

Consumers, Producers, and the Efficiency of Markets

Chapter 7

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 is determined 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.
- The equilibrium in a market maximizes the total welfare of buyers and sellers.

Welfare Economics

Equilibrium in the market results in maximum benefits, and therefore maximum total welfare for both the consumers and the producers of the product.

Welfare Economics

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

Consumer Surplus

- **Willingness to pay** is the maximum price that a buyer is willing and able to pay for a good.
- It measures how much the buyer values the good or service.

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.

Four Possible Buyers' Willingness to Pay...

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

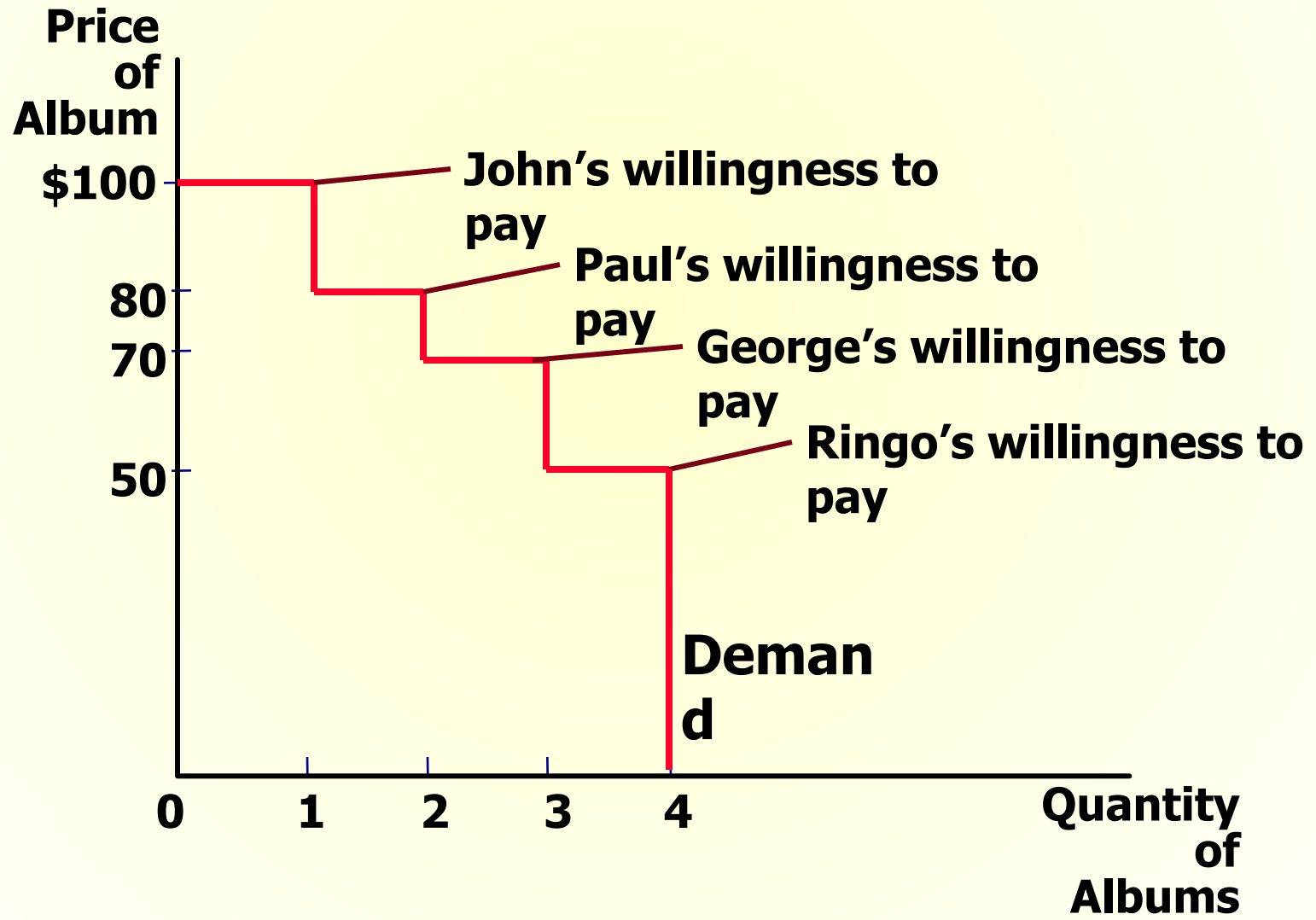
Consumer Surplus

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

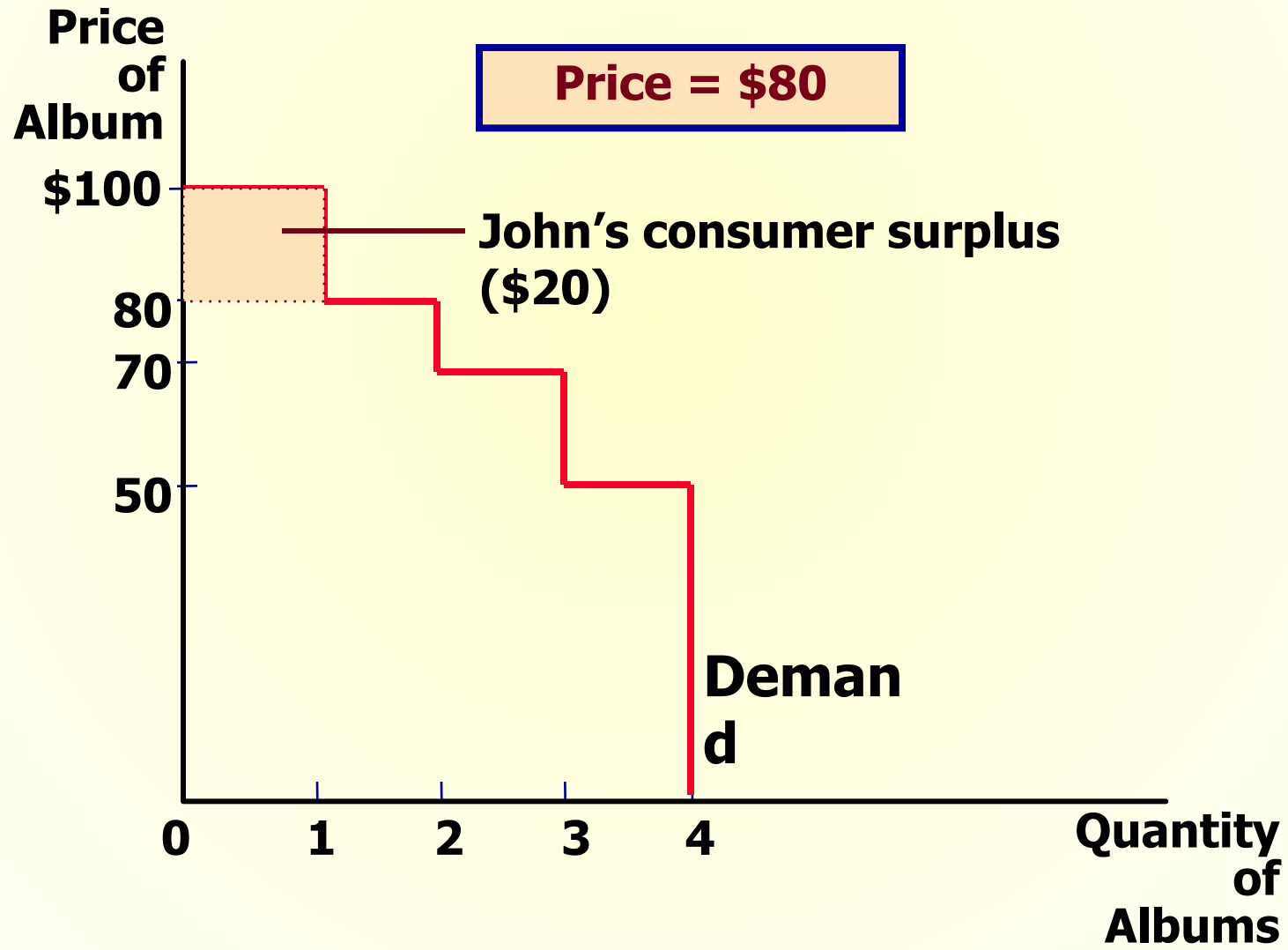
Four Possible Buyers' Willingness to Pay...

Price	Buyer	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	Ringo	4

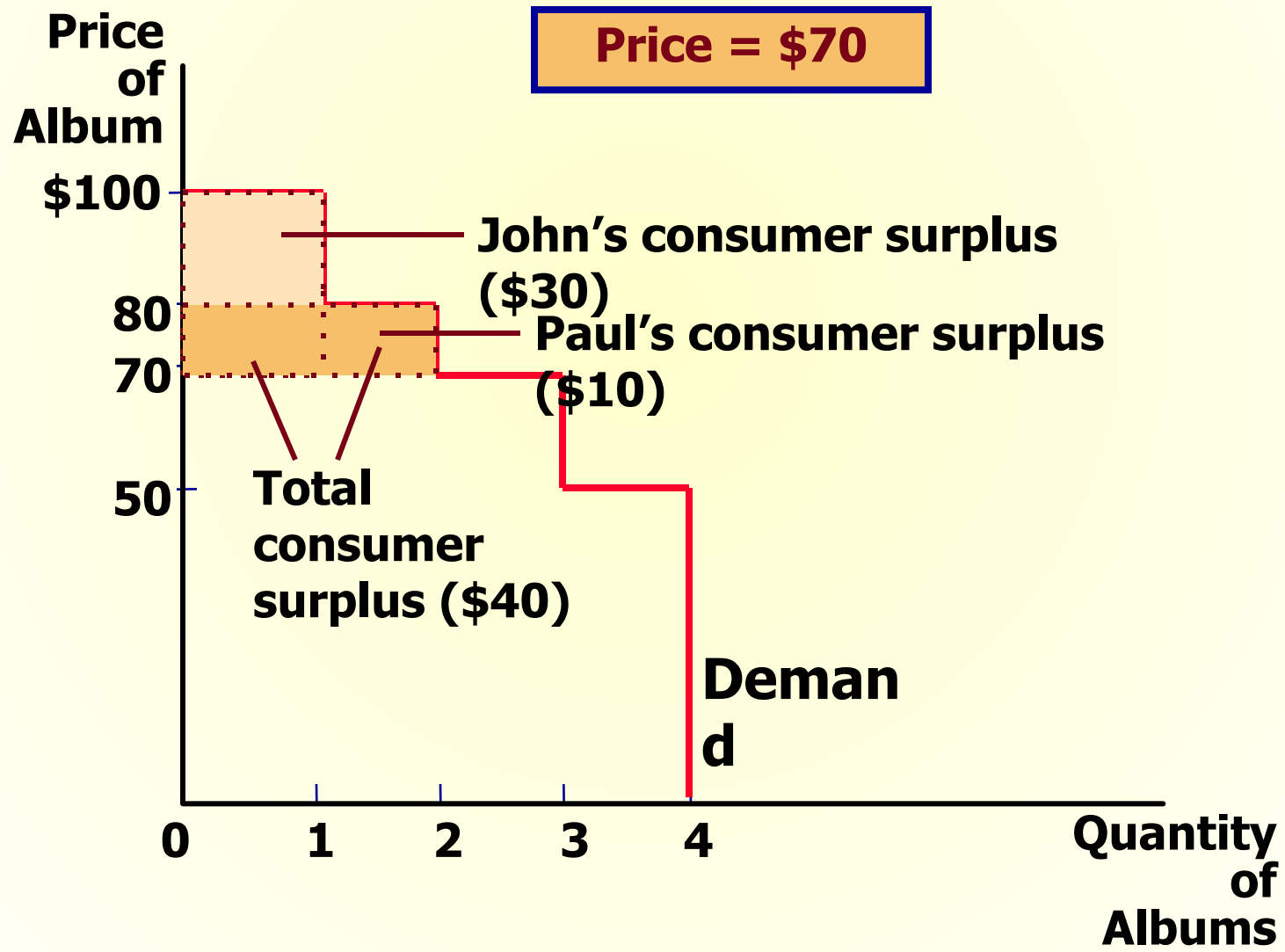
Measuring Consumer Surplus with the Demand Curve...



Measuring Consumer Surplus with the Demand Curve...



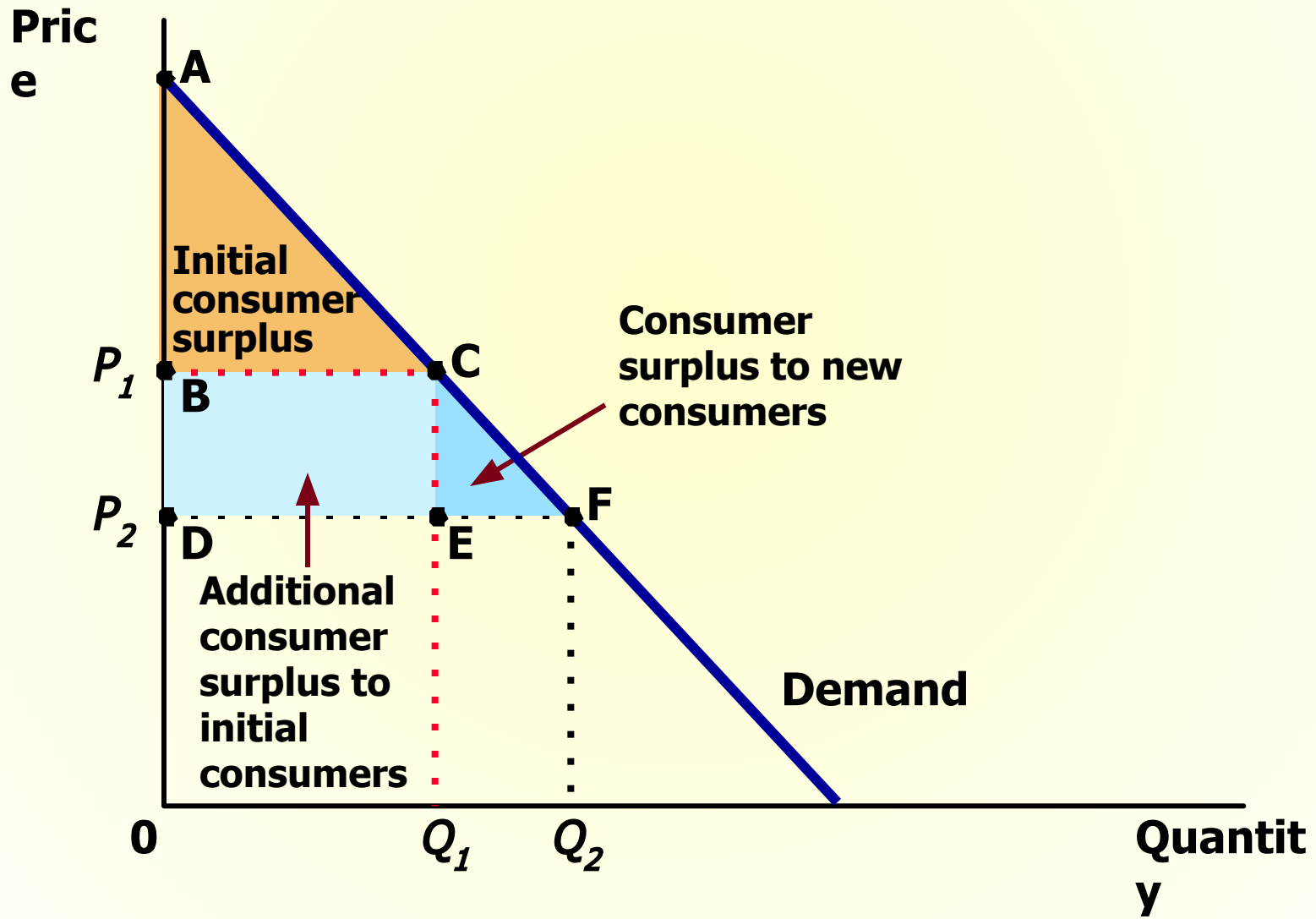
Measuring Consumer Surplus with the Demand Curve...



Measuring Consumer Surplus with the Demand Curve

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

How the Price Affects Consumer Surplus...



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.

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.

The Costs of Four Possible Sellers...

Seller	Cost
Mary	\$900
Frida	800
Georgia	600
Grandma	500

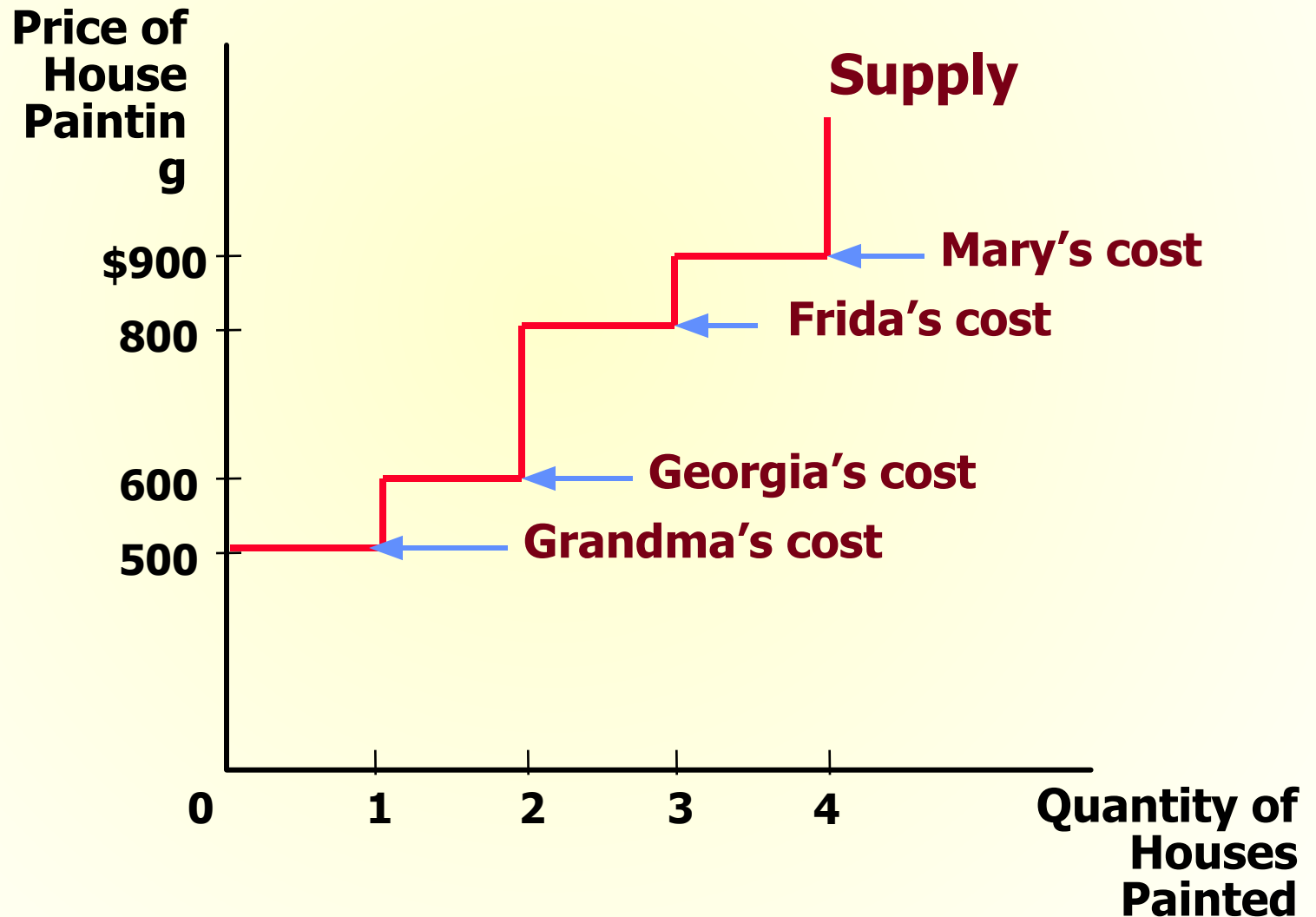
Producer Surplus and the Supply Curve

- 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.

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

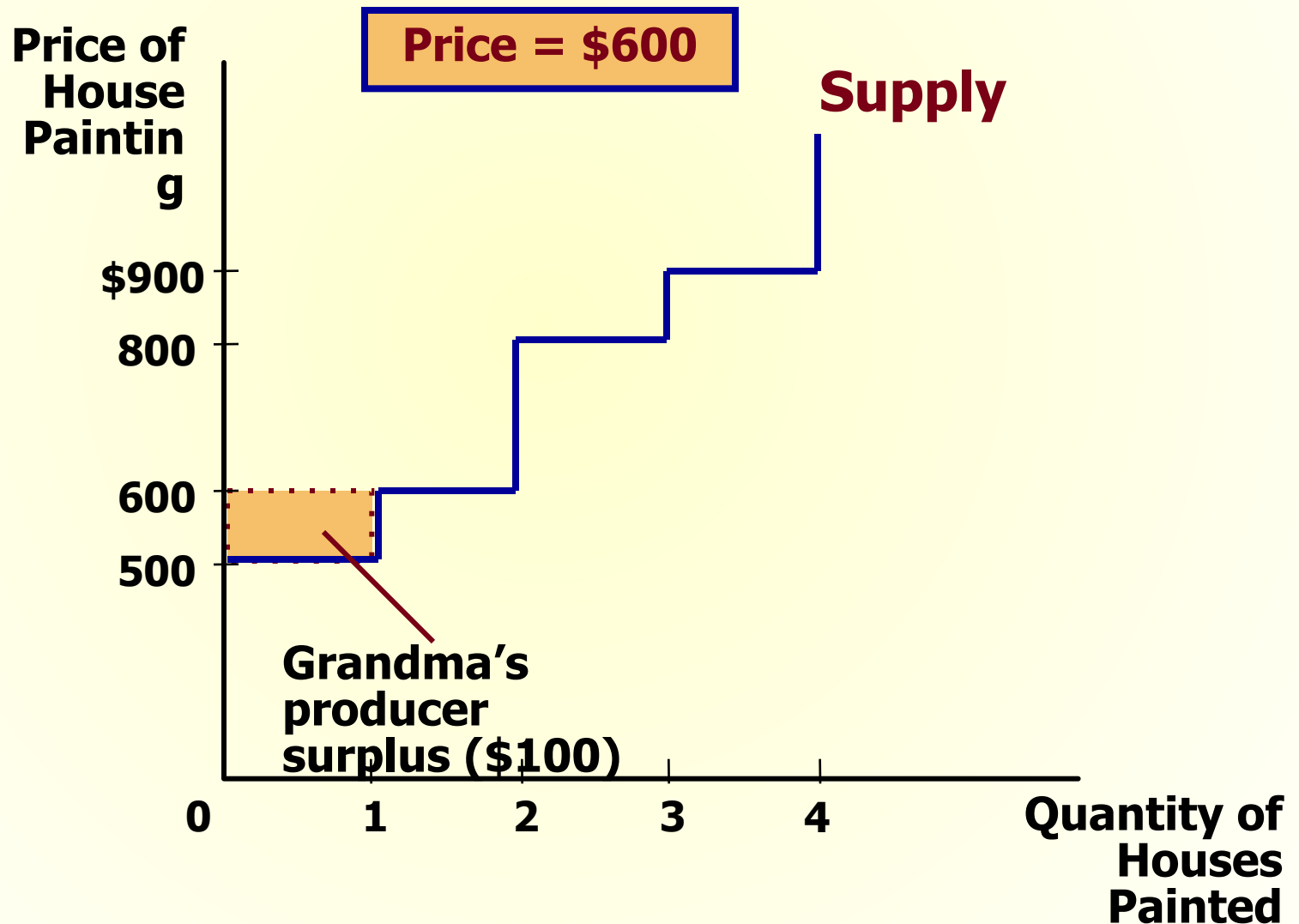
Producer Surplus and the Supply Curve...



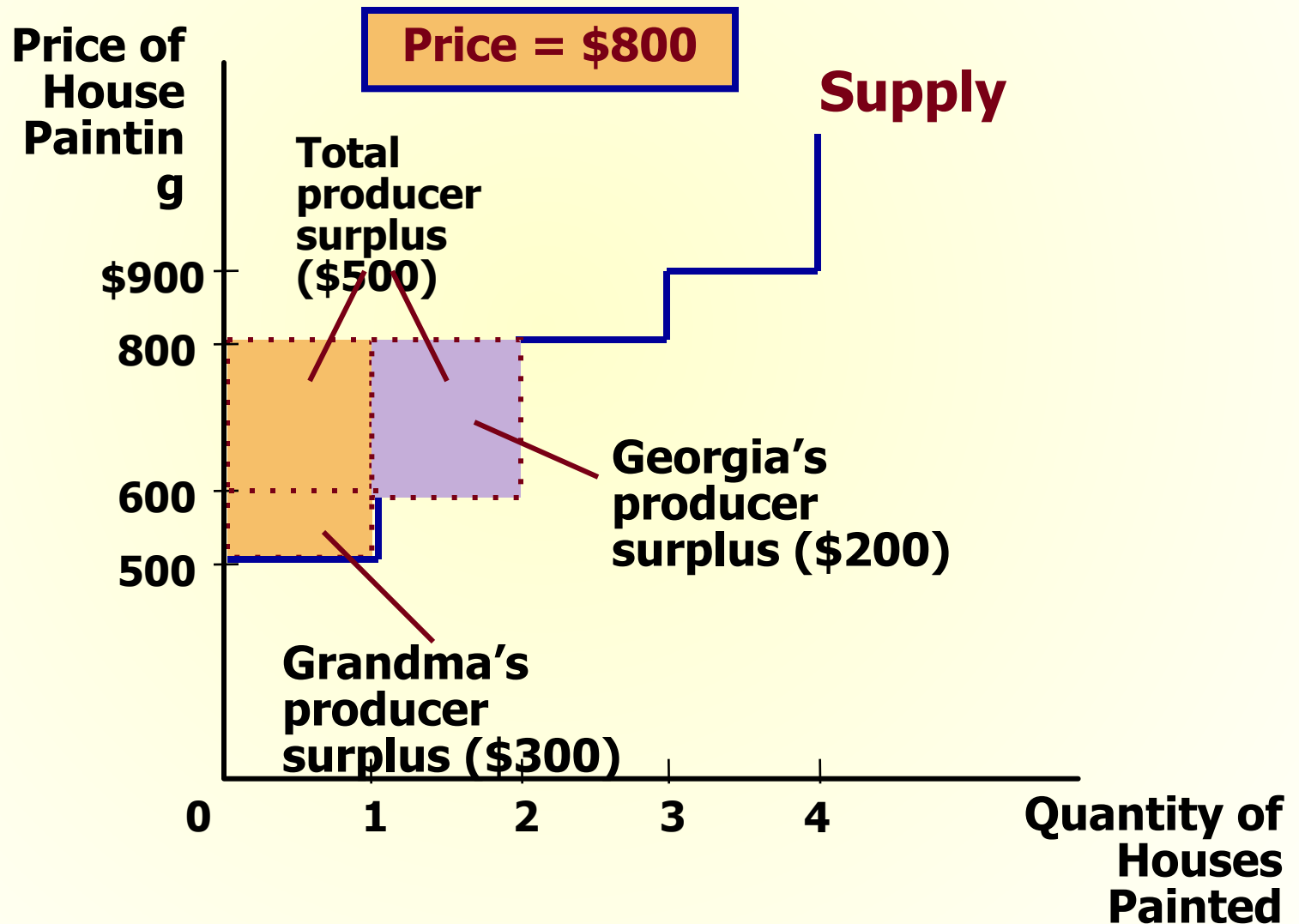
Producer Surplus and the Supply Curve

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

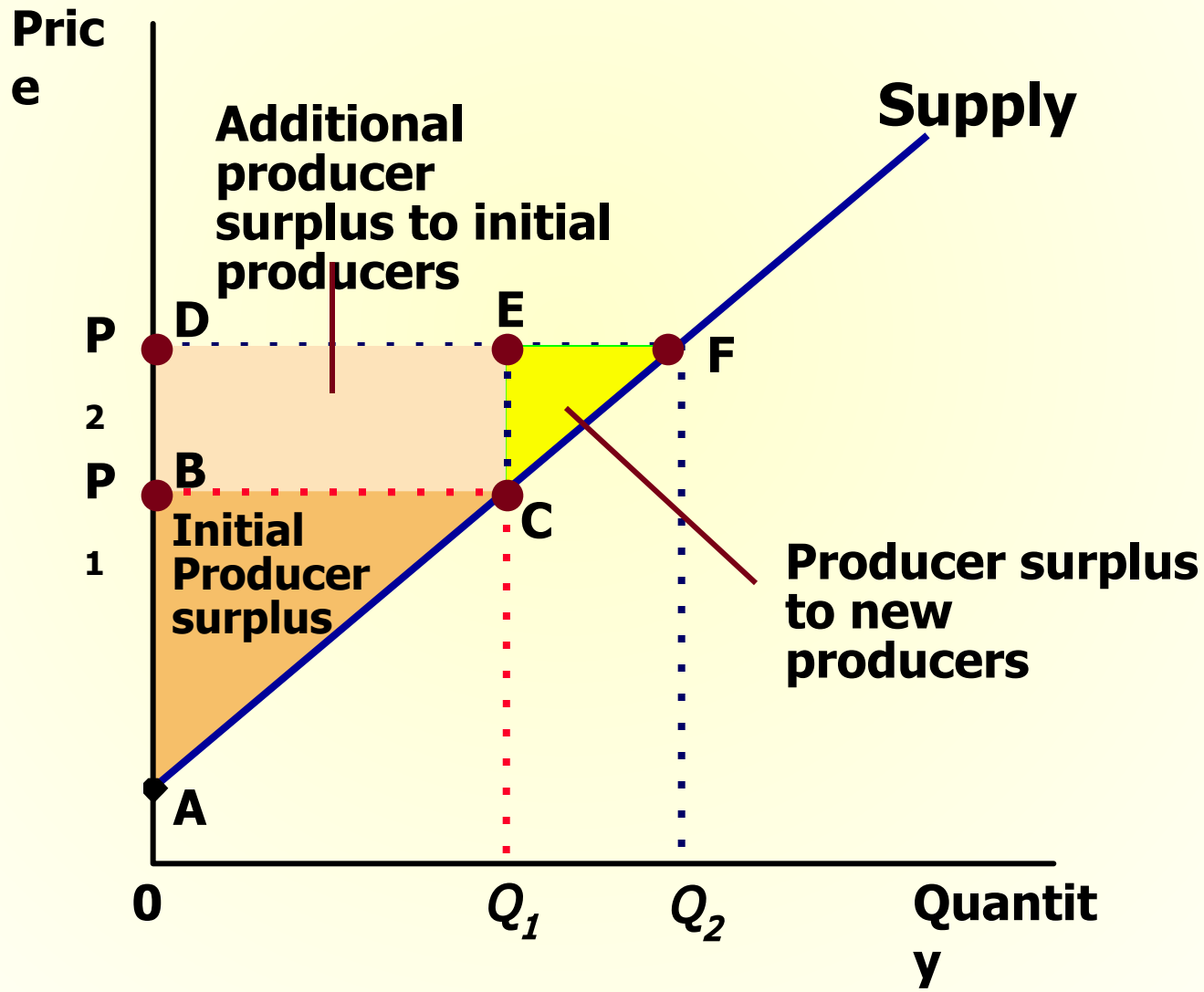
Measuring Producer Surplus with the Supply Curve...



Measuring Producer Surplus with the Supply Curve...



How 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?

Economic Well-Being and Total Surplus

Consumer Surplus = Value to buyers – Amount paid by buyers

and

Producer Surplus = Amount received by sellers – Cost to sellers

Economic Well-Being and Total Surplus

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

or

$$\text{Total Surplus} = \text{Value to buyers} - \text{Cost to sellers}$$

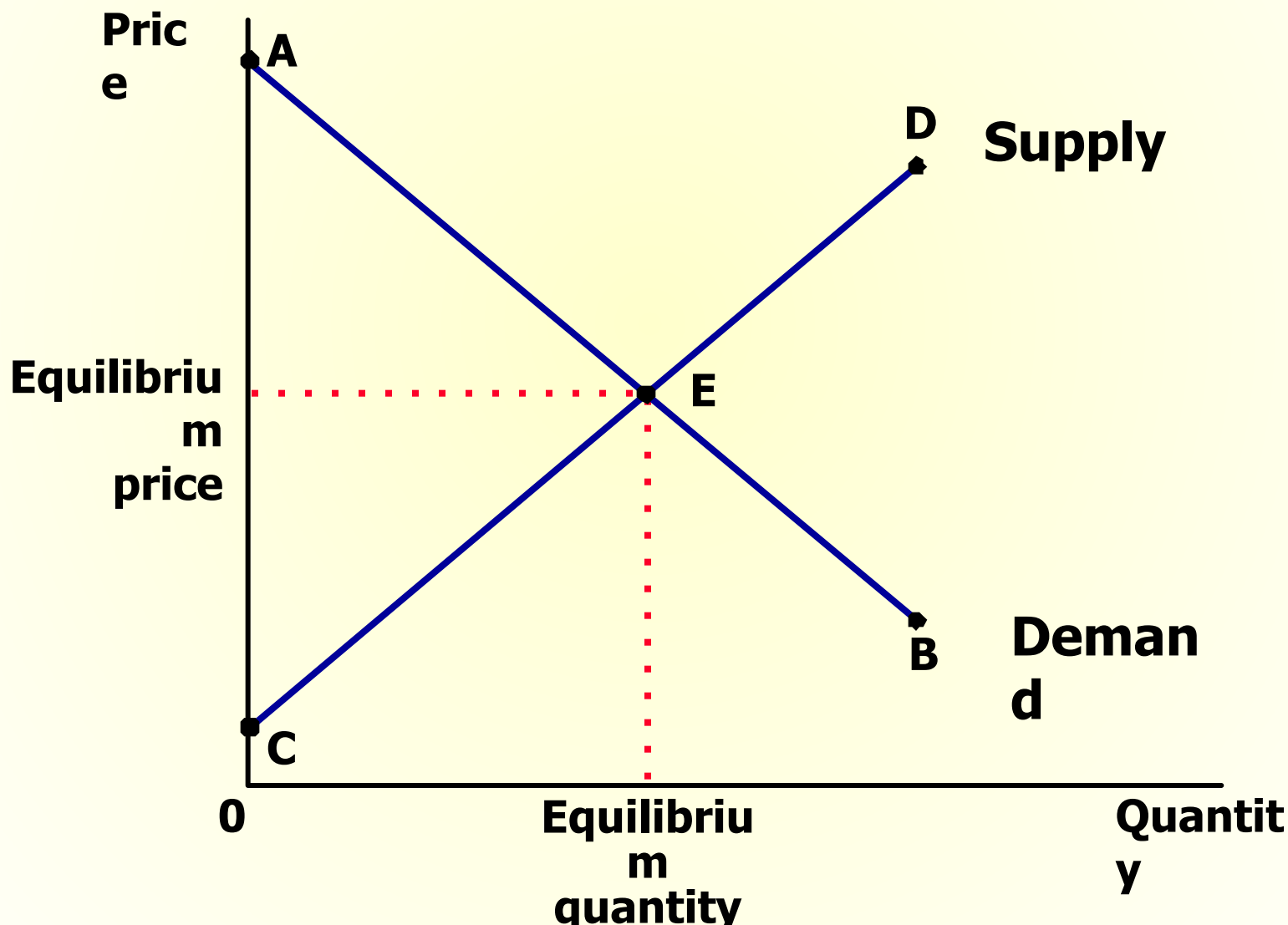
Market Efficiency

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

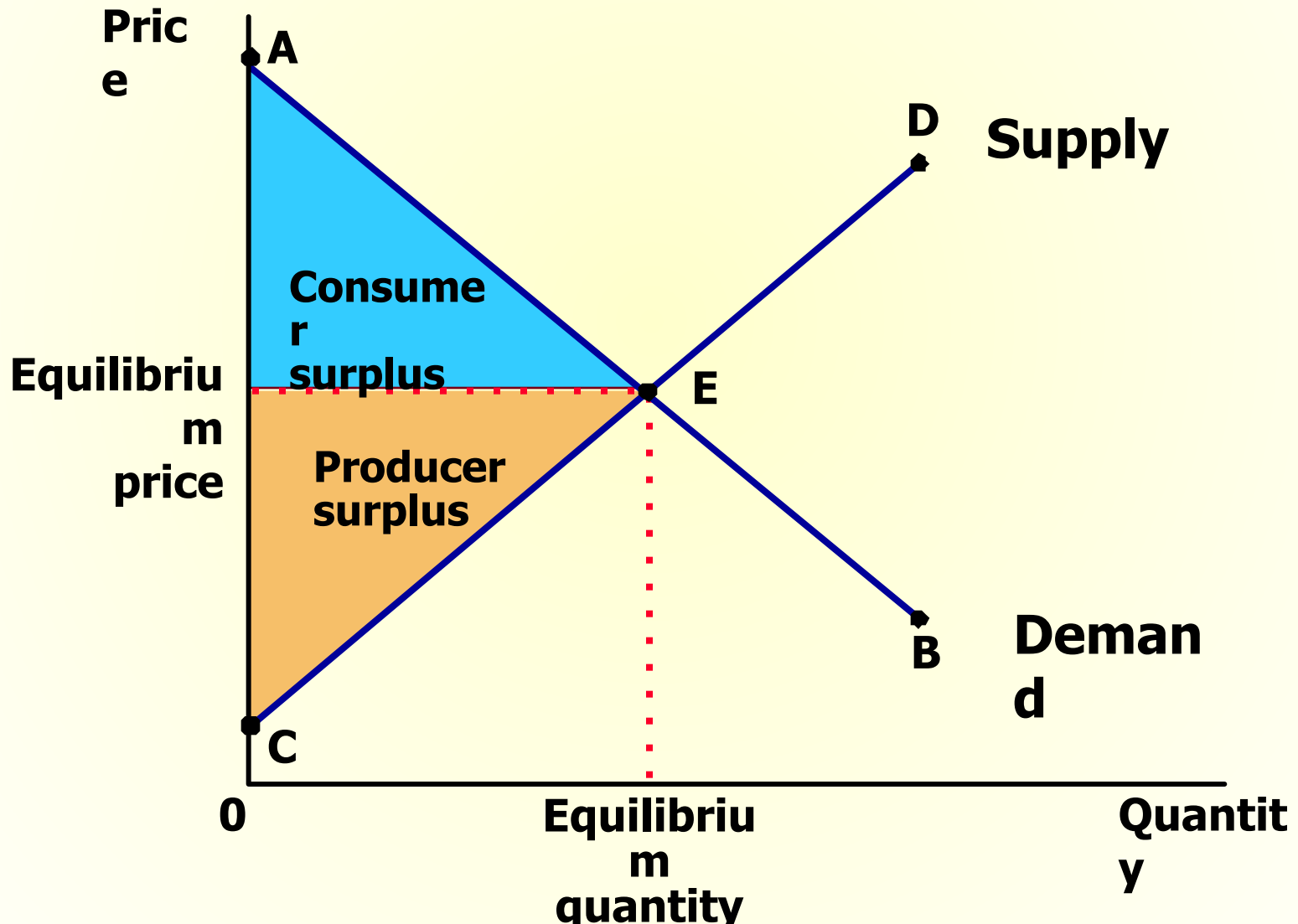
Market Efficiency

In addition to market efficiency, a social planner might also care about **equity** – the fairness of the distribution of well-being among the various buyers and sellers.

Evaluating the Market Equilibrium...



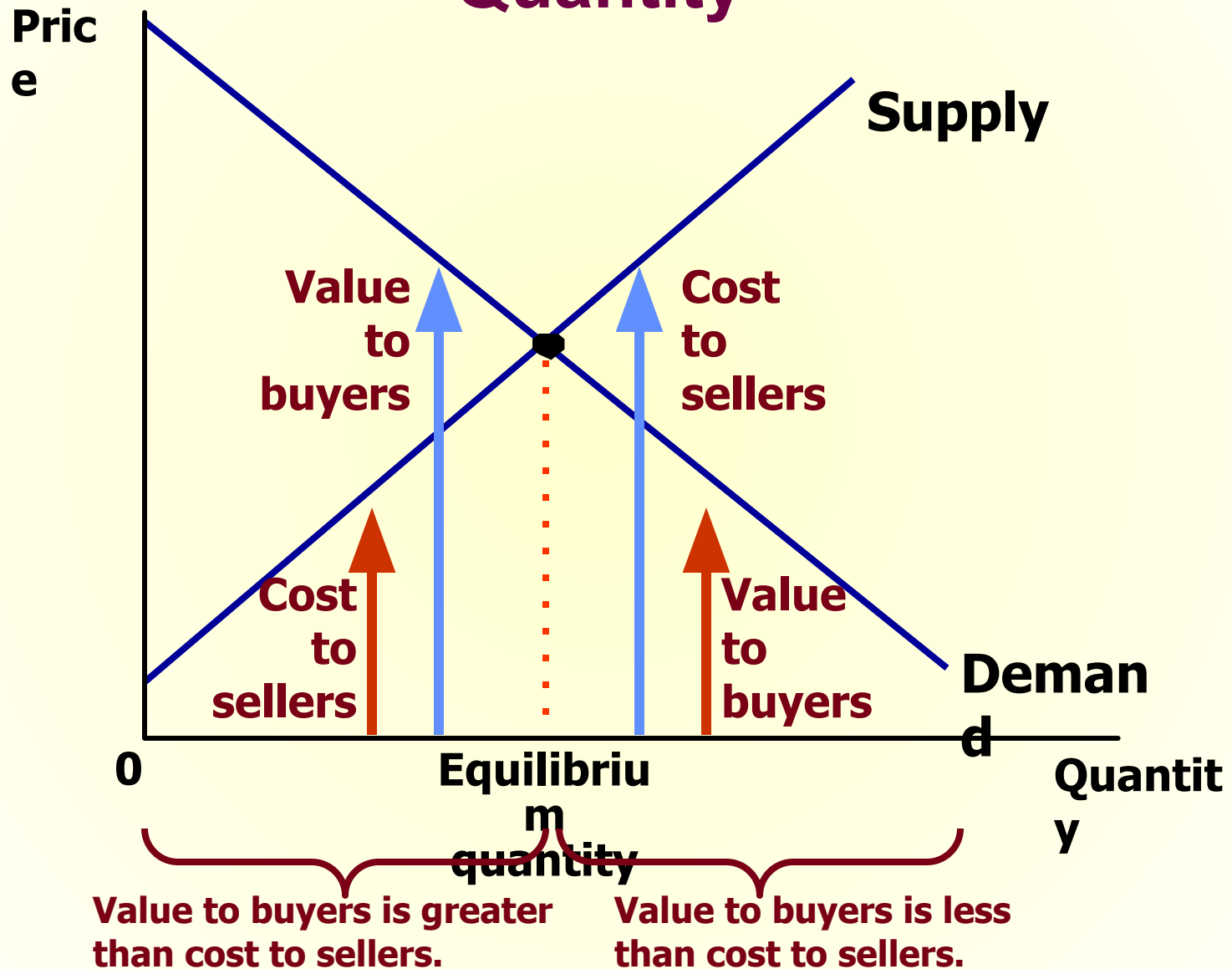
Consumer and Producer Surplus in the Market Equilibrium...



Three Insights Concerning Market Outcomes

- Free markets allocate the supply of goods to the buyers who value them most highly.
- 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.

The Efficiency of the Equilibrium Quantity



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*.

Market Power

- If a market system is not perfectly competitive, market power may result.
- Market power is the ability to influence prices.
- Market power can cause markets to be inefficient because it keeps price and quantity from the equilibrium of supply and demand.

Externalities

Externalities are created when a market outcome affects individuals other than buyers and sellers in that market.

- Externalities cause welfare in a market to depend on more than just the value to the buyers and cost to the sellers.
- When buyers and sellers do not take externalities into account when deciding how much to consume and produce, the equilibrium in the market can be inefficient.

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.**

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.**

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.

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.**