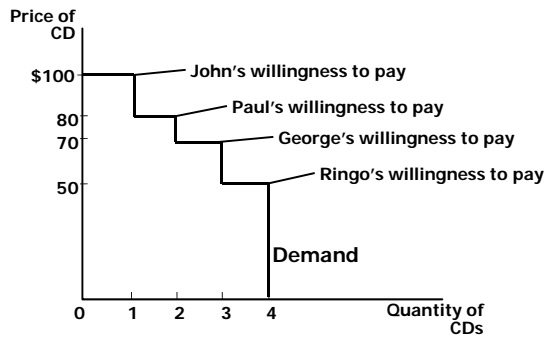
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Consumer Surplus

The market demand curve depicts the various quantities that buyers would be willing and able to purchase at different prices.

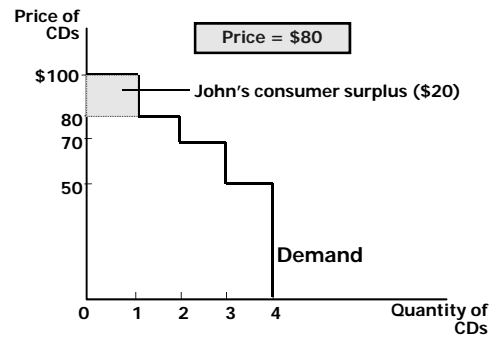
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Measuring Consumer Surplus with the Demand Curve...



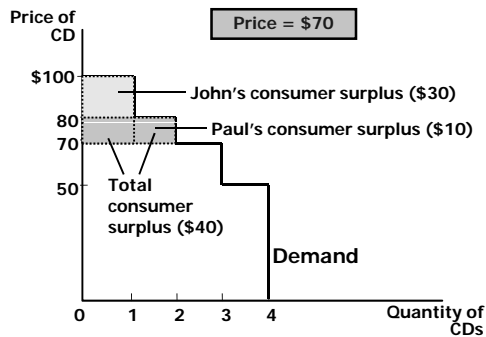
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Measuring Consumer Surplus with the Demand Curve...



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Measuring Consumer Surplus with the Demand Curve...



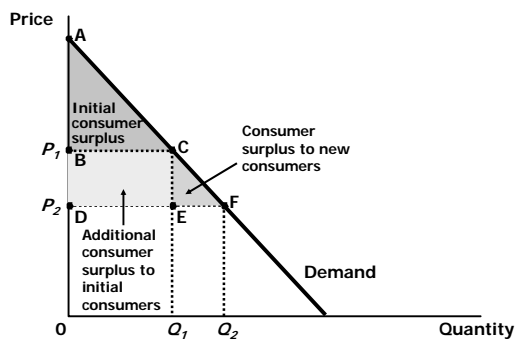
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Measuring Consumer Surplus with the Demand Curve

The area below the demand curve and above the price line measures the consumer surplus in the market.

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How the Price Affects Consumer Surplus...



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Consumer Surplus and Economic Well-Being

Consumer surplus, the amount that buyers are willing to pay for a good minus the amount they actually pay for it, measures the benefit that buyers receive from a good as the buyers themselves perceive it.

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Producer Surplus

- ◆ **Producer surplus** is the amount a seller is paid minus the cost of production.
- ◆ It measures the benefit to sellers participating in a market.

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Producer Surplus and the Supply Curve

- ◆ Just as consumer surplus is related to the demand curve, producer surplus is closely related to the supply curve.
- ◆ At any quantity, the price given by the supply curve shows the cost of the *marginal seller*, the seller who would leave the market first if the price were any lower.

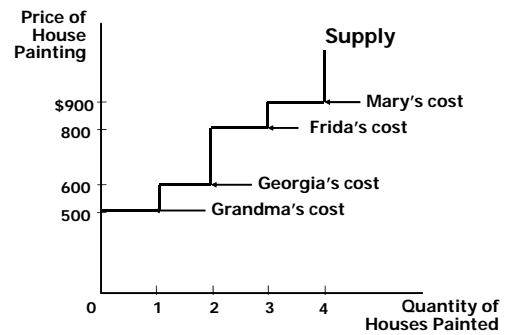
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Supply Schedule for the Four Possible Sellers...

| Price | Sellers | Quantity Supplied |
|-----------------|-------------------------------|-------------------|
| \$900 or more | Mary, Frida, Georgia, Grandma | 4 |
| \$800 to \$900 | Frida, Georgia, Grandma | 3 |
| \$600 to \$800 | Georgia, Grandma | 2 |
| \$500 to \$600 | Grandma | 1 |
| Less than \$500 | None | 0 |

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Producer Surplus and the Supply Curve...



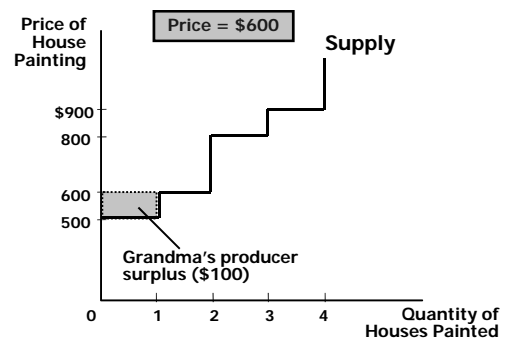
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Producer Surplus and the Supply Curve

The area below the price line and above the supply curve measures the producer surplus in a market.

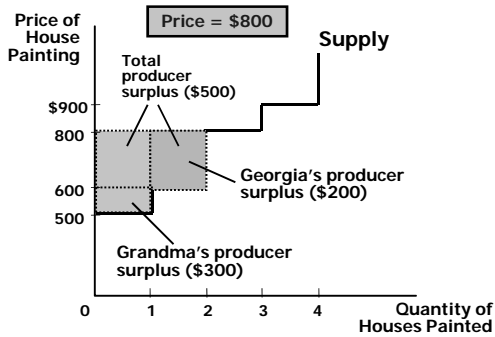
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Measuring Producer Surplus with the Supply Curve...



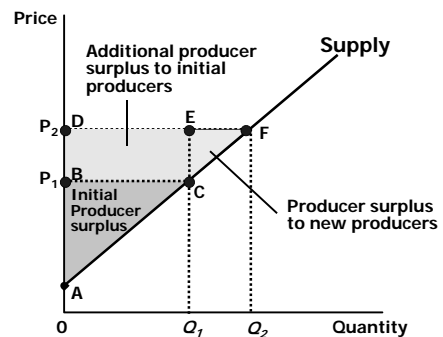
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Measuring Producer Surplus with the Supply Curve...



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How Price Affects Producer Surplus...



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Market Efficiency

Consumer surplus and producer surplus may be used to address the following question:

Is the allocation of resources determined by free markets desirable?

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Economic Well-Being and Total Surplus

$$\text{Consumer Surplus} = \text{Value to buyers} - \text{Amount paid by buyers}$$

and

$$\text{Producer Surplus} = \text{Amount received by sellers} - \text{Cost to sellers}$$

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Economic Well-Being and Total Surplus

$$\text{Total Surplus} = \text{Consumer Surplus} + \text{Producer Surplus}$$

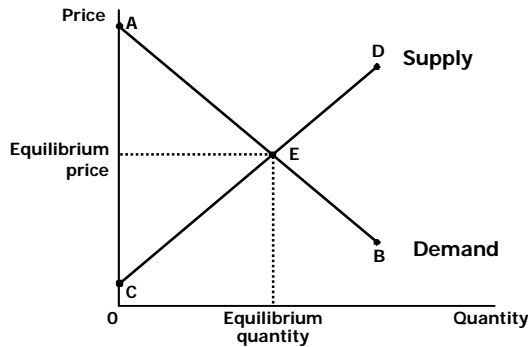
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Market Efficiency

Market efficiency is achieved when the allocation of resources maximizes total surplus.

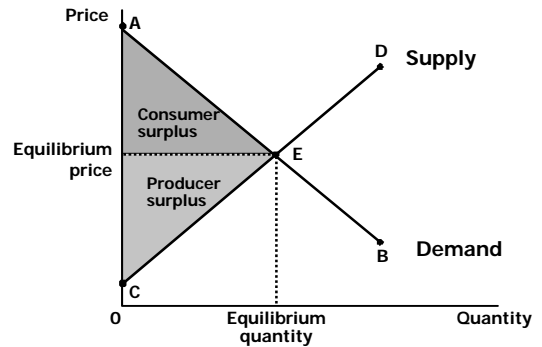
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Evaluating the Market Equilibrium...



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Consumer and Producer Surplus in the Market Equilibrium...



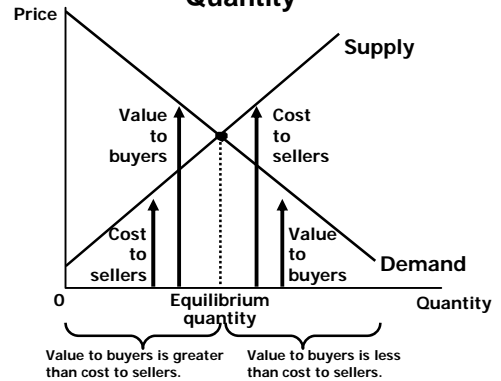
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Three Insights Concerning Market Outcomes

- ◆ Competitive markets allocate the supply of goods to the buyers who value them most highly.
- ◆ Competitive markets allocate the demand for goods to the sellers who can produce them at least cost.
- ◆ Competitive markets produce the quantity of goods that maximizes the sum of consumer and producer surplus.

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The Efficiency of the Equilibrium Quantity



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The Efficiency of the Equilibrium Quantity

- ◆ Because the equilibrium outcome is an efficient allocation of resources, the social planner can leave the market outcome as he/she finds it.
- ◆ This policy of leaving well enough alone goes by the French expression *laissez faire*.

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A Few Assumptions Behind These Results

- Buyers/sellers are well informed.
- Markets are competitive—no buyer or seller has any influence on market price.
- Sale is not coerced.
- Contracts are enforced.
- Property rights are defined and enforced.
- Production/consumption of these products does not affect third parties.
- The transaction involves a private (rather than a public) good.

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Scalping Sports Events Tickets I

- Why would a team prohibit scalping?
- You are not allowed to sell tickets for above the listed price in the area around Fenway Park. If the Red Sox catch you reselling season tickets on the internet, your tickets can be revoked.
- You cannot sell tickets to the U.S. Open in tennis (held in NYC) unless you are more than 1500 feet from the stadium!!

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Scalping Tickets II

- Puzzling Question: Why the Low Price?
 - ↗ Uncertainty about final demand ...
 - ↗ Mistake ...
 - ↗ Product's image is influenced by price ...
 - ↗ Profit maximization on sale of complementary goods.
- Why make fans wait in line?
 - ↗ Lines can be free publicity for the artist.
 - ↗ Young fans more likely to wait in line.
 - ↗ Young fans tend to hear concert, then buy CD.
 - ↗ Older fans tend to hear the concert and do not buy the CD.
- Young fans often cheer more at sporting events.

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Scalping Tickets III

- ↗ Fake tickets? Some copies look real.
- ↗ Other scams? Pick-pocketing, corruption by people selling tickets.
- ↗ Ticketmaster??
- ↗ "After-market" improves welfare with many, many other products.
 - Aloha Stadium Swap Meet
 - Furniture
 - Textbooks
- ↗ 2005 Pro Bowl: \$150 ticket for \$600-\$900.

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Prohibition on Resale: Could it Improve Welfare?

- Prohibitions on reselling software, DVDs, pdfs.
 - ↗ Public dimension to the good.
 - ↗ Software can be used by multiple people without diminishing the product.
 - ↗ Same with pdfs.
- Hard to defend such prohibitions on the basis of welfare analysis when the goods being resold are private goods.
- Resale of copyrighted goods is prohibited unless allowed by the author.

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Summary

- ◆ Producer surplus measures the benefit sellers get from participating in a market.
- ◆ Producer surplus can be computed by finding the area below the price and above the supply curve.

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Summary

- ◆ Consumer surplus measures the benefit buyers get from participating in a market.
- ◆ Consumer surplus can be computed by finding the area below the demand curve and above the price.

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Summary

- ◆ **The equilibrium of demand and supply maximizes the sum of consumer and producer surplus.**
- ◆ **This is as if the invisible hand of the marketplace leads buyers and sellers to allocate resources efficiently.**
- ◆ **Markets do not allocate resources efficiently in the presence of market failures.**

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Summary

- ◆ **An allocation of resources that maximizes the sum of consumer and producer surplus is said to be efficient.**
- ◆ **Policymakers are often concerned with the efficiency, as well as the equity, of economic outcomes.**

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