Microeconomics
HM207

Consumers, Producers, and the Efficiency of Markets

Topic 5: Market Efficiency & Welfare

REVISITING THE MARKET EQUILIBRIUM

- Do the equilibrium price and quantity maximize the total welfare of buyers and sellers?
- Market equilibrium reflects the way markets allocate scarce resources.
- Whether the market allocation is desirable can be addressed by **WELFARE ECONOMICS**!

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.

Consumer Surplus

Supplier Surplus

Welfare Economics

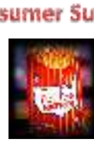
- The equilibrium in a market maximizes the total welfare of buyers and sellers.
- Equilibrium in the market results in maximum benefits, and therefore maximum total welfare for both the consumers and the producers of the product.

Everyone is  iest at Equilibrium

Welfare Economics: C. & S. Surplus

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

Consumer Surplus



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

Supplier Surplus

CONSUMER SURPLUS

- *Willingness to pay (VALUE TO BUYERS)* is the maximum amount that a buyer will pay for a good.
- It measures how much the buyer values the good or service.
- **CONSUMER SURPLUS** is the difference between the maximum amount a person is willing to pay for a good Willingness to pay) and its current market price.

Table 1 Four Possible Buyers' Willingness to Pay

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

CONSUMER SURPLUS

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

Price	Buyers	Quantity Demanded
More than $100	None	0
$80 to $100	John	1
$70 to $80	John, Paul	2
$50 to $70	John, Paul, George	3
$50 or less	John, Paul, George, Ringo	4

Figure 1 The Demand Schedule and the Demand Curve

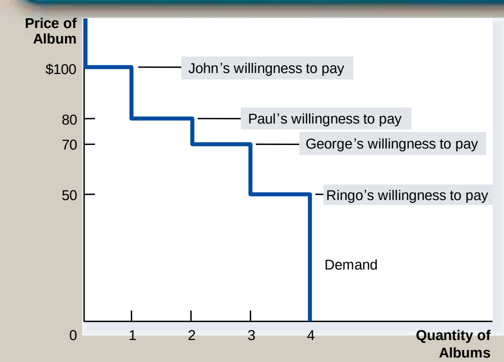


Figure 2 Measuring Consumer Surplus with the Demand Curve

(a) Price = $80

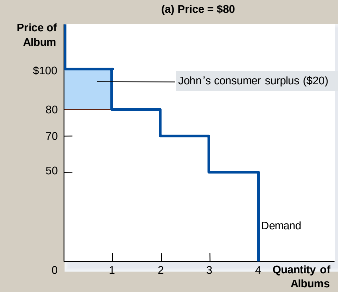
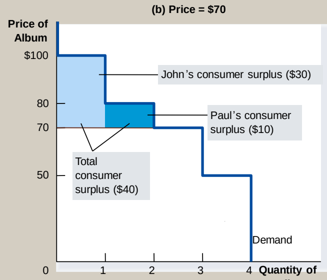


Figure 2 Measuring Consumer Surplus with the Demand Curve

(b) Price = $70



Using the Demand Curve to Measure Consumer Surplus

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

Figure 3 How the Price Affects Consumer Surplus

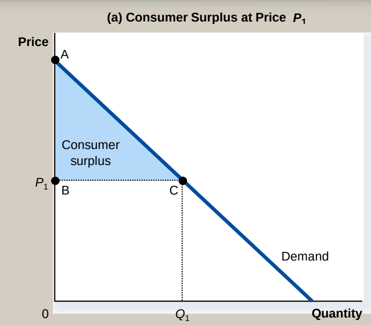
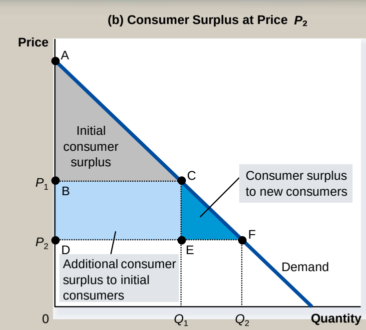


Figure 3 How the Price Affects Consumer Surplus



What Does Consumer Surplus Measure?

- *Consumer surplus*, the amount that buyers are willing to pay for a good minus the amount they actually pay for it
- *Consumer Surplus* =
  (Value to buyers – Amount paid by buyers)
- Measures the BENEFIT that buyers receive from a good *as perceive by the buyer*.

PRODUCER SURPLUS

- *Producer surplus* is the amount a seller is paid for a good minus the seller's *cost*.
- is the difference between the maximum amount a producer is willing to accept to supply a good and its current market price.
- *Producer surplus =*
  (Amount received by sellers – Cost to sellers)
- It measures the BENEFIT to sellers participating in a market.

Table 2 The Costs of Four Possible Sellers

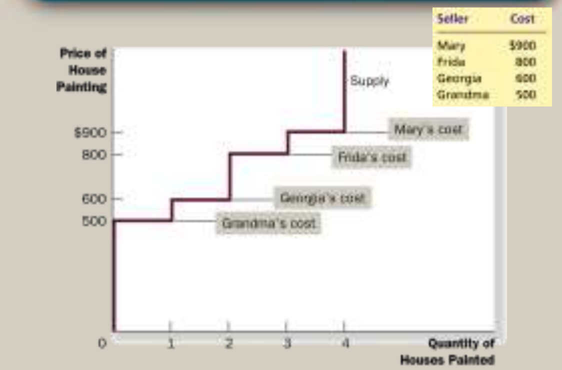
Seller	Cost
Mary	$900
Frida	800
Georgia	600
Grandma	500

Using the Supply Curve to Measure Producer Surplus

- Just as consumer surplus is related to the demand curve, producer surplus is closely related to the supply curve.

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

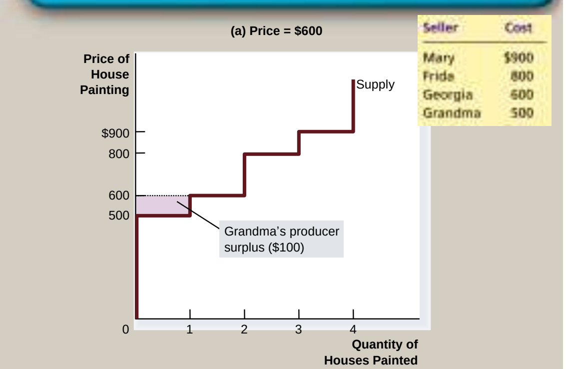
Figure 4 The Supply Schedule and the Supply Curve



Using the Supply Curve to Measure Producer Surplus

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

Figure 5 Measuring Producer Surplus with the Supply Curve



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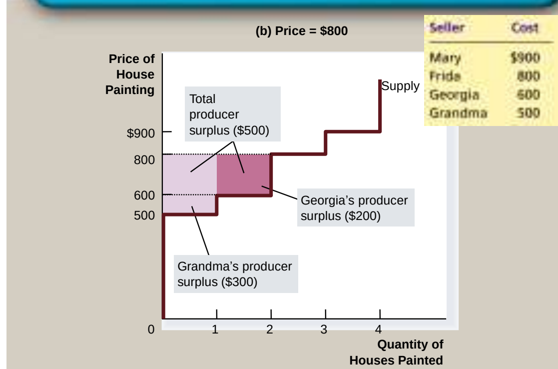


Figure 6 How the Price Affects Producer Surplus

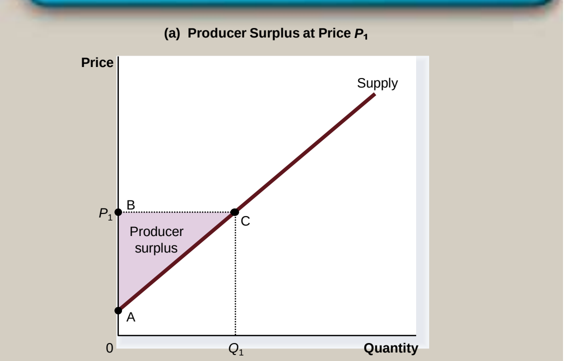
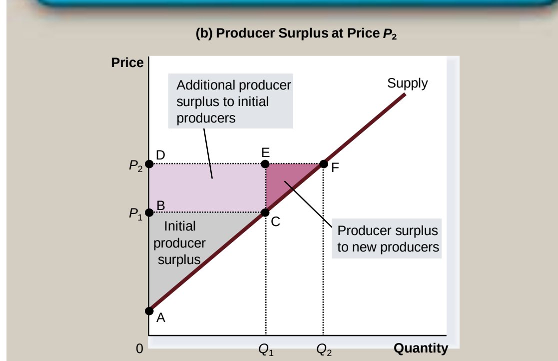


Figure 6 How the Price Affects Producer Surplus



MARKET EFFICIENCY

- Consumer surplus and producer surplus may be used to address the following question:
  - Is the allocation of resources determined by free markets in any way desirable?

MARKET EFFICIENCY

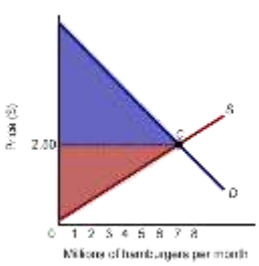
Total surplus
= Consumer surplus + Producer surplus

or

Total surplus
= Value to buyers – Cost to sellers

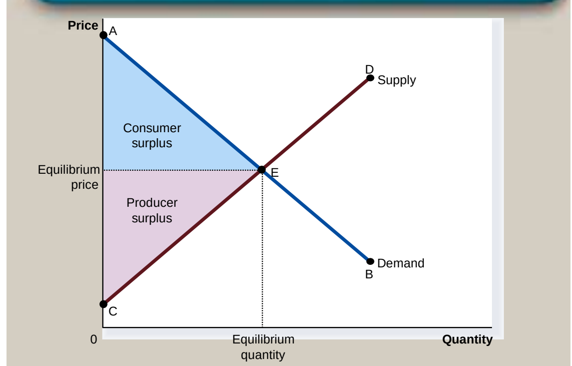
MARKET EFFICIENCY

- *Efficiency* is the property of a resource allocation of maximizing the total surplus received by all members of society.



- Total producer and consumer surplus is highest where supply and demand curves intersect at equilibrium.
- Consumers receive benefits in excess of what they pay and producers receive compensation in excess of costs.

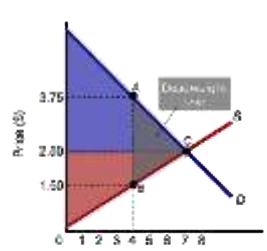
Figure 7 Consumer and Producer Surplus in the Market Equilibrium



MARKET EFFICIENCY

- Three Insights Concerning Market Outcomes
  - Free markets allocate the supply of goods to the buyers who value them most highly, as measured by their willingness to pay.
  - Free markets allocate the demand for goods to the sellers who can produce them at least cost.
  - Free markets produce the quantity of goods that maximizes the sum of consumer and producer surplus.

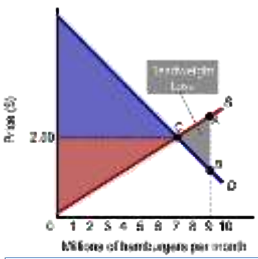
When Markets are Inefficient: Deadweight Loss



- A deadweight loss can occur from under production
- If the market produces too little, say 4 million instead of 7 million hamburgers per month, total producer and consumer surplus is reduced. This reduction (triangle *ABC*) is called a ***deadweight loss***.

DWL = People who have more marginal benefit than marginal cost are not buying the product

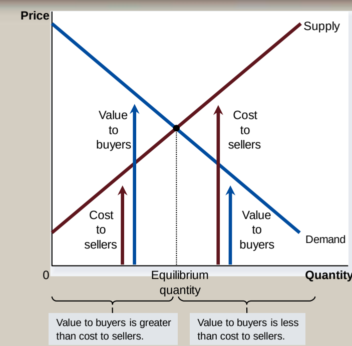
Potential Causes of Deadweight Loss From Under- and Overproduction



- Deadweight losses can occur from overproduction.
- If the market produces 10 million instead of 7 million hamburgers per month, the cost of production rises above the willingness of consumers to pay, resulting in a deadweight loss.

DWL = People who have more marginal cost than marginal benefits are buying the product

Figure 8 The Efficiency of the Equilibrium Quantity



Evaluating the Market Equilibrium

- 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*.

Market Efficiency and Failure

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Next: Production Theory

Study for Tutorial

ideas inspiring innovation

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