University of Macerata
Economics - A.Y. 2022/2023
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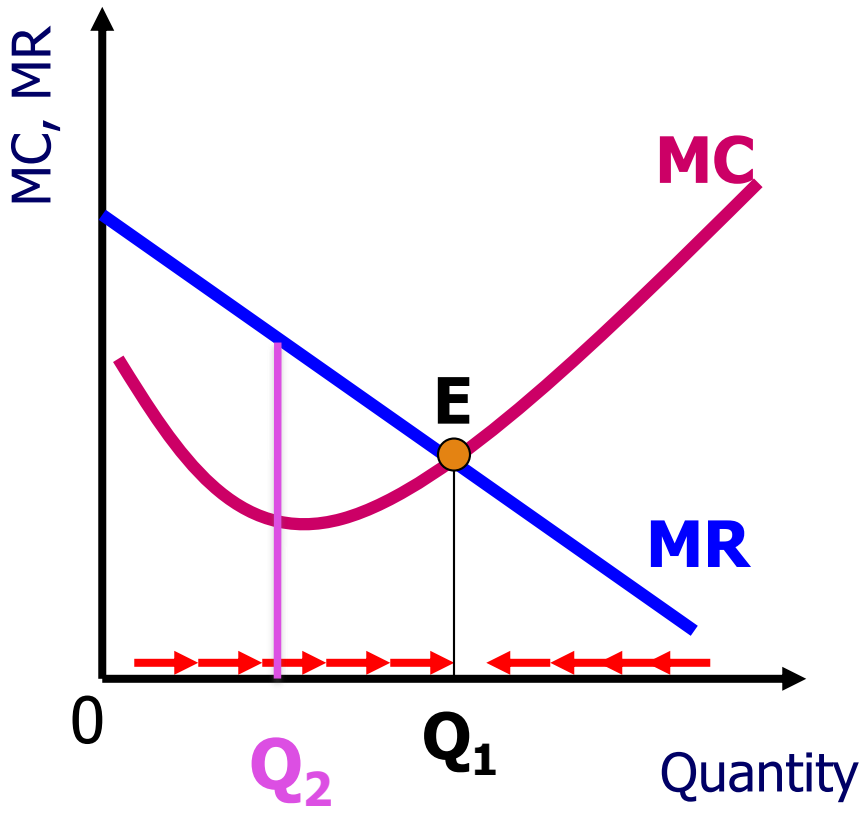
Perfect competition

REF. Chapter 8

The maximization of profit



If MR > MR, an increase in output leads to an increase in profits.

If MR < MC, a decrease in output leads to an increase in profits

Profits are then maximum in Q1, where MR = MC

The shape of the marginal revenue curve for the company depends on the structure of the market in which it operates

Market structures

Market structures

The conditions that lead the company to decide prices and quantities are different depending on the market structure (especially the **number and size of sellers** and **how much of the market the largest sellers control**)

Different kinds of market structures:

- Perfect competition
- Imperfect competition
  - ✓ Monopoly
  - ✓ Monopolistic competition
  - ✓ Oligopoly

Perfect competition

Perfect competition: characteristics

- many buyers and sellers
- no single action (in terms of choosing the quantities produced) has an effect on the market price
- companies are "price takers"
- the product is homogeneous
- there is perfect information
- there are no barriers to entry and exit
- the goal of companies is the maximization of profit

Perfect competition: characteristics

- It is a theoretical model, applicable in reality only to some agricultural and financial markets
- There is a distinction between the equilibrium for the sector (industry) and the individual firm
- There is a difference between short and long term conditions

Perfect competition: Industry and Firm

The firm can sell the Quantities (q) it wants **without being able to significantly affect the market price** (because its supply is too small compared to the size of the market), but it must "accept" the market price as a given. This is expressed by a horizontal demand curve for the individual firm.

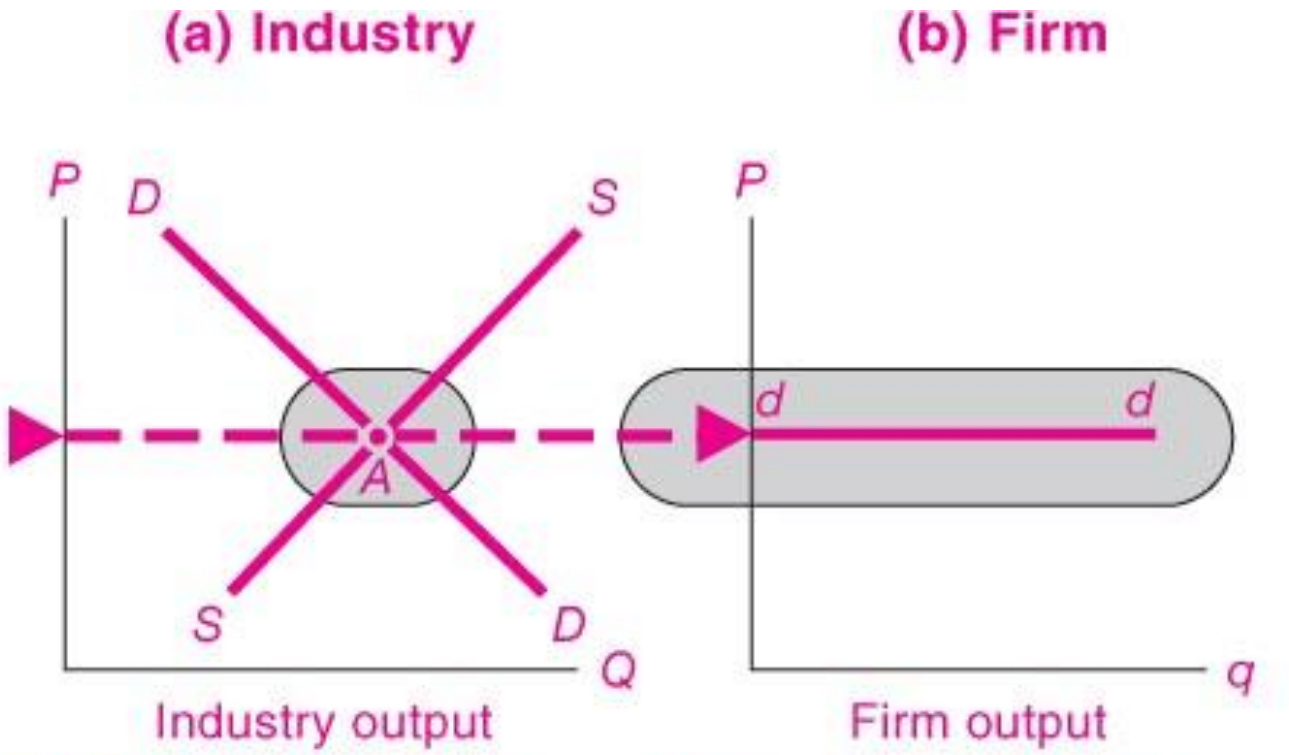


FIGURE 8-1. Demand Curve Is Completely Elastic for a Perfectly Competitive Firm

Horizontal demand for the single firm: consequences

- The firm in perfect competition accepts the **market price as a given** (price taker), it cannot change it. This means that it faces a **horizontal demand curve** (if it raised the price of its product it would have no buyers).
- In this condition the **marginal revenue (MR)** is constant and equal to the **price P**

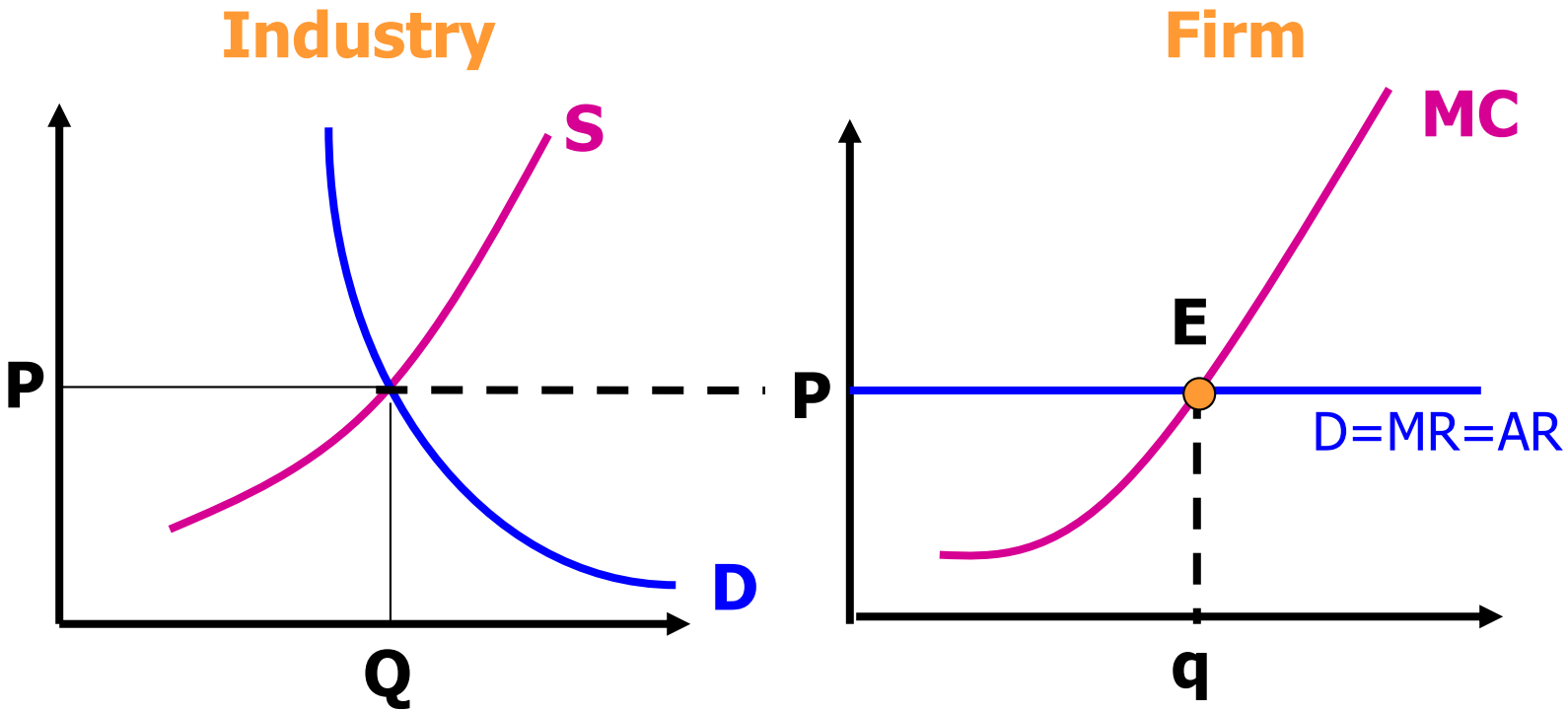
Remembering that the amount that guarantees the max profit is MC = MR …

In perfect competition only, the equilibrium for the single firm is when:

MC = P

Short-term equilibrium

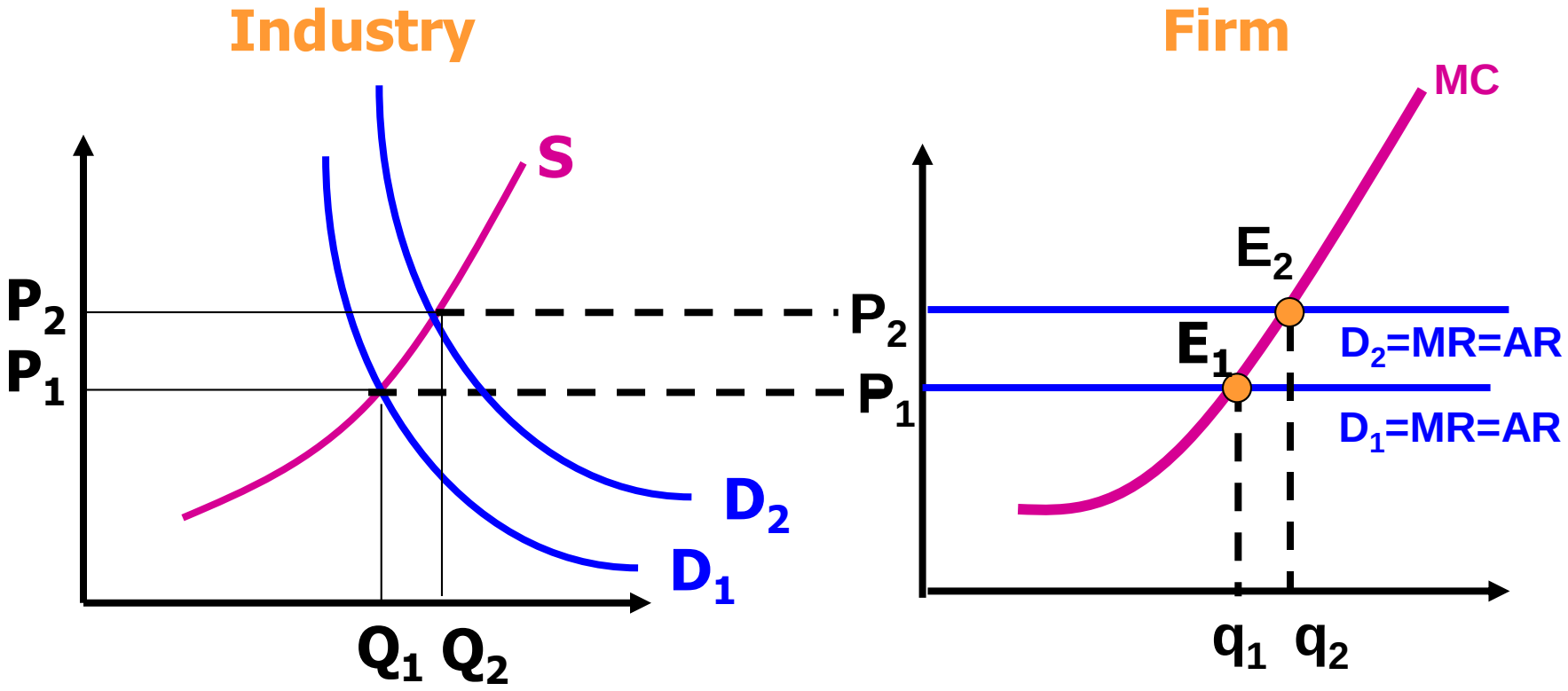
The firm and the sector, in the short run, in perfect competition



The firm accepts the market price P as a given and chooses to produce the quantity for which MC=MR, with the goal of maximizing profit

Short-term equilibrium

What happens if the demand in the sector increases?

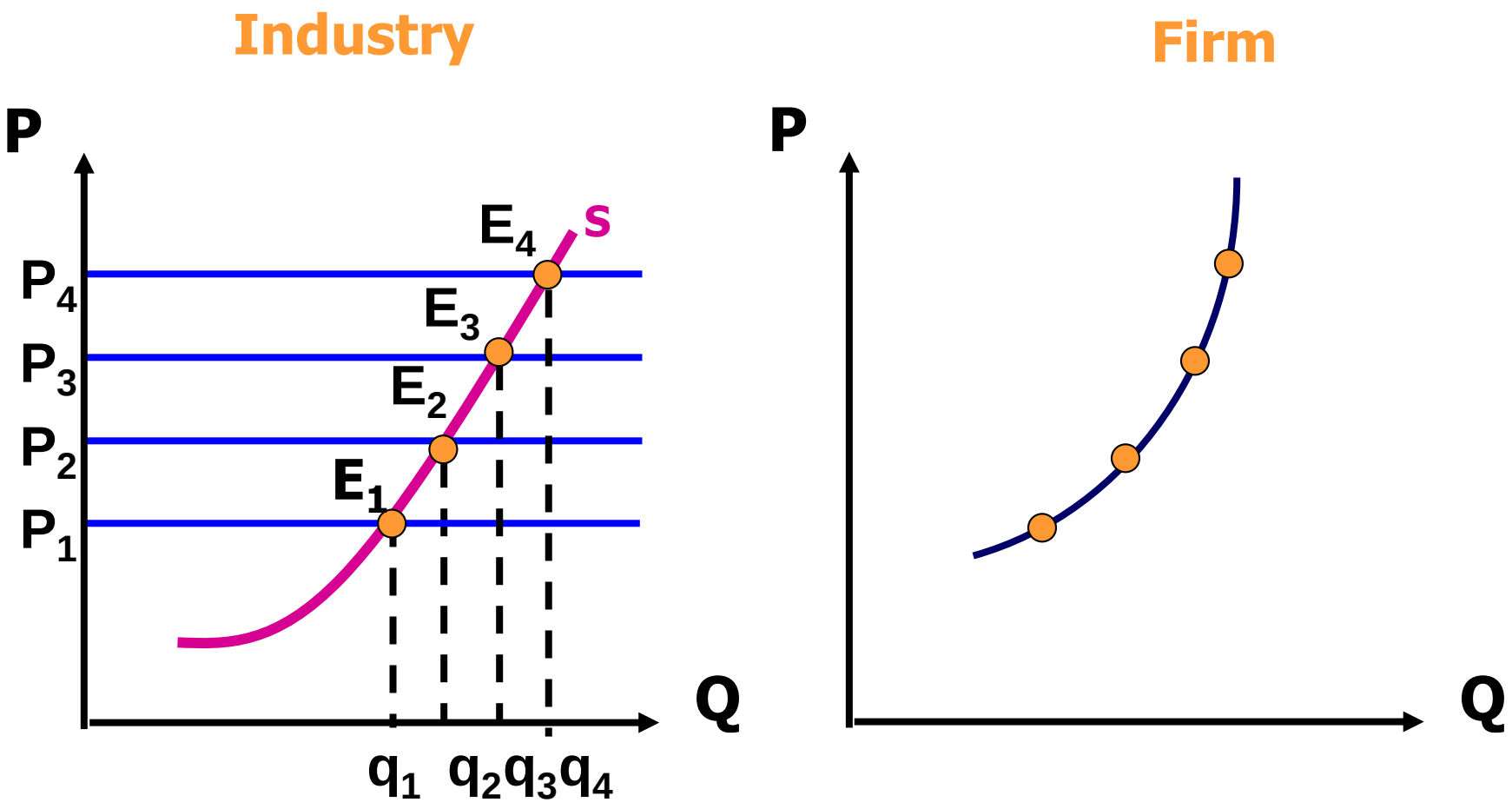


The market price P raises.

The single firm increases the quantity produced in equilibrium and the quantity produced in the entire sector grows.

Implications

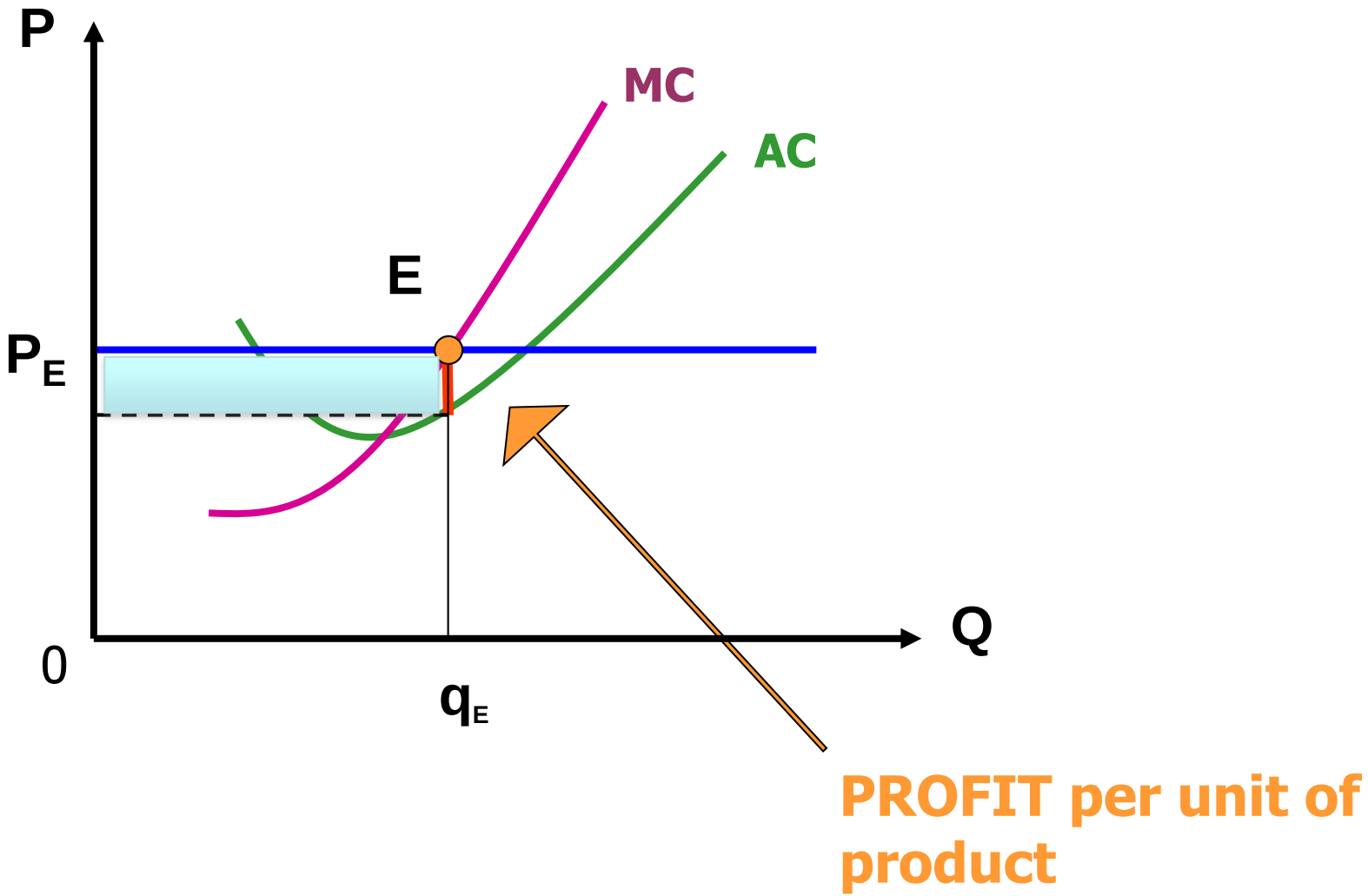
If, as the price increases, the firm increases the quantities following the marginal cost, then the supply curve of the single firm coincides with the **increasing** part of the marginal cost curve. => the **supply curve for the industry** is the **horizontal summation** of marginal cost curves of firms



In the short run, what is the profit for the single firm?

- The quantity that guarantees the maximum profit has been identified
- We now want to calculate the level of profit
- It is necessary to make the difference between revenues and costs (=> P - AC)

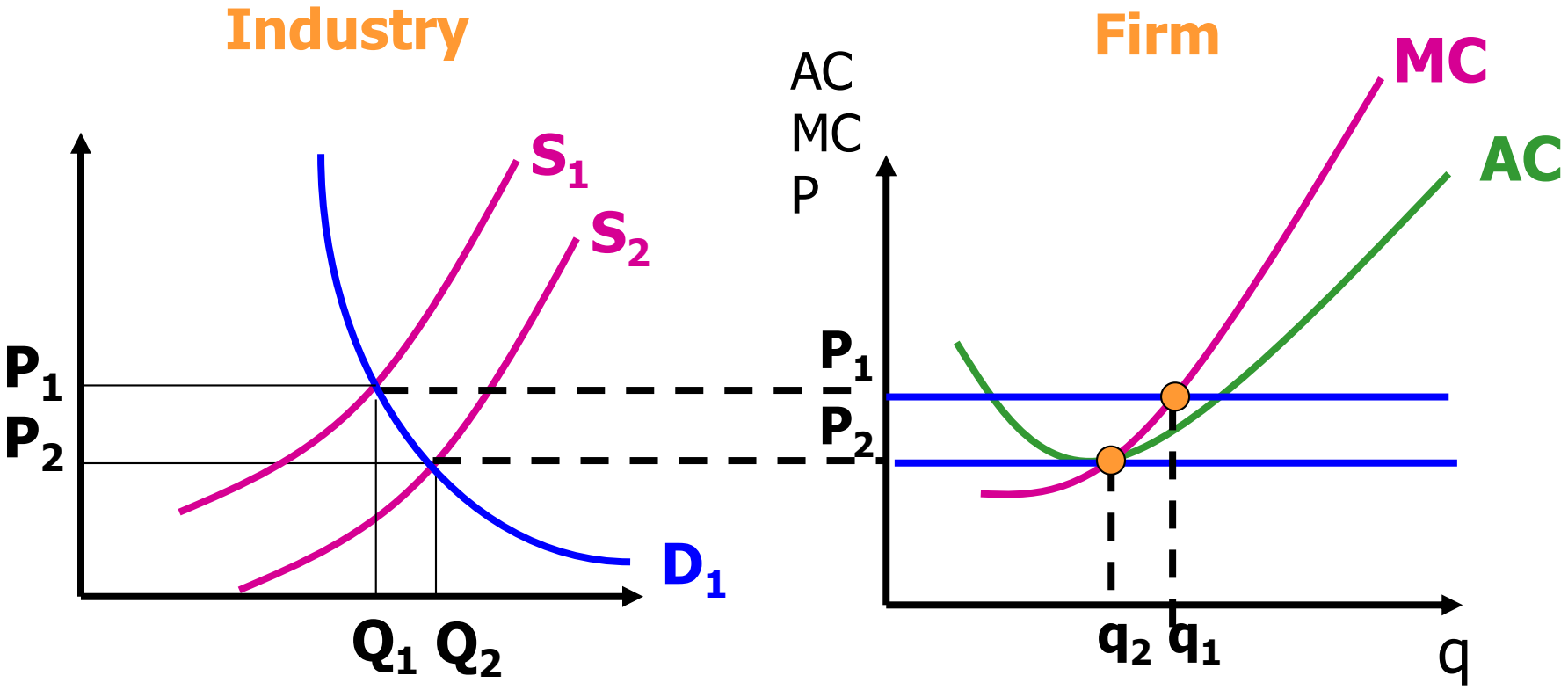
Short run: the calculation of profit



The long run: how the equilibrium changes

- Under conditions of perfect competition and free entry in the market, other companies will be attracted to the sector from positive profits
- The overall supply of the sector will increase
- The price will go down until the profit is eliminated
- These are the advantages of perfect competition for consumers

The long run



The more the number of firms in the sector increases, the more the supply curve shifts to the right causing a price reduction and an increase in Q.

For the single firm, q decreases (i.e., a lower market share).

Conclusions

The equilibrium of perfect competition is a point of:

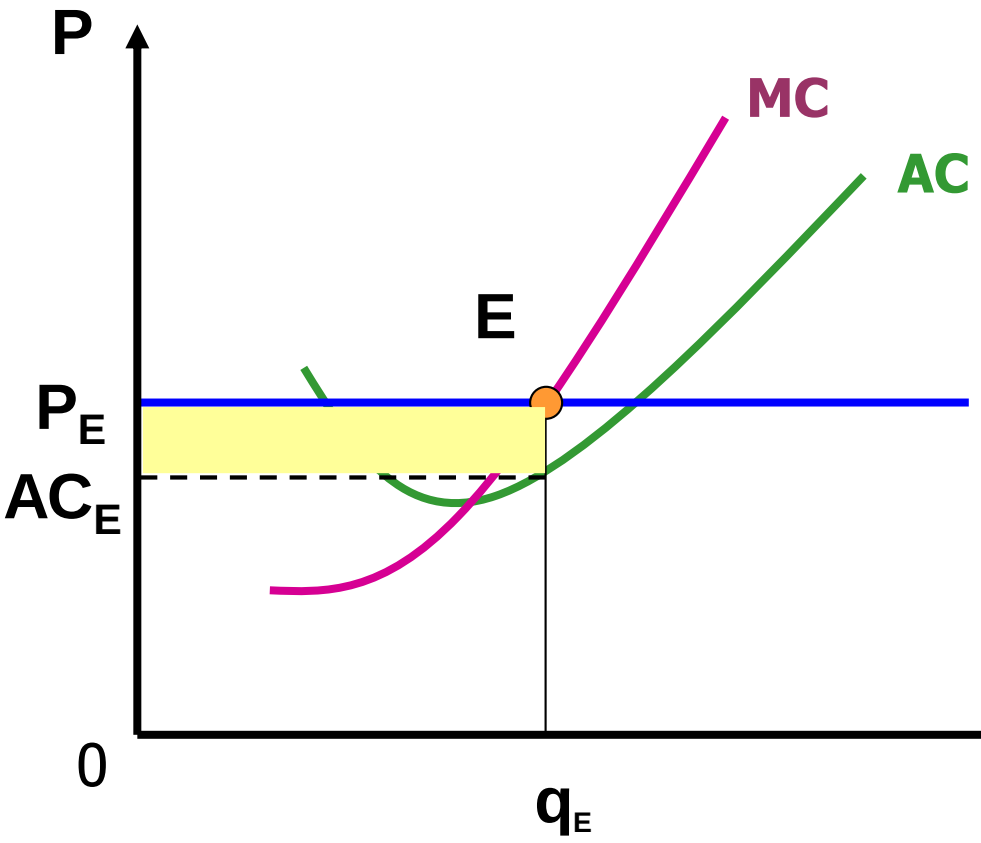
- maximum technical efficiency, since there is the best exploitation of production factors (in the long run, output is produced at the minimum level of average costs);
- economic efficiency, since profit is maximized in the short term;
- Pareto efficiency (i.e. a situation in which no reorganization or trade could raise the satisfaction of one individual without lowering the satisfaction of another individual), the best allocation of resources is implemented (maximum social welfare because prices are minimum and quantities sold to society at the maximum level)

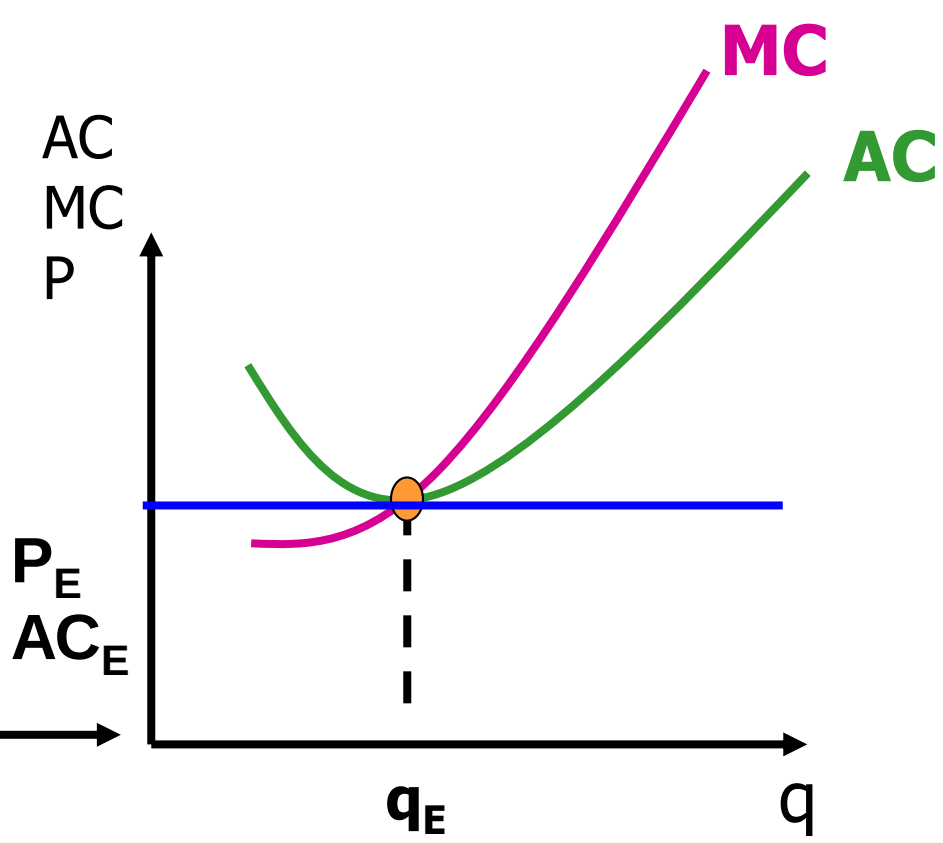
Conclusions

- According to this theoretical analysis, competition must be encouraged (high number of companies, perfect information, absence of barriers to entry, ...)
- Companies are forced to produce the quantity corresponding to the minimum average cost (efficiency in the use of resources)
- Prices tend to coincide with the minimum average cost
- The profits tend to be equal to zero
- The benefits of increased efficiency fall on consumers

In summary

In summary, the short and long term equilibria





Short-term equilibrium:
P=MC
Where P>AC
(there is profit)

Long-term equilibrium:
P=MC
Where P=AC=MC
(there is no profit)