8 Perfect Competition

ECO202 Fall 2019

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Outline

1. Features of perfect competition
2. Firm and market equilibrium
3. Market outcomes

Features of perfect competition

Assumptions for perfect competition

In perfectly competitive markets:

- Firms are price takers
- Products are homogeneous
- Firms have freedom of entry/exit
- Consumers have full information

Goal of firms

Firms maximize π:

$$\pi = TR - TC$$
$$\pi = TR(Q) - TC(Q)$$

Firms that do not maximize π are unlikely to survive for long

Profit-maximizing condition

$$\pi = TR(Q) - TC(Q)$$

$$\frac{\Delta\pi}{\Delta Q} = \frac{\Delta TR}{\Delta Q} - \frac{\Delta TC}{\Delta Q}$$

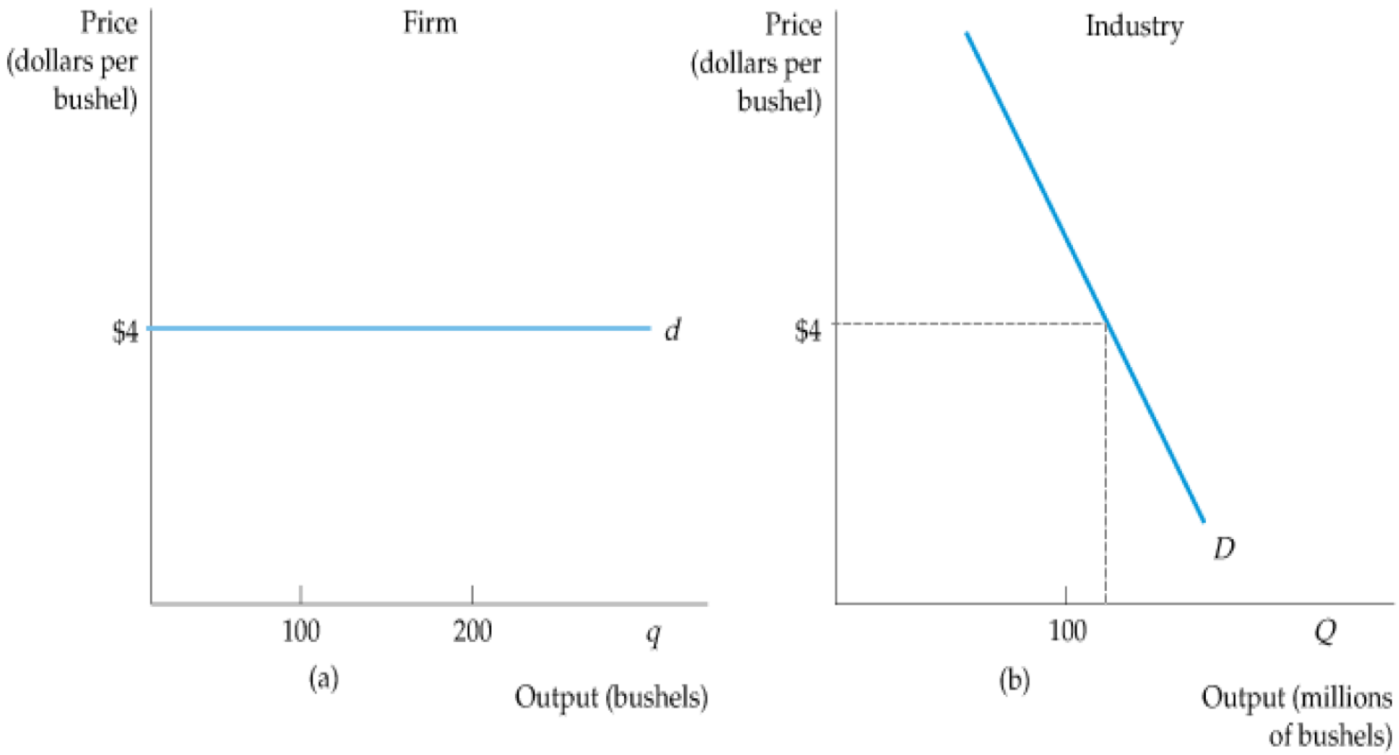
$$\frac{\Delta\pi}{\Delta Q} = MR - MC$$

$$\text{Set} \quad \frac{\Delta\pi}{\Delta Q} = 0$$

$$0 = MR - MC$$

$$\mathbf{MR} = \mathbf{MC}$$

Demand in a competitive market



Profit-maximization for each firm

In perfect competition, Marginal Revenue equals Average Revenue equals Price

$$\mathbf{MR} = \mathbf{MC}$$

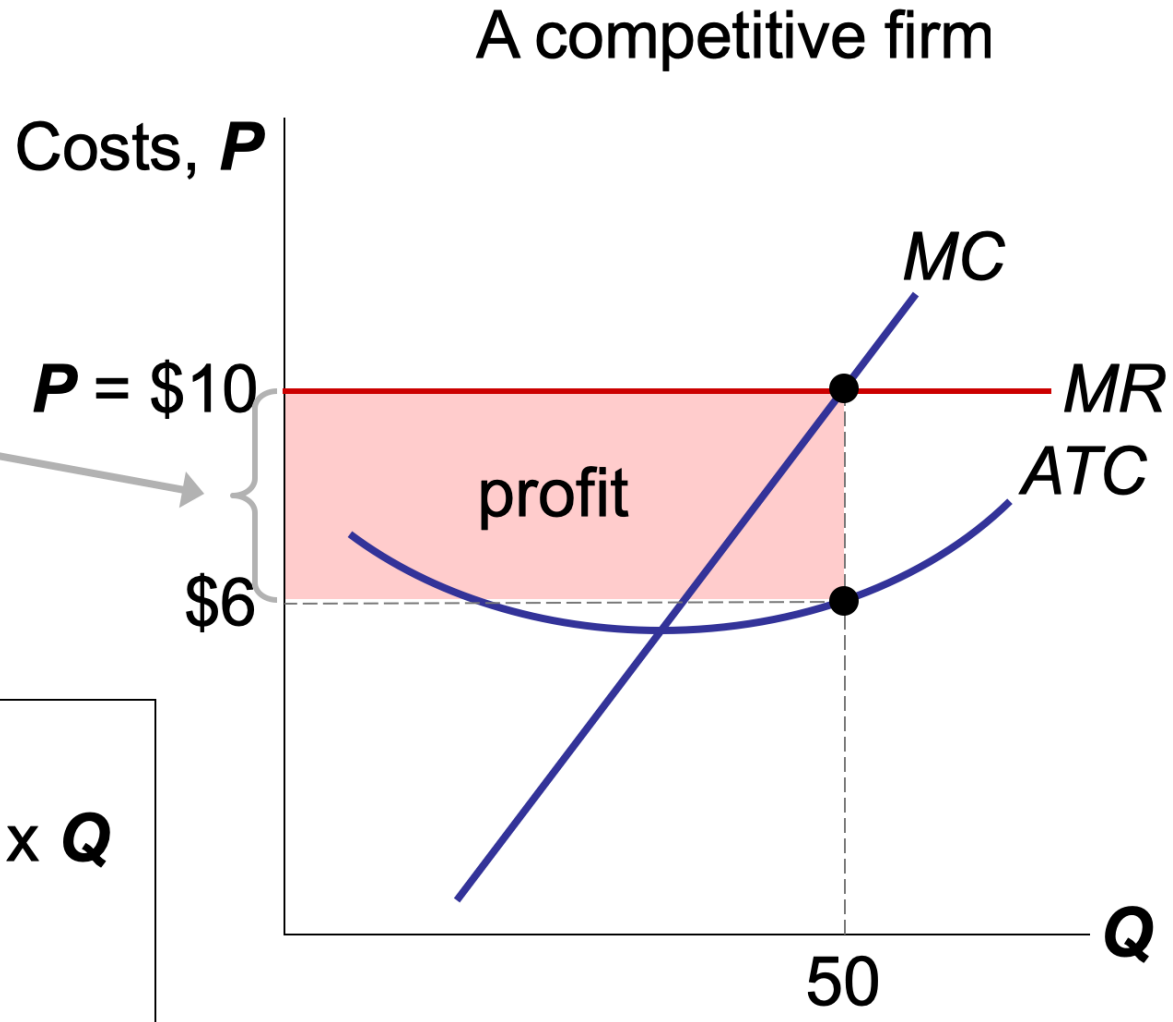
$$P = MR$$

$$P = MC$$

Firm outcome: extra profit

Profit per unit
= ***P*** – *ATC*
= \$10 – 6
= \$4

Total profit
= (***P*** – *ATC*) x ***Q***
= \$4 x 50
= \$200



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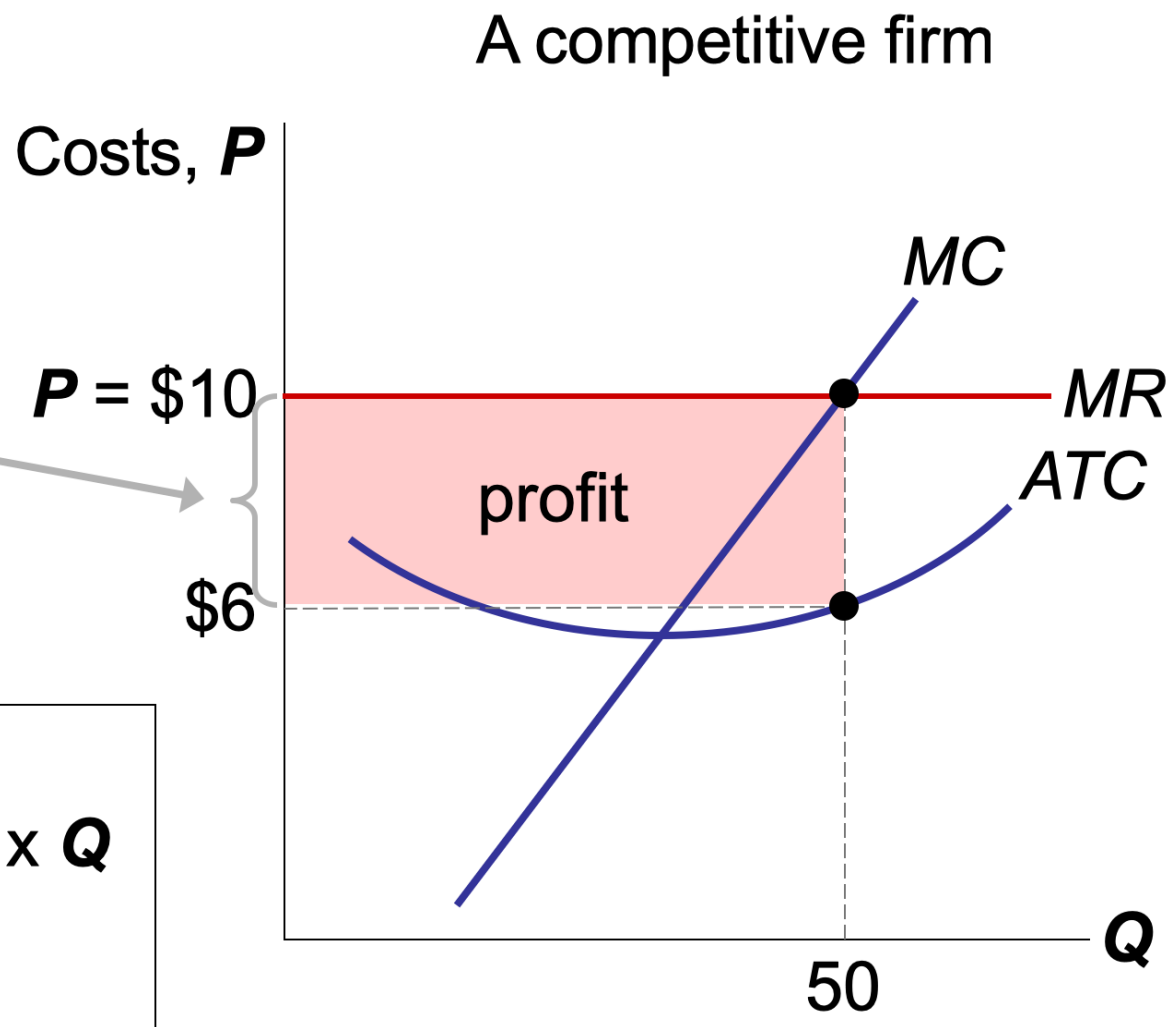
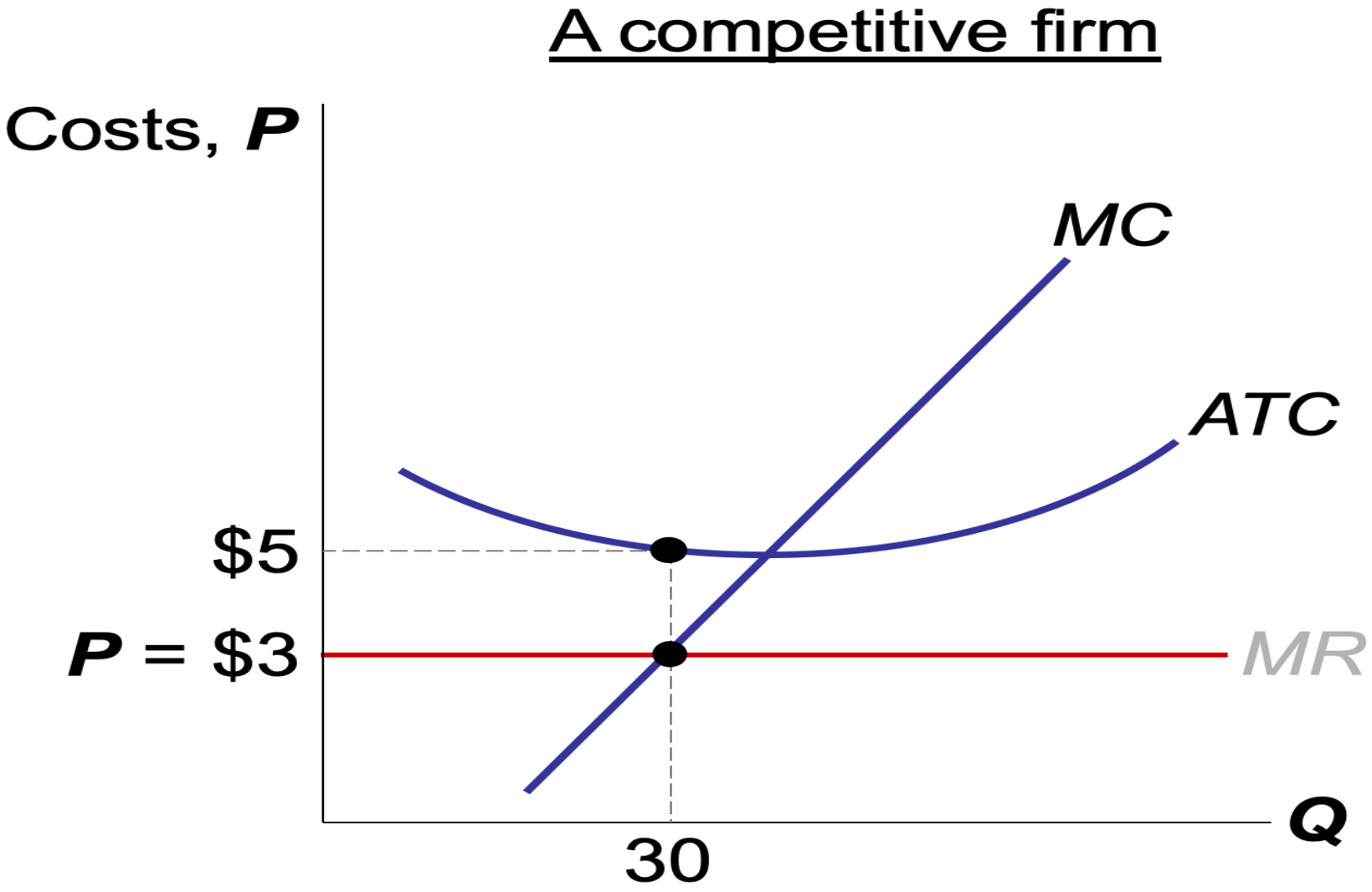


Firm outcome: losses



Firm and market equilibrium

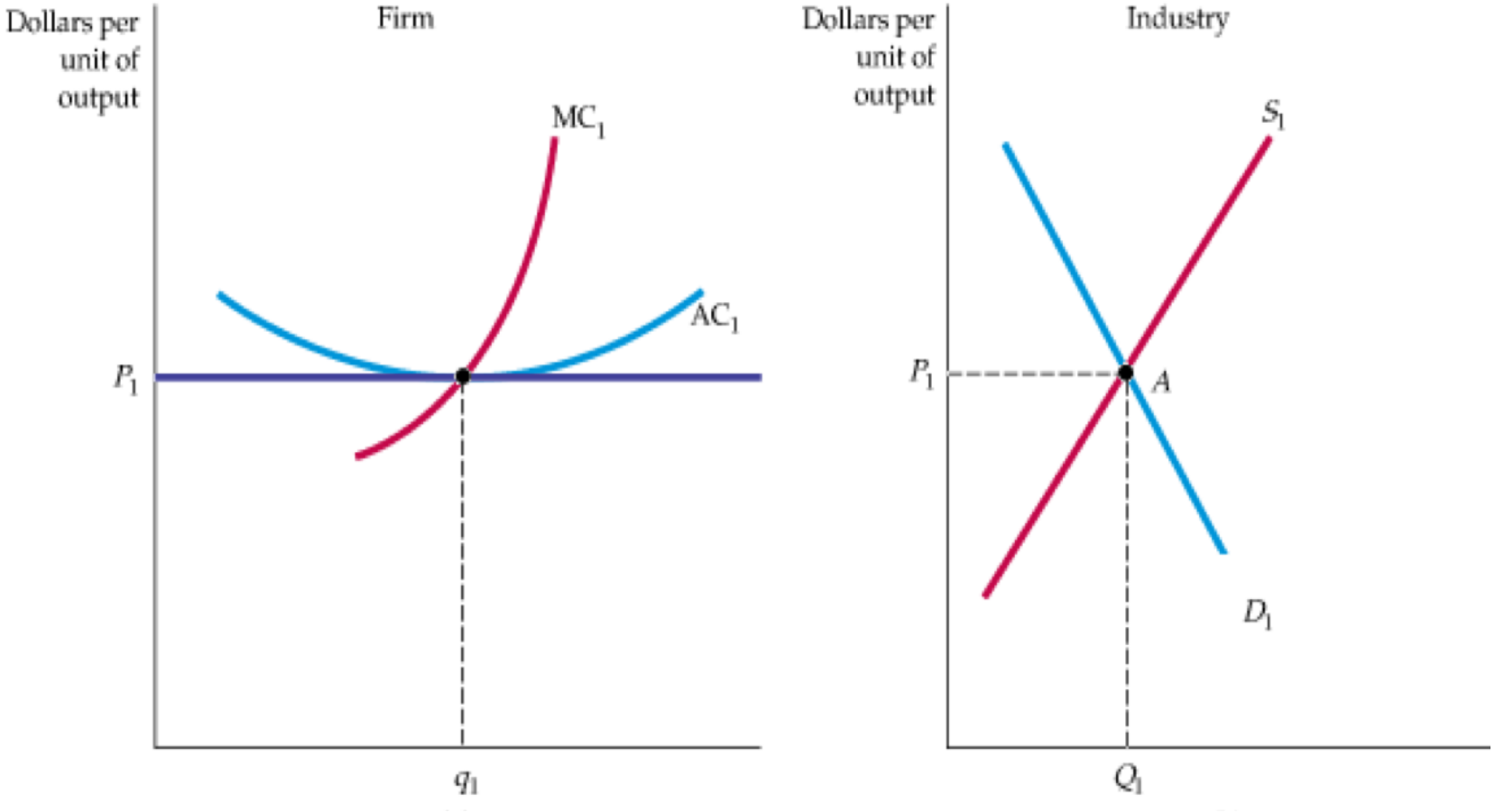
Equilibrium in a competitive market

Firms enter and exit the market depending on how much π they expect to make

Long-run competitive equilibrium in a perfectly competitive market:

1. All firms in the industry are maximizing π
2. No firm wants to enter or exit the industry because all firms are earning zero economic π
3. The price of the product is such that quantity supplied by the industry equals quantity demanded by consumers

Equilibrium in a competitive market



Market outcomes

Predicting prices

Why are prices not constant forever?

1. Market is not perfectly competitive
2. Not all firms have the same cost function

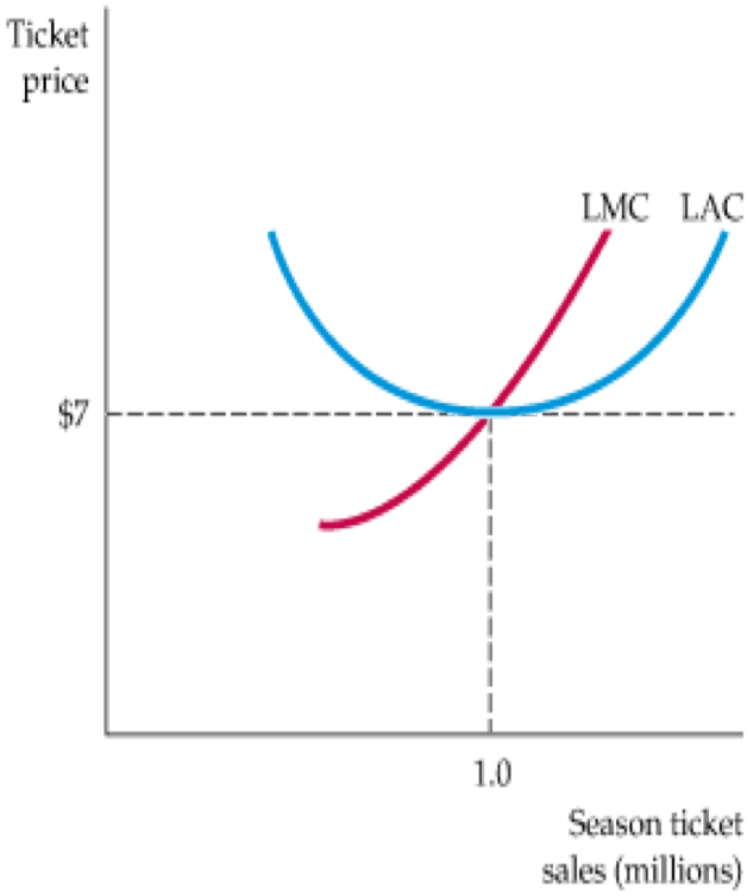
Firms with different cost functions

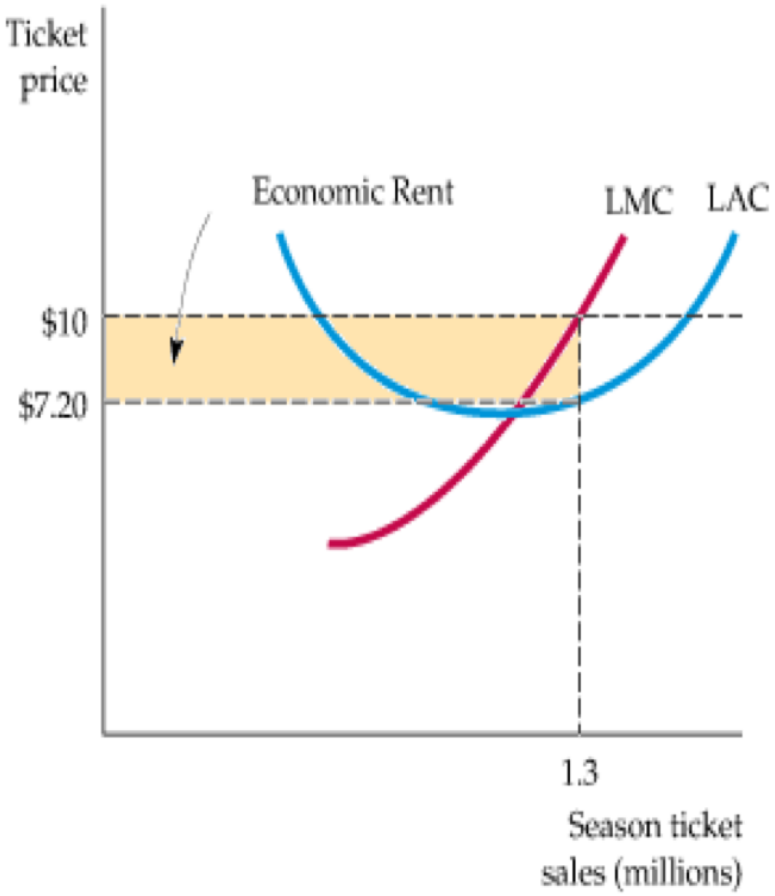
Firms in the industry have different cost functions (for example, firm X has a patent so it can produce at a lower AC than other firms)

Economic rent is the amount firms are willing to pay for an input less the minimum amount necessary to obtain it

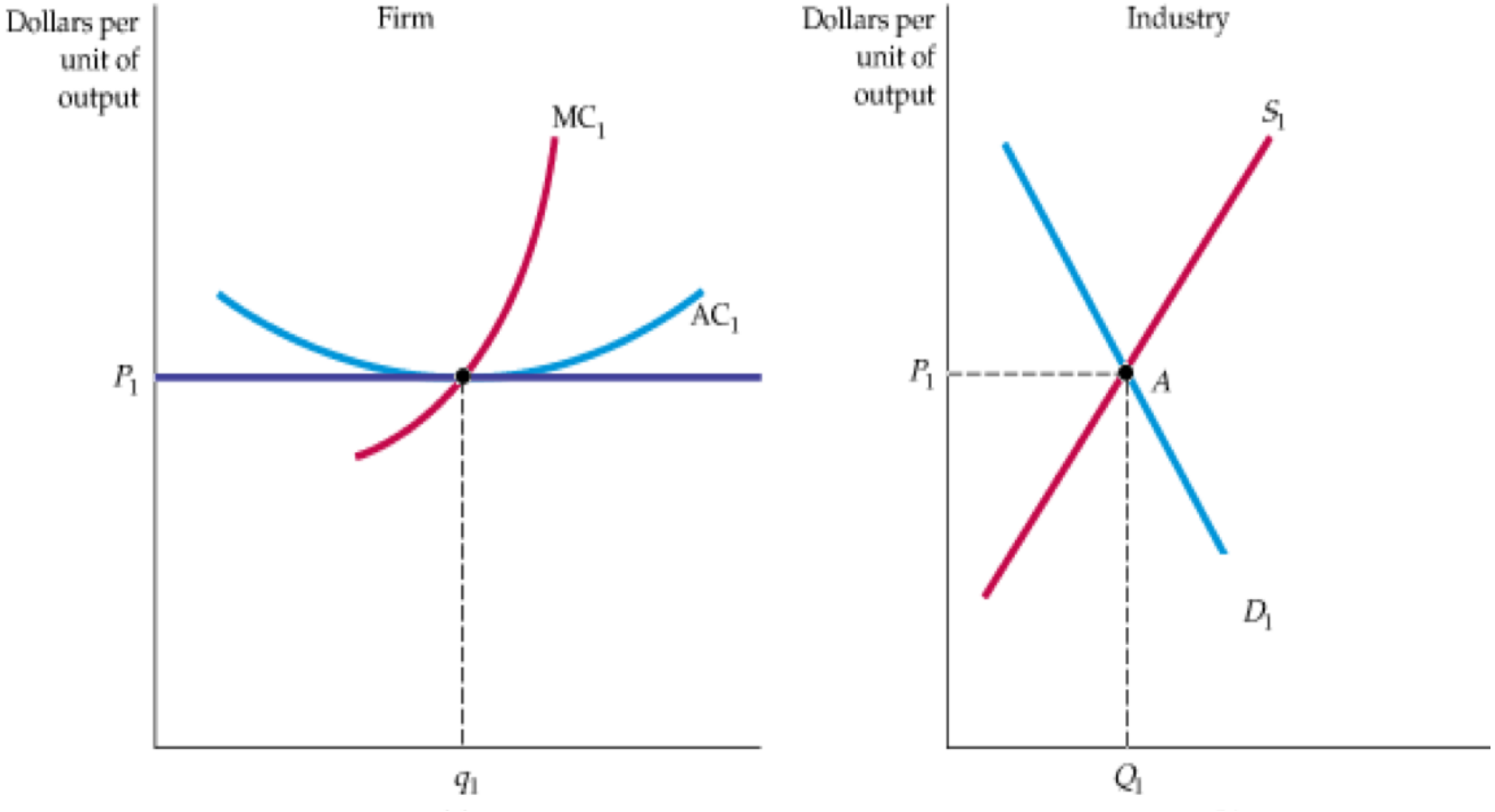
In competitive markets, economic rent is often positive even though π=0

Economic rent

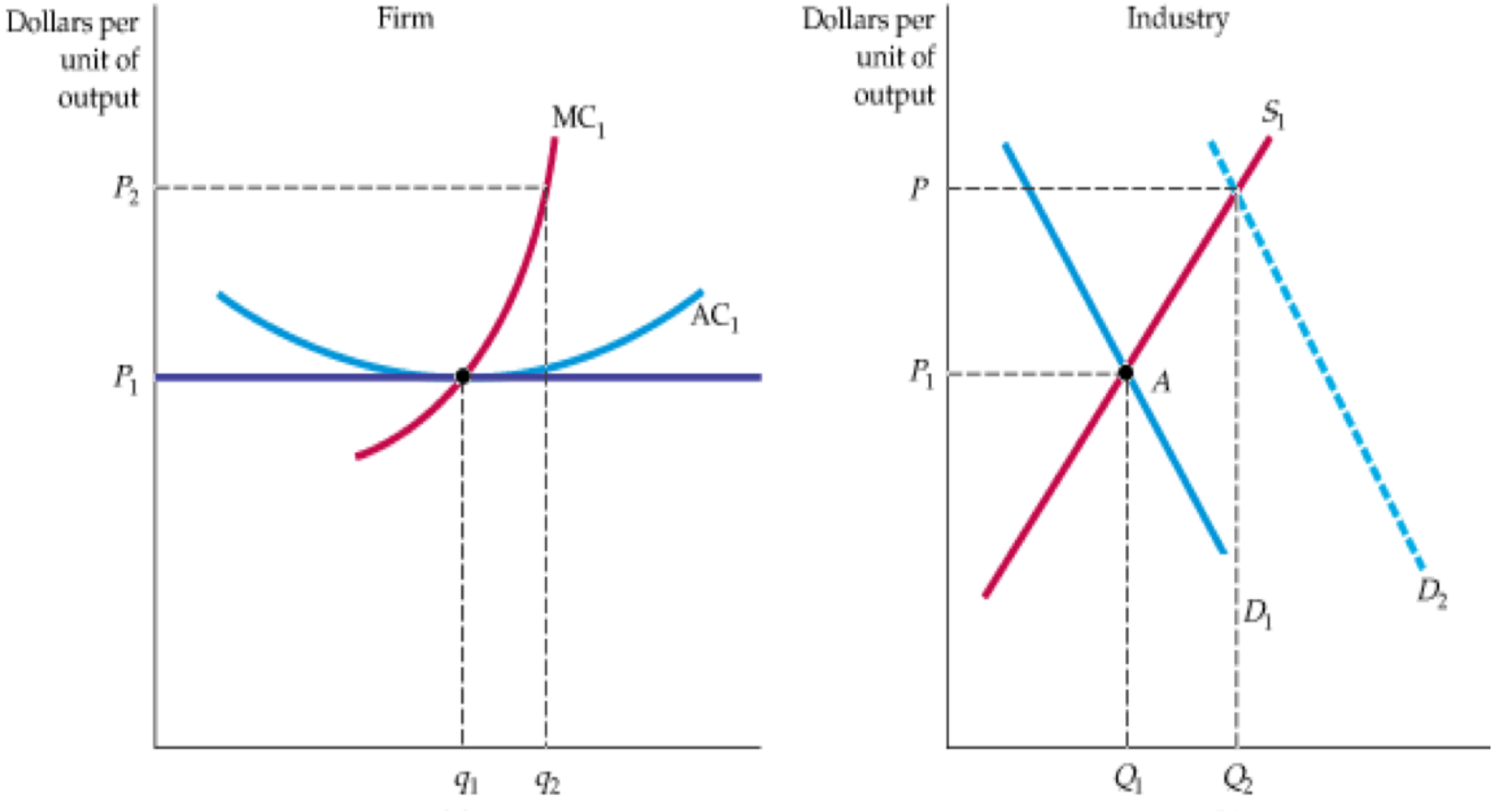




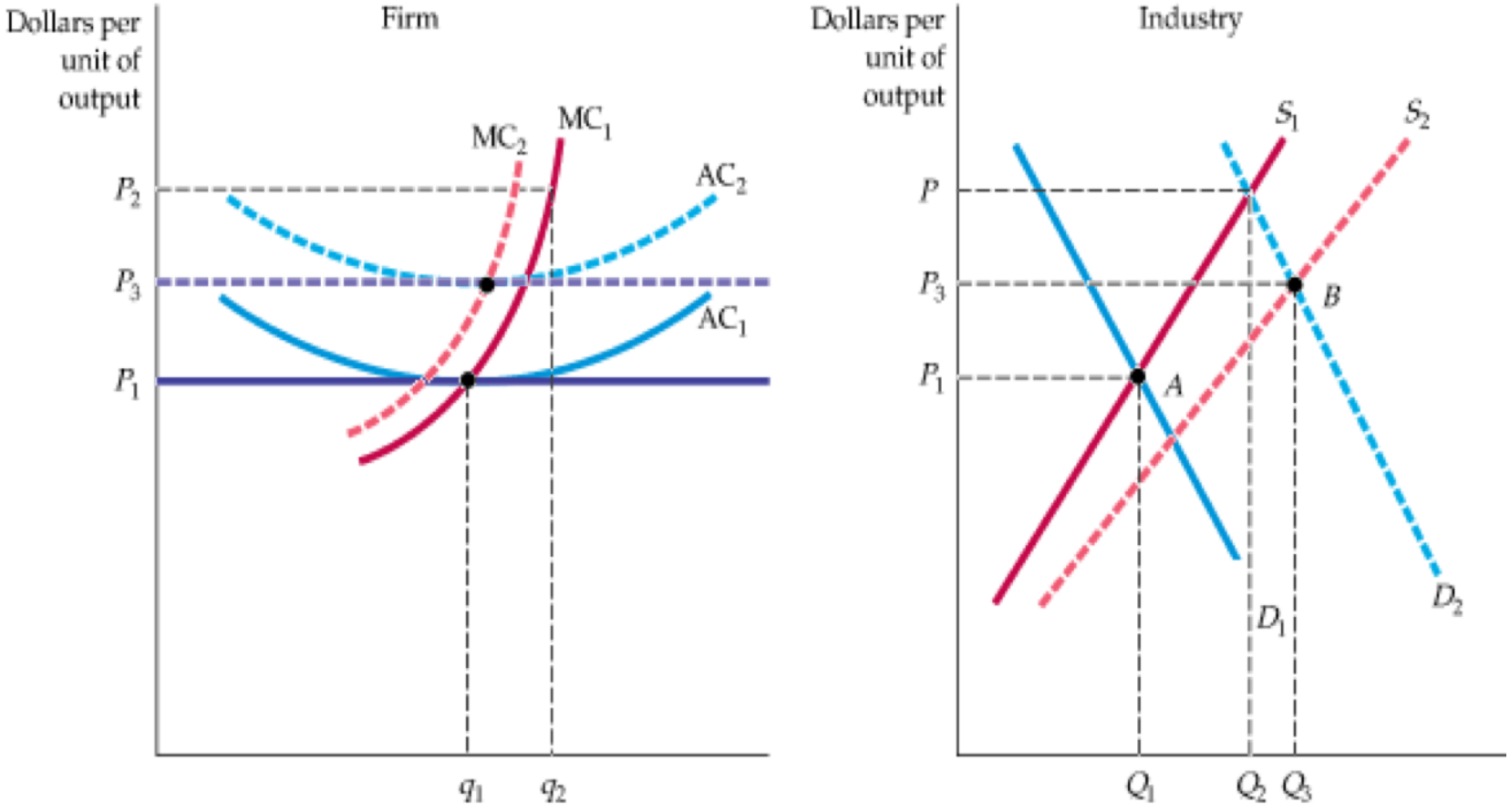
Increasing cost industries



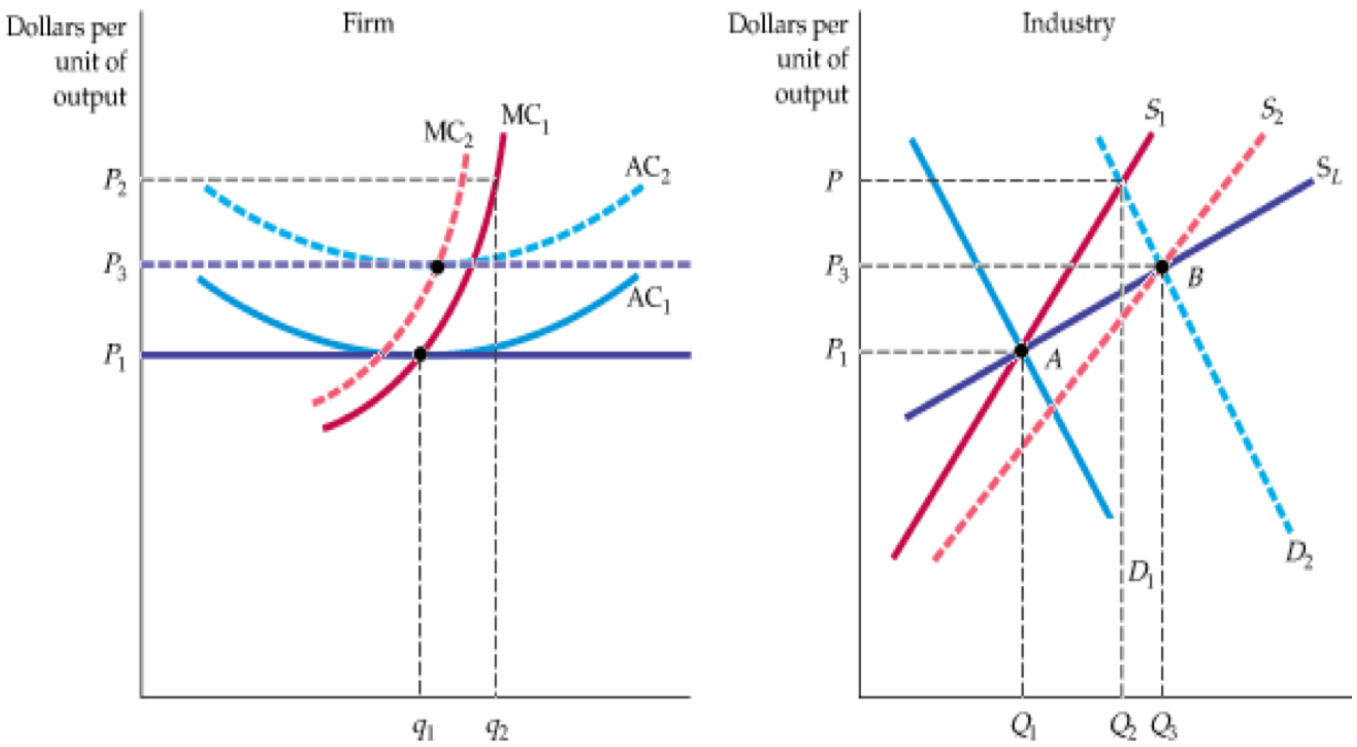
Demand shifts outward



New firms respond



Upward-sloping market supply curve



Any Questions?

Features of perfect competition

Firm and market equilibrium

Market outcomes