

Microeconomic Analysis

Consumer and Producer Welfare

Measuring Consumer Welfare

- *Consumer welfare from a good is the benefit a consumer gets from consuming that good minus what the consumer paid to buy the good.*
- The demand curve reflects a consumer's *marginal willingness to pay:*

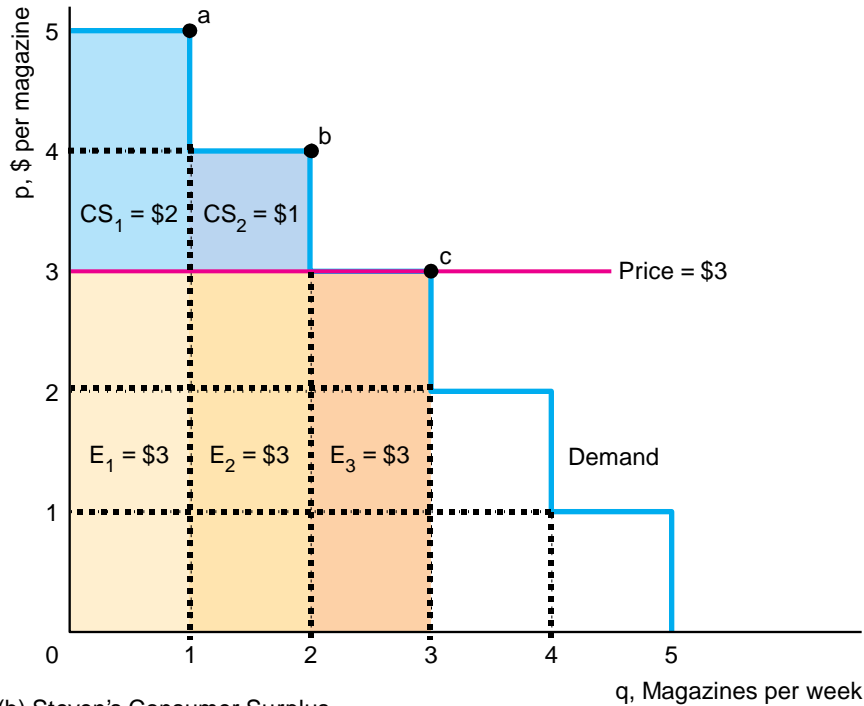
- The demand curve reflects a consumer's *marginal willingness to pay*:
 - the maximum amount a consumer will spend for an extra unit.
 - the *marginal value* the consumer places on the last unit of output.

Consumer Surplus

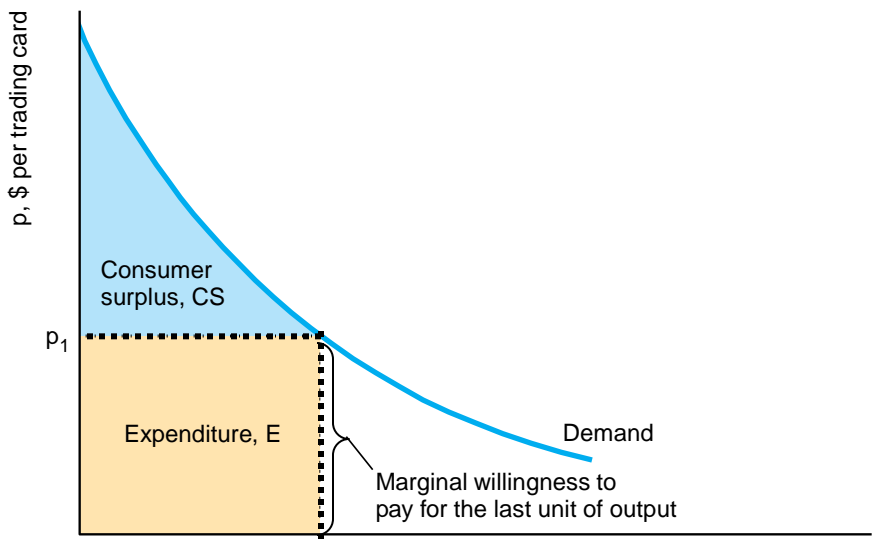
consumer surplus (CS) - the monetary difference between what a consumer is willing to pay for the quantity of the good purchased and what the good actually costs.

An individual's consumer surplus is the area under the demand curve and above the market price up to the quantity the consumer buys.

(a) David's Consumer Surplus



(b) Steven's Consumer Surplus



Producer Surplus

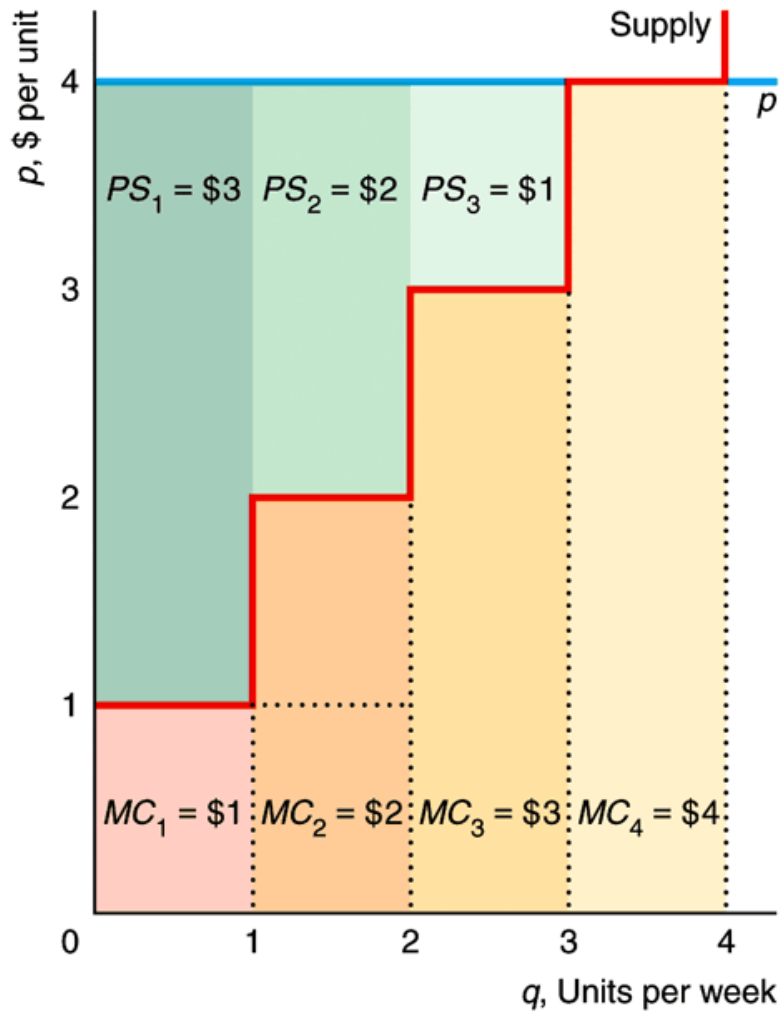
- **producer surplus (*PS*)** - the difference between the amount for which a good sells and the minimum amount necessary for the seller to be willing to produce the good

- The total producer surplus is the area above the supply curve and below the market price up to the quantity actually produced.

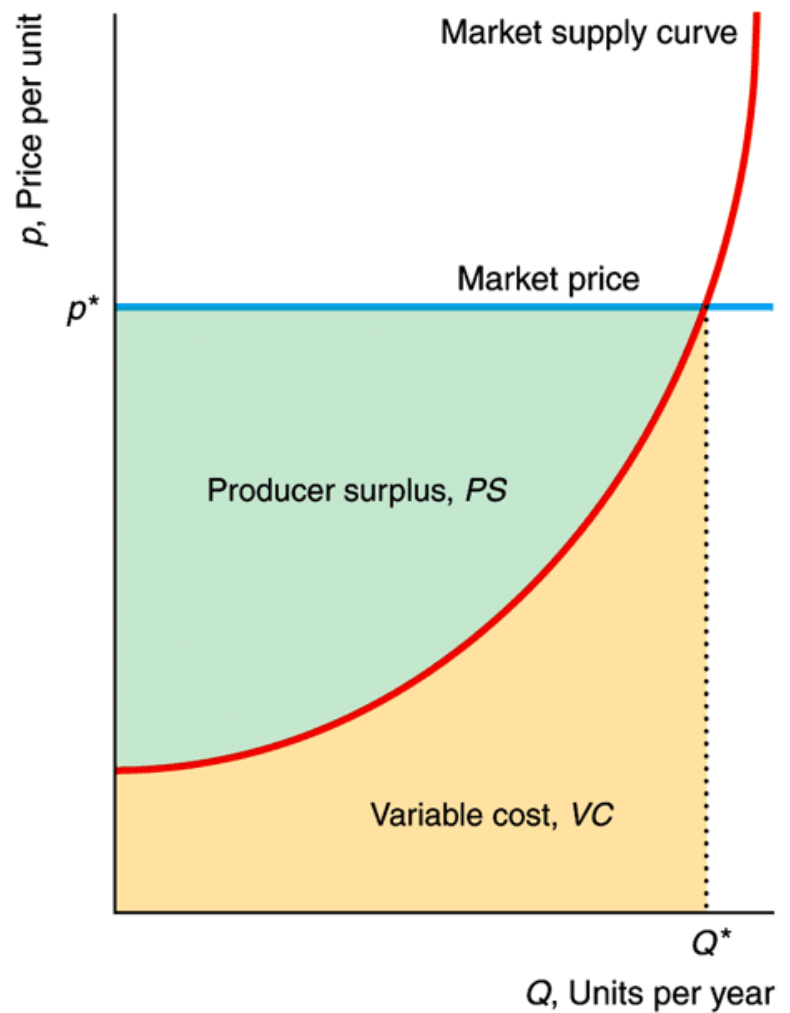
$$PS = R - VC.$$

- Thus, the difference between producer surplus and profit is fixed cost, F .

(a) A Firm's Producer Surplus



(b) A Market's Producer Surplus



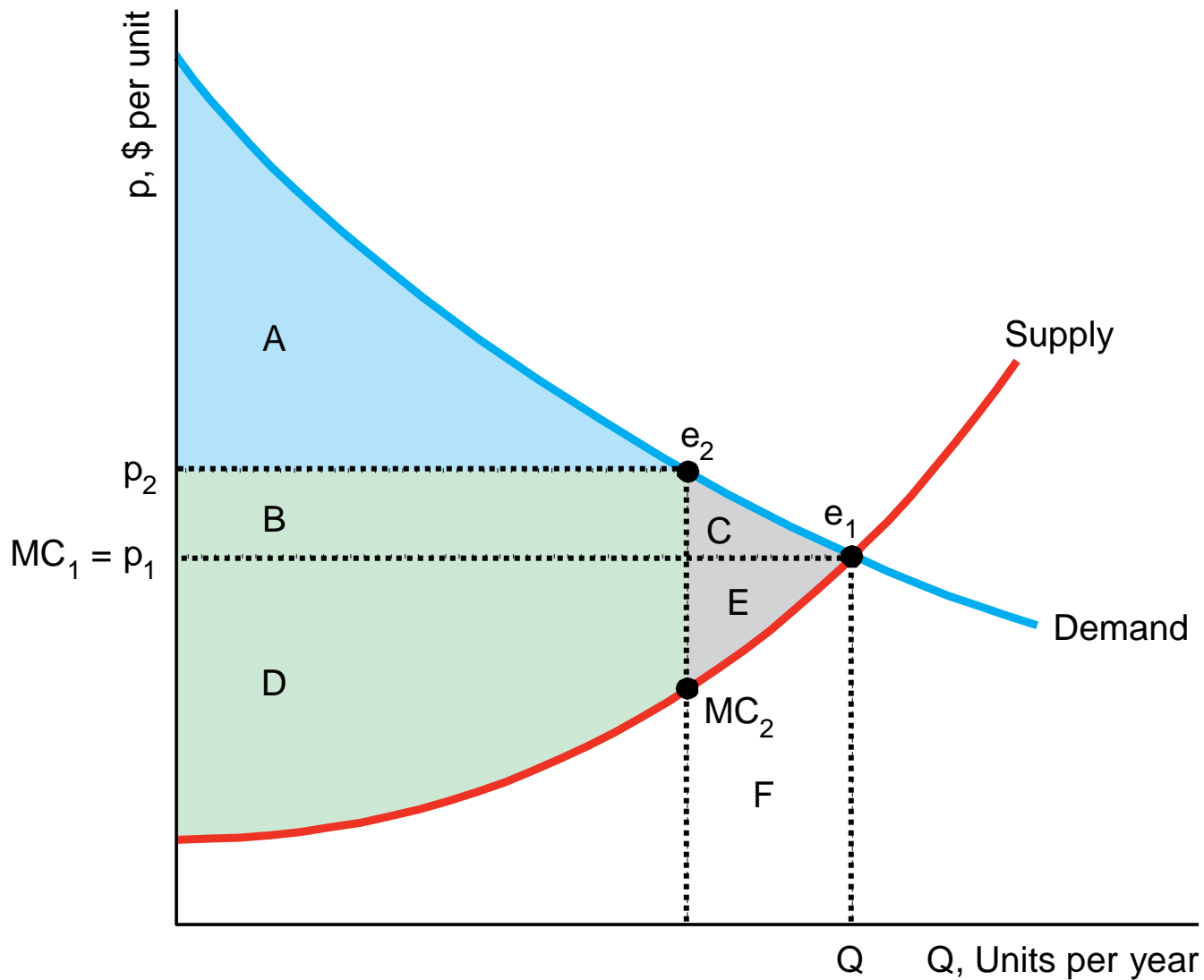
Competition maximizes Welfare

- One commonly used measure of the welfare of society, W , is the sum of consumer surplus plus producer surplus:

$$W = CS + PS.$$

Deadweight loss (DWL)

- **deadweight loss (*DWL*)** - the net reduction in welfare from a loss of surplus by one group that is not offset by a gain to another group from an action that alters a market equilibrium.
 - *The deadweight loss results because consumers value extra output by more than the marginal cost of producing it.*



	Competitive Output, Q_1 (1)	Smaller Output, Q_2 (2)	Change (2) - (1)
Consumer Surplus, CS	$A + B + C$	A	$-B - C = \Delta CS$
Producer Surplus, PS	$D + E$	$B + D$	$B - E = \Delta PS$
Welfare, $W = CS + PS$	$A + B + C + D + E$	$A + B + D$	$-C - E = \Delta W = DWL$

The reason that competition maximizes welfare is that price equals marginal cost at the competitive equilibrium.

market failure - inefficient production or consumption, often because a price exceeds marginal cost