

Week 11

Market structure

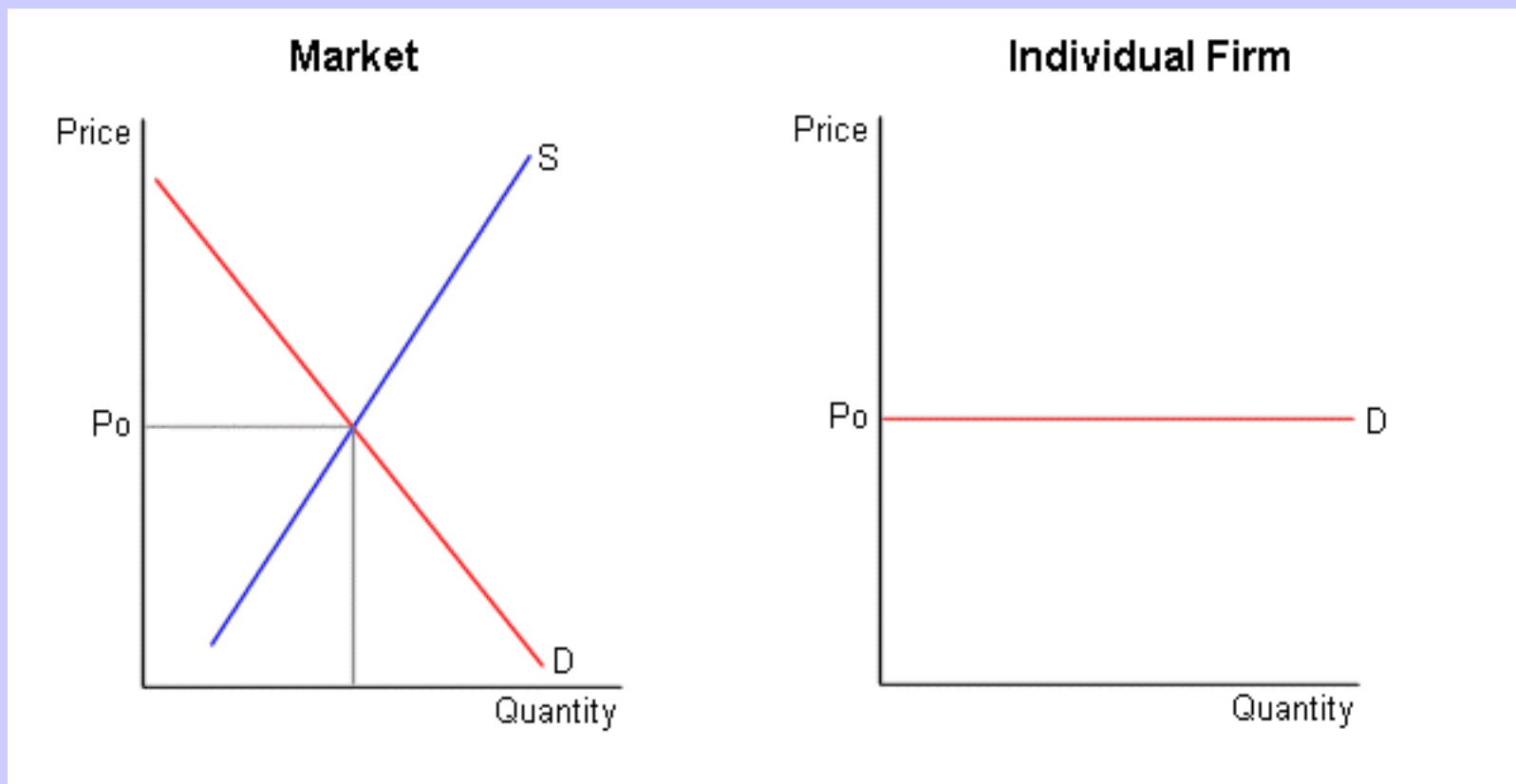
Perfect competition and monopolistic competition

Perfectly competitive market

- many buyers and sellers,
- identical (also known as homogeneous) products,
- no barriers to either entry or exit, and
- buyers and sellers have perfect information.

Demand curve facing a single firm

- no individual firm can affect the market price
- demand curve facing each firm is perfectly elastic



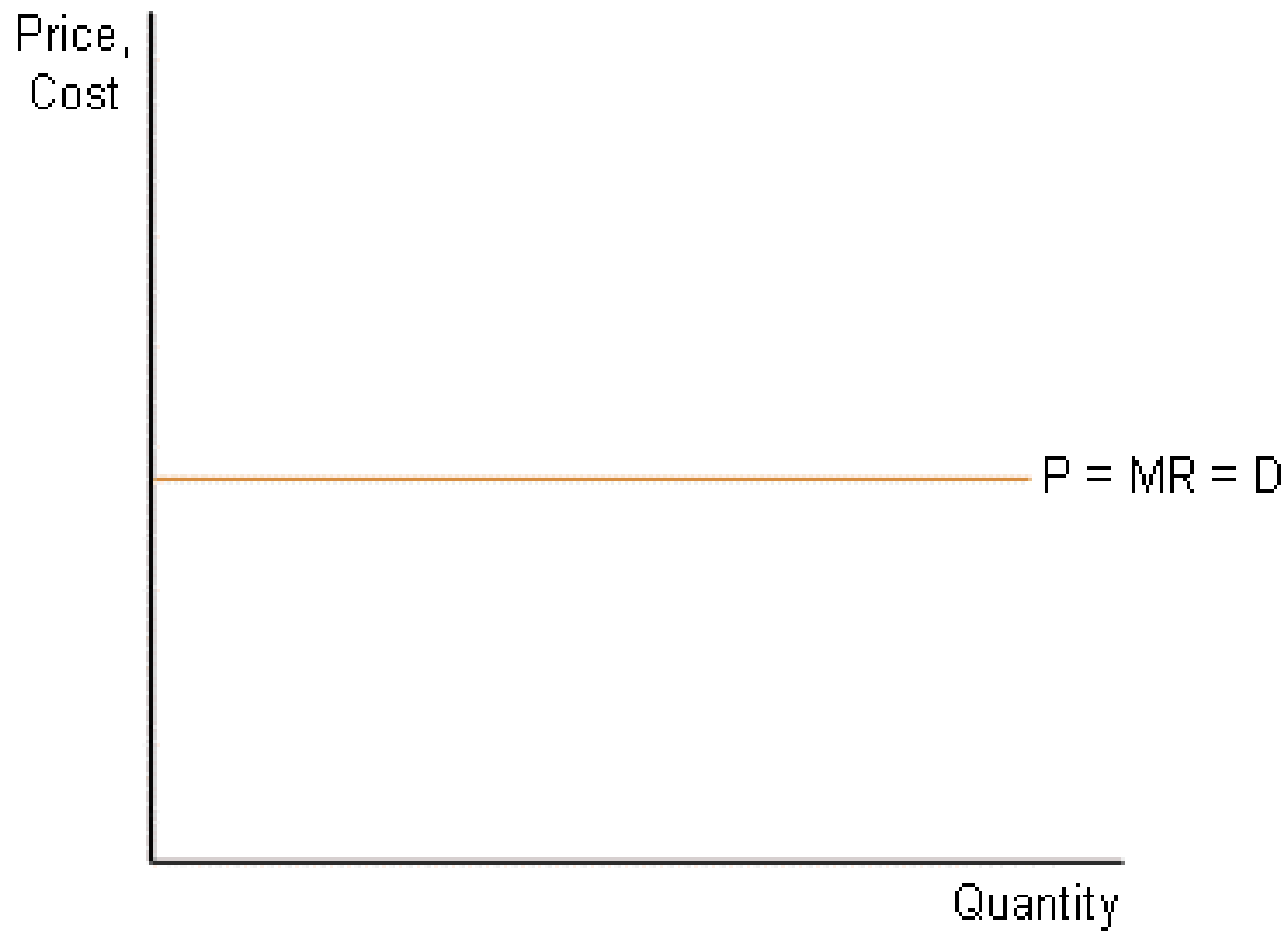
Profit maximization

- produce where $MR = MC$

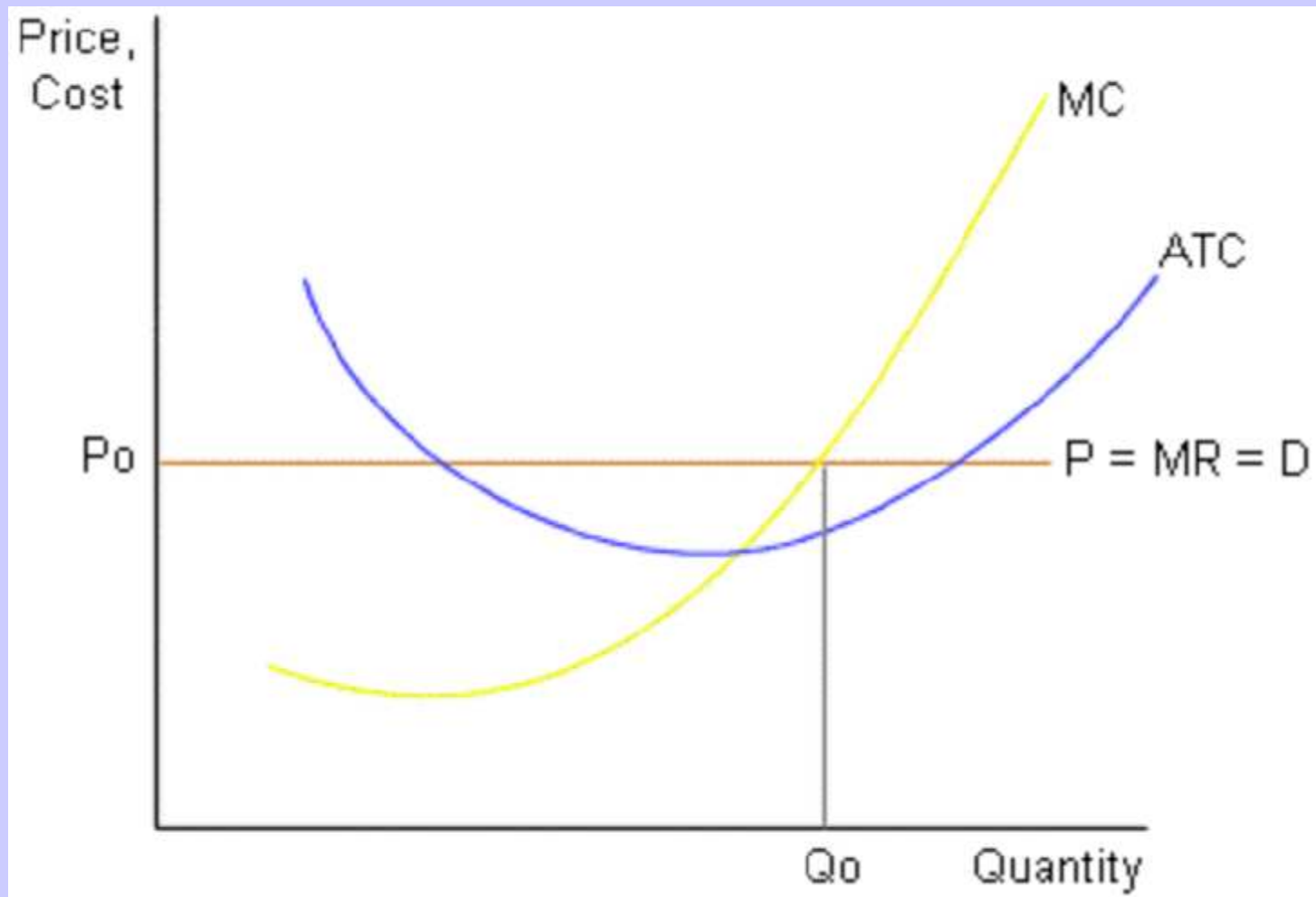
$$\text{Marginal revenue} = \frac{\Delta TR}{\Delta Q}$$

$$\text{Marginal cost} = \frac{\Delta TC}{\Delta Q}$$

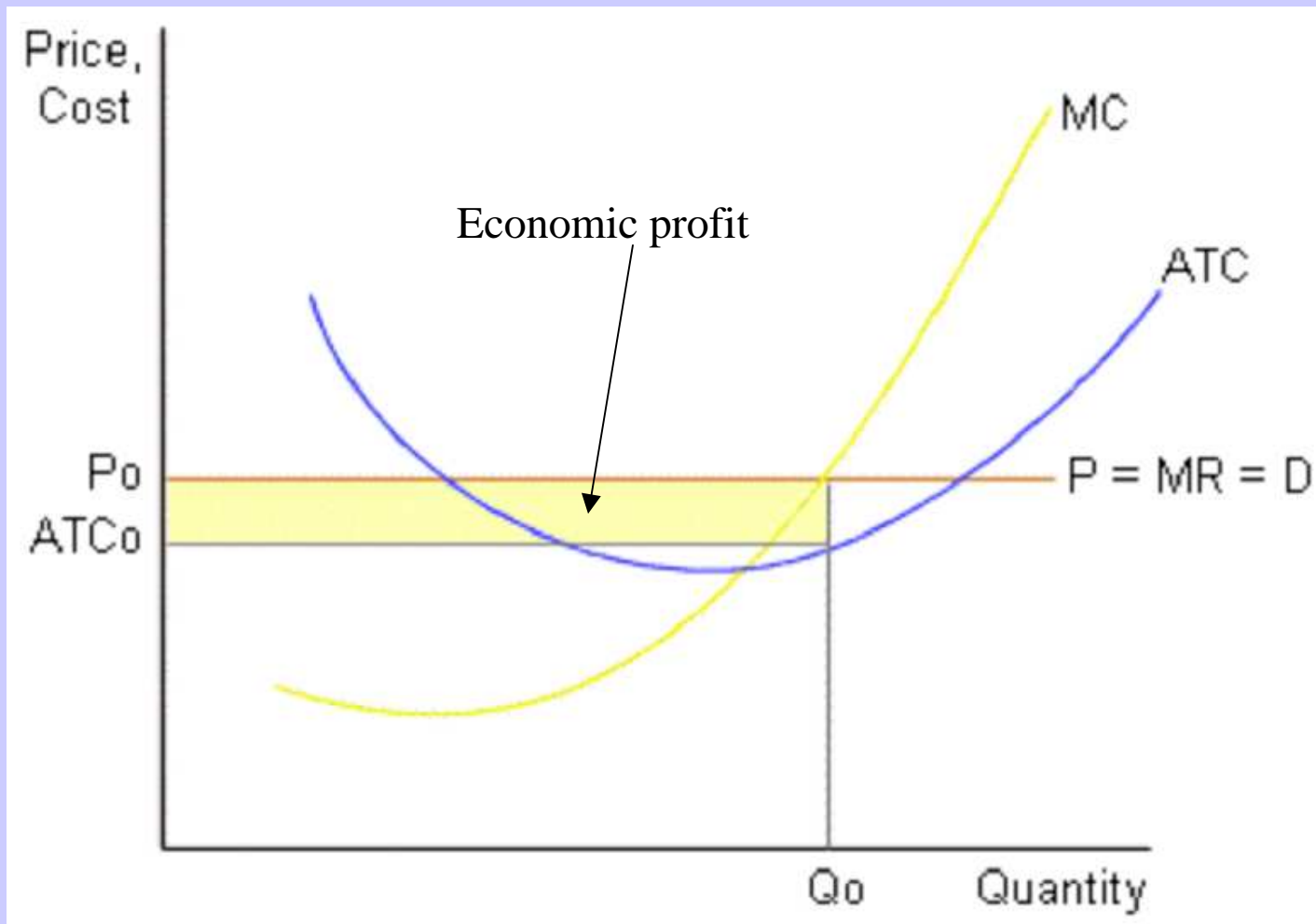
$$P = MR$$



Profit-maximizing level of output



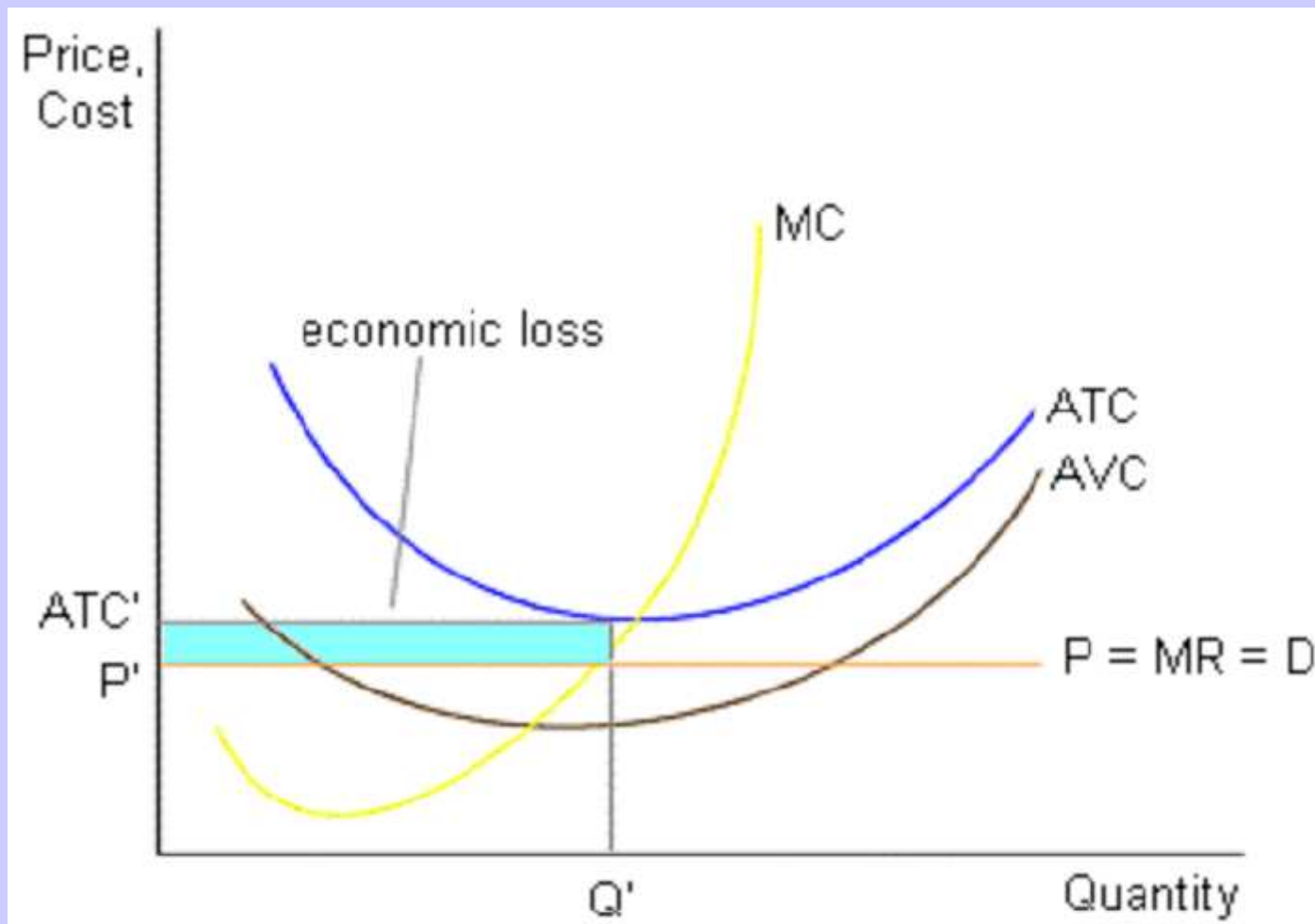
Economic Profits > 0



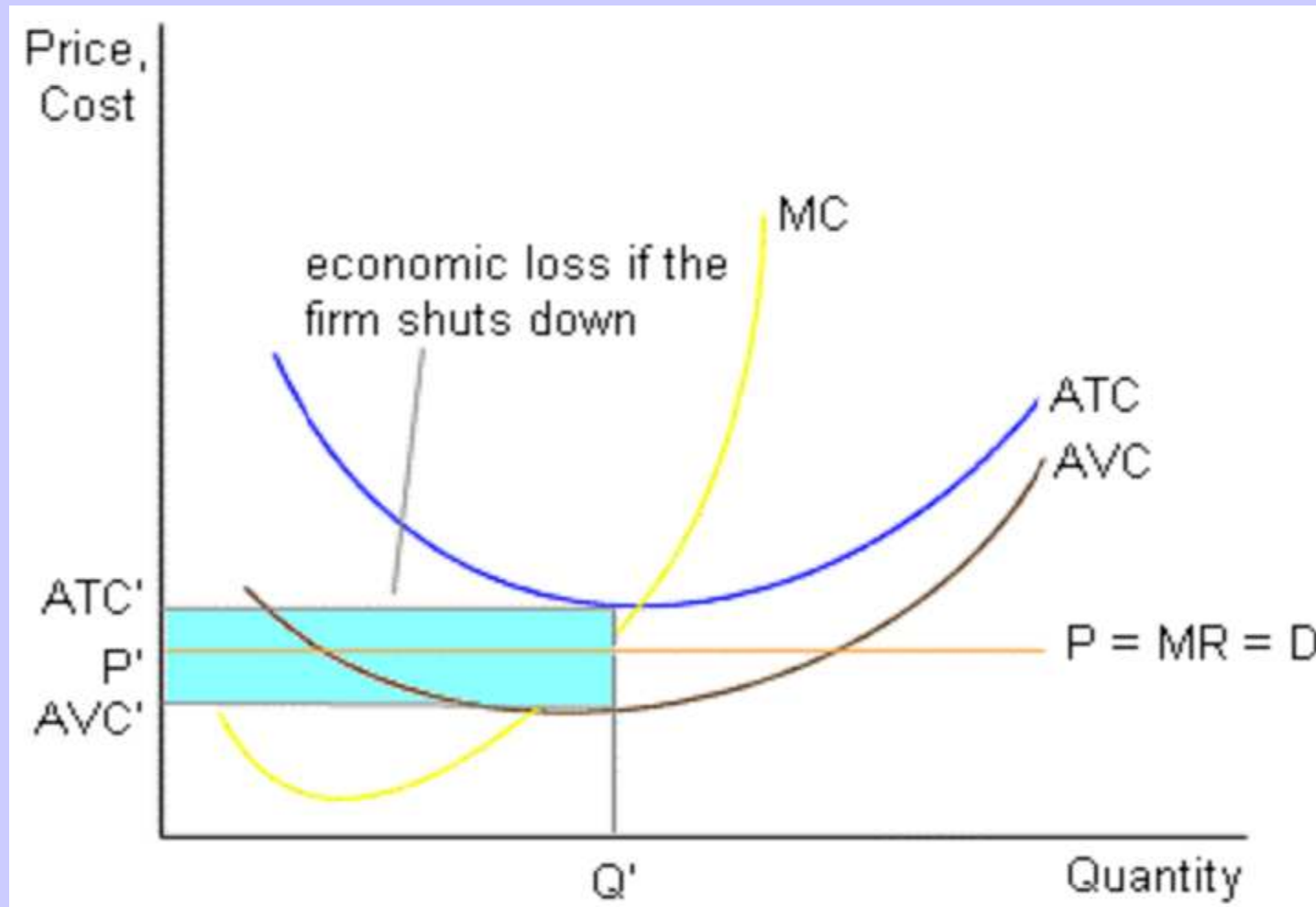
Loss minimization and the shut-down rule

- Suppose that $P < ATC$. Since the firm is experiencing a loss, should it shut down?
- Loss if shut down = fixed costs
- Shut down in the short run only if the loss that occurs where $MR = MC$ exceeds the loss that would occur if the firm shuts down (= fixed cost)
- Stay in business if $TR > VC$. This implies that $P > AVC$. Shut down if $P < AVC$.

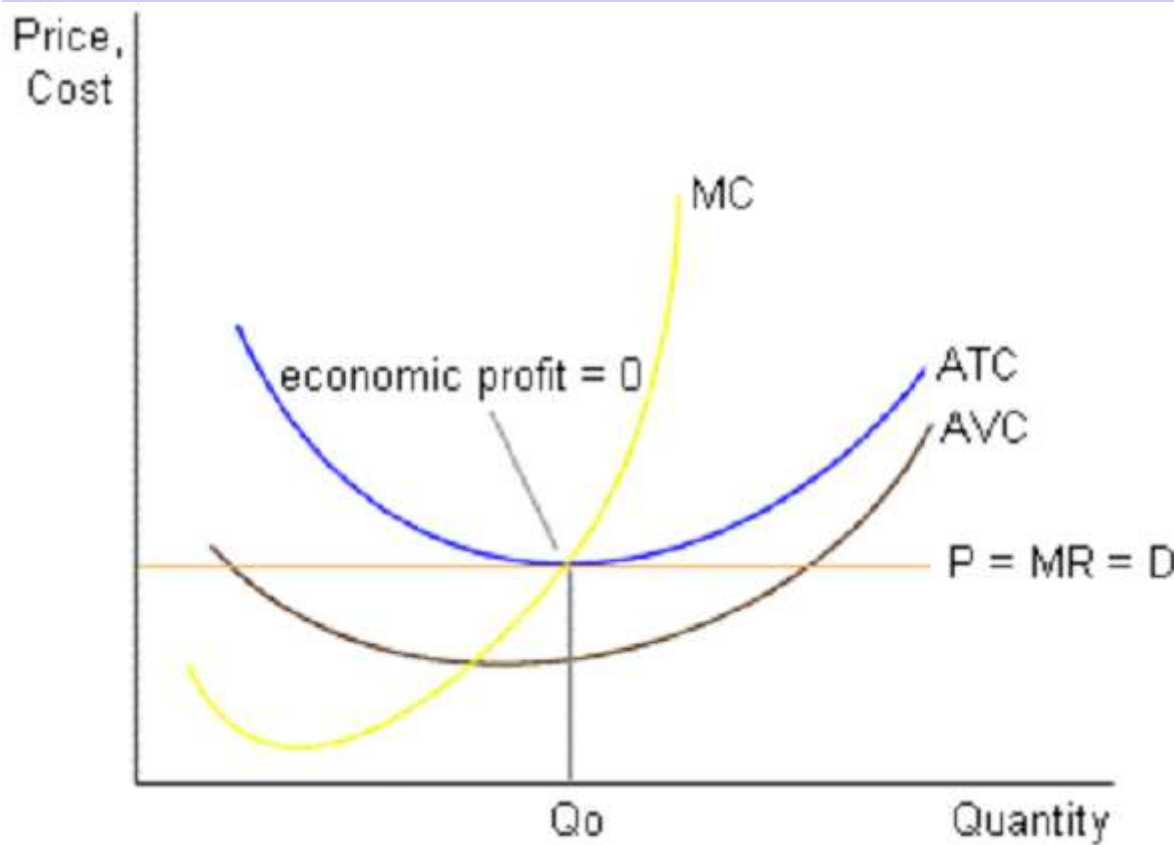
Economic loss ($AVC < P < ATC$)



Loss if shut down

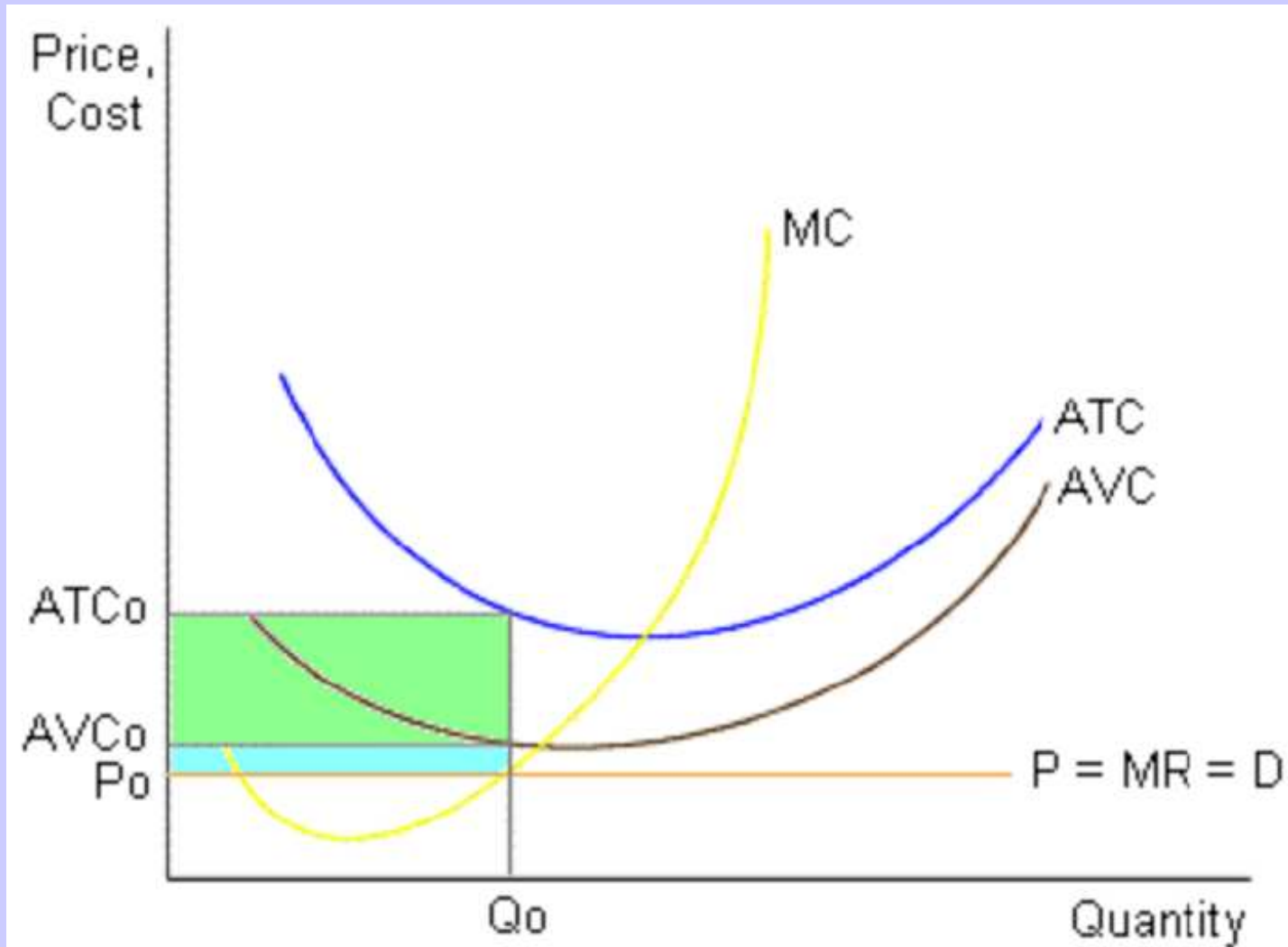


Break-even price

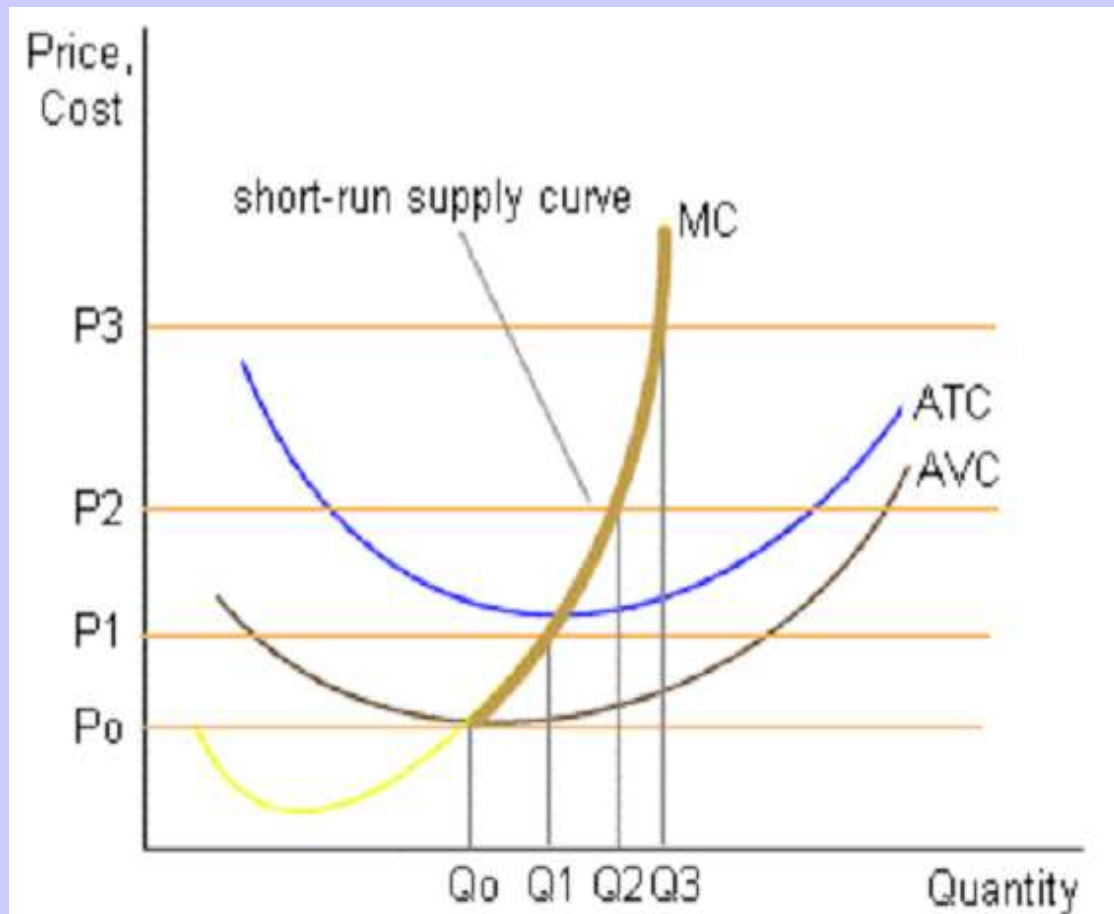


- If price = minimum point on ATC curve, economic profit = 0.
- Owners receive normal profit.
- No incentive for firms to either enter or leave the market.

$$P < AVC$$



Short-run supply curve



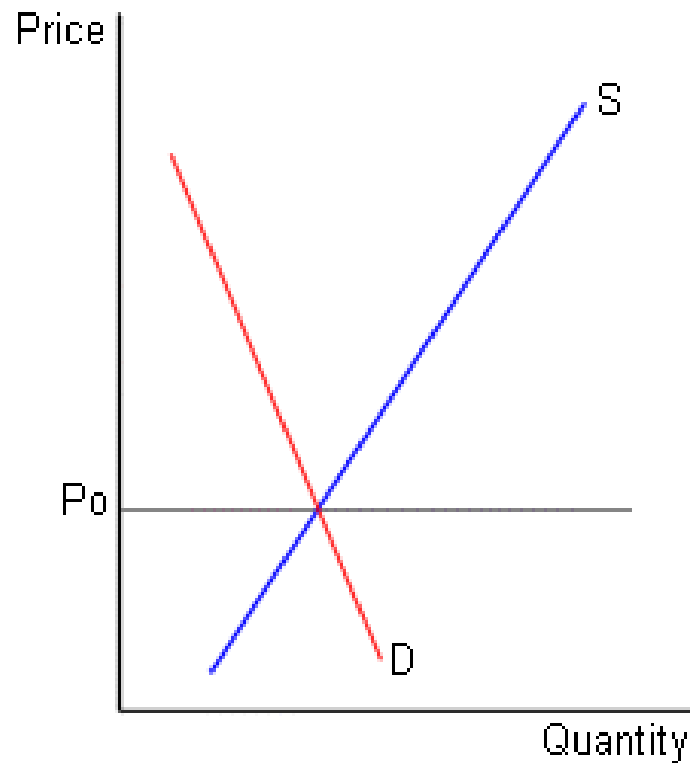
- A perfectly competitive firm will produce at the level of output at which $P = MC$, as long as $P > AVC$.

Long run

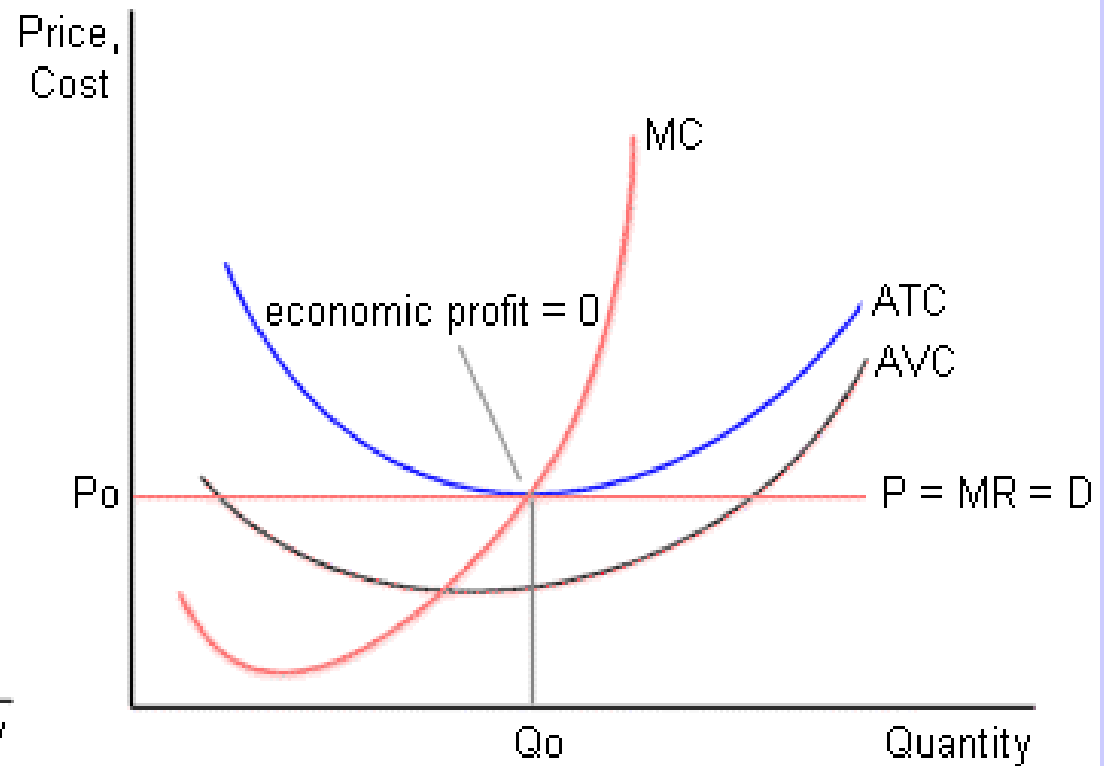
- Firms enter if economic profits > 0
 - market supply increases
 - price declines
 - profit declines until economic profit equals zero (and entry stops)
- Firms exit if economic losses occur
 - market supply decreases
 - price rises
 - losses decline until economic profit equals zero

Long-run equilibrium

Market



Individual Firm



Long-run equilibrium and economic efficiency

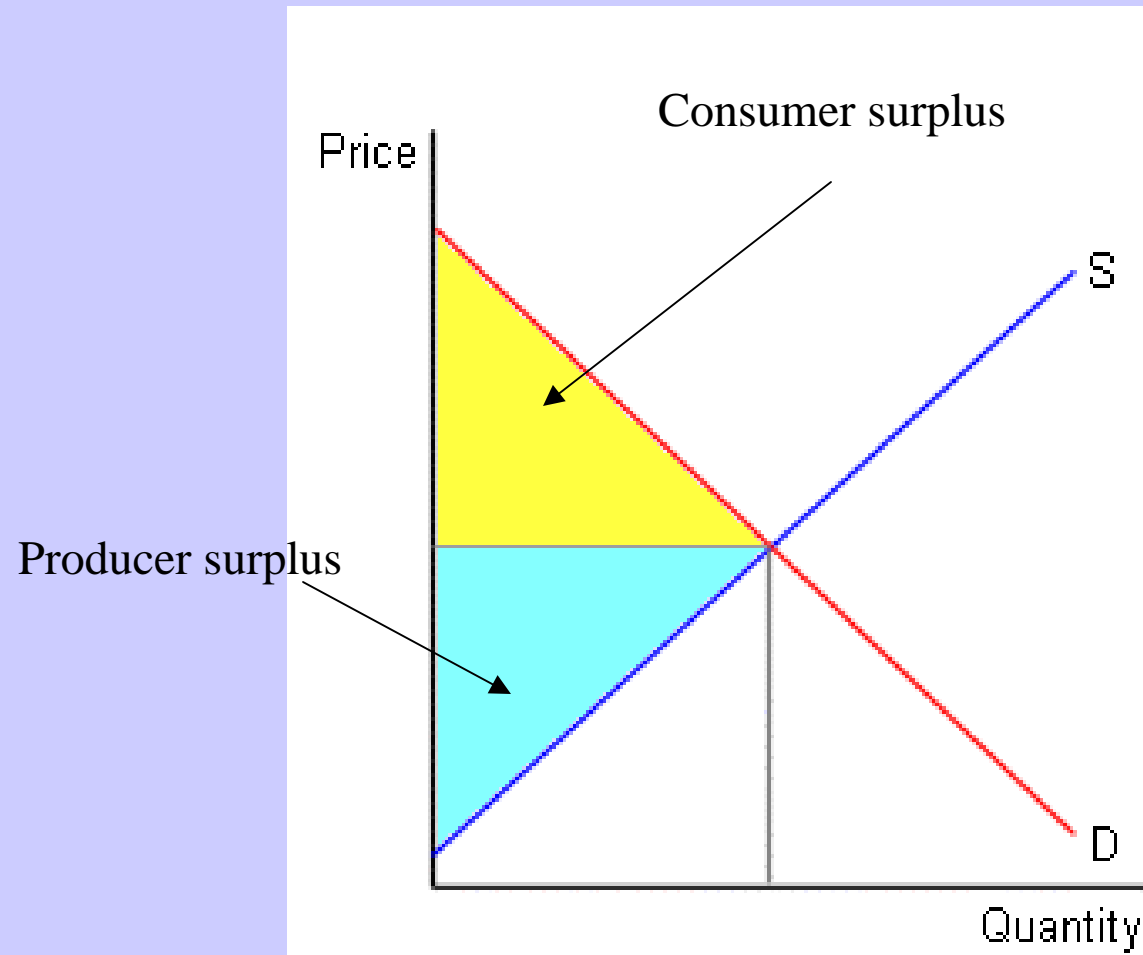
- Two desirable efficiency properties (assuming no market failure)
 - $P = MC$ (Social marginal benefit = social marginal cost)
 - $P = \text{minimum ATC}$

Consumer and producer surplus

- Consumer surplus = net gain from trade received by consumers ($MB > P$ for consumers up to the last unit consumed)
- Producer surplus = net gain received by producers ($P > MC$ up to the last unit sold)

Consumer and producer surplus

- Gains from trade = consumer surplus + producer surplus



Monopolistic Competition

Characteristics of a monopolistically competitive market

- Many buyers and sellers
- Differentiated products
- Easy entry and exit

Relationship to other market models

- Monopolistic competition is similar to perfect competition in that:
 - There are many buyers and sellers
 - There are no barriers to entry or exit
- Monopolistic competition is similar to monopoly in that:
 - Each firm is the sole producer of a particular product (although there are close substitutes)
 - The firm faces a downward sloping demand curve for its product

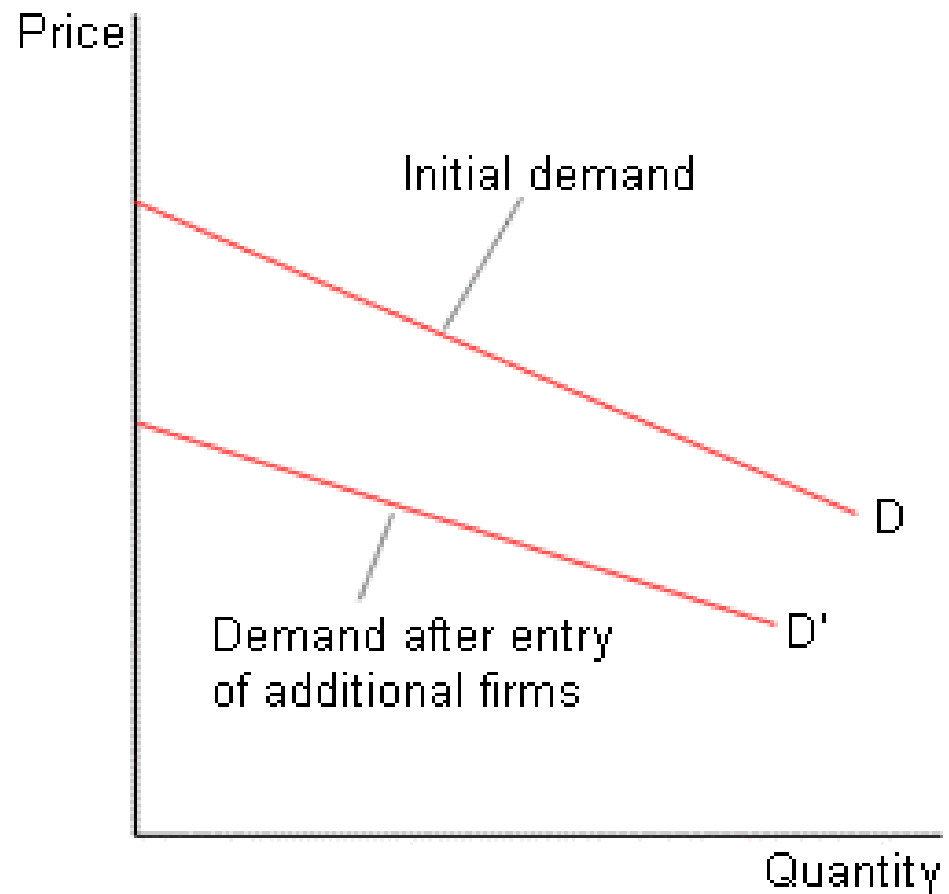
Demand curve facing a monopolistically competitive firm



The firm's demand curve and entry and exit

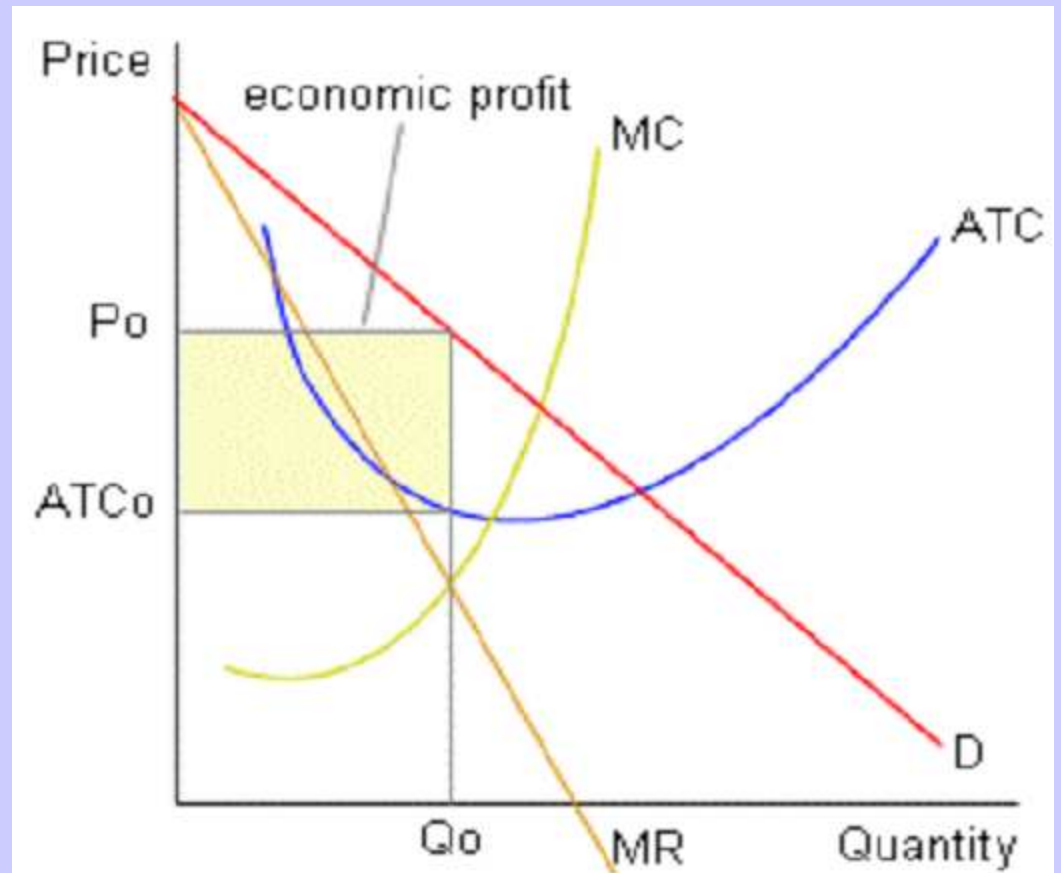
- As firms enter a monopolistically competitive market, the demand facing a typical firm declines and becomes more elastic.

Typical firm in an oligopoly market



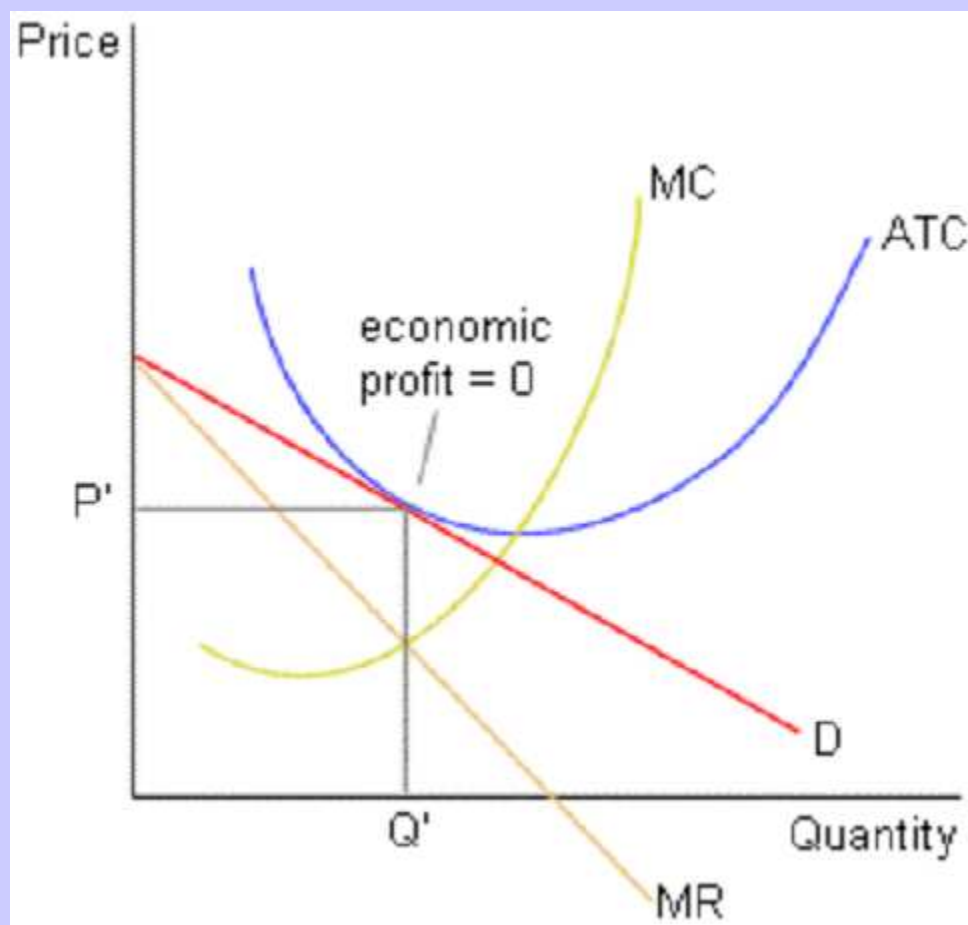
Short-run equilibrium in a monopolistically competitive industry

- Economic profits lead to entry and a reduction in the demand facing a typical firm.

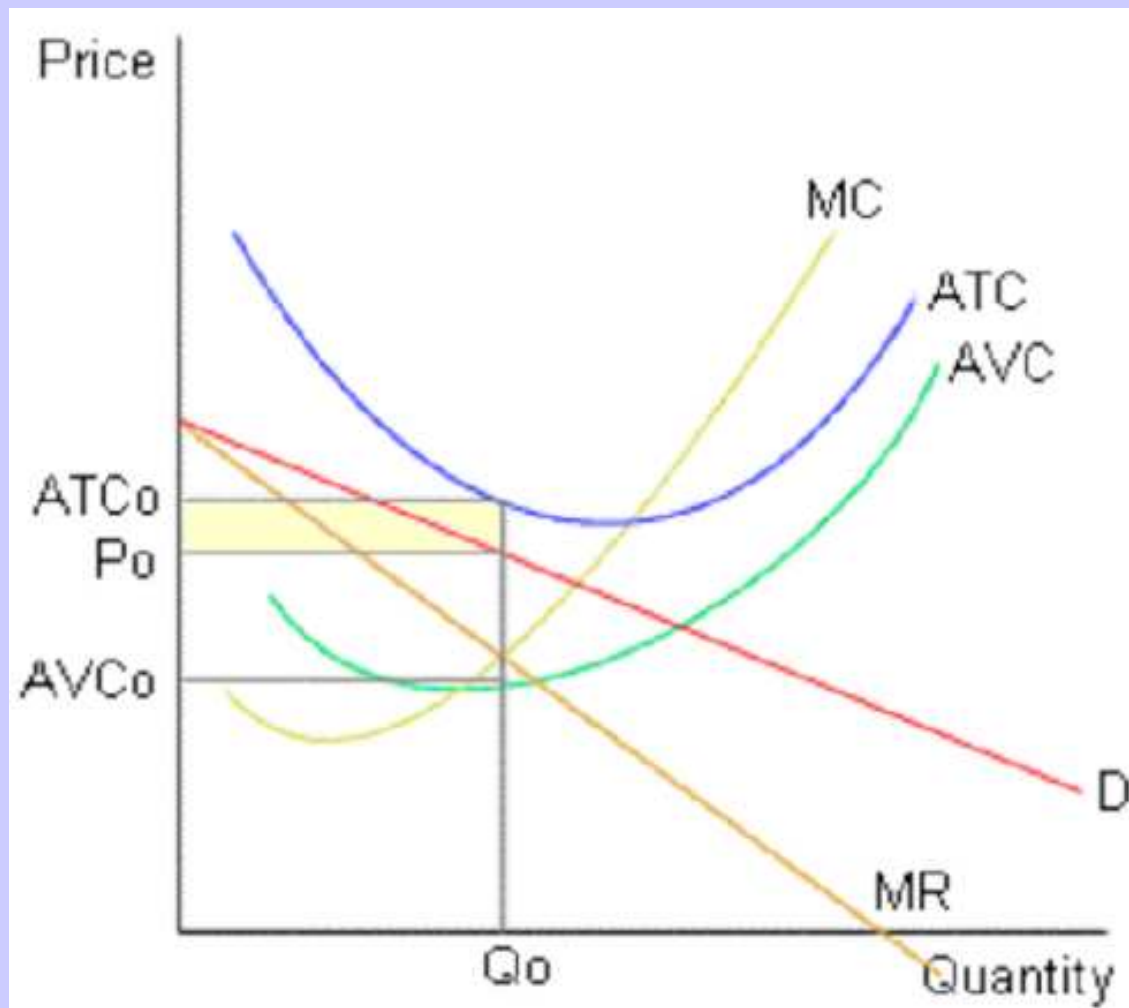


Long-run equilibrium in a monopolistically competitive industry

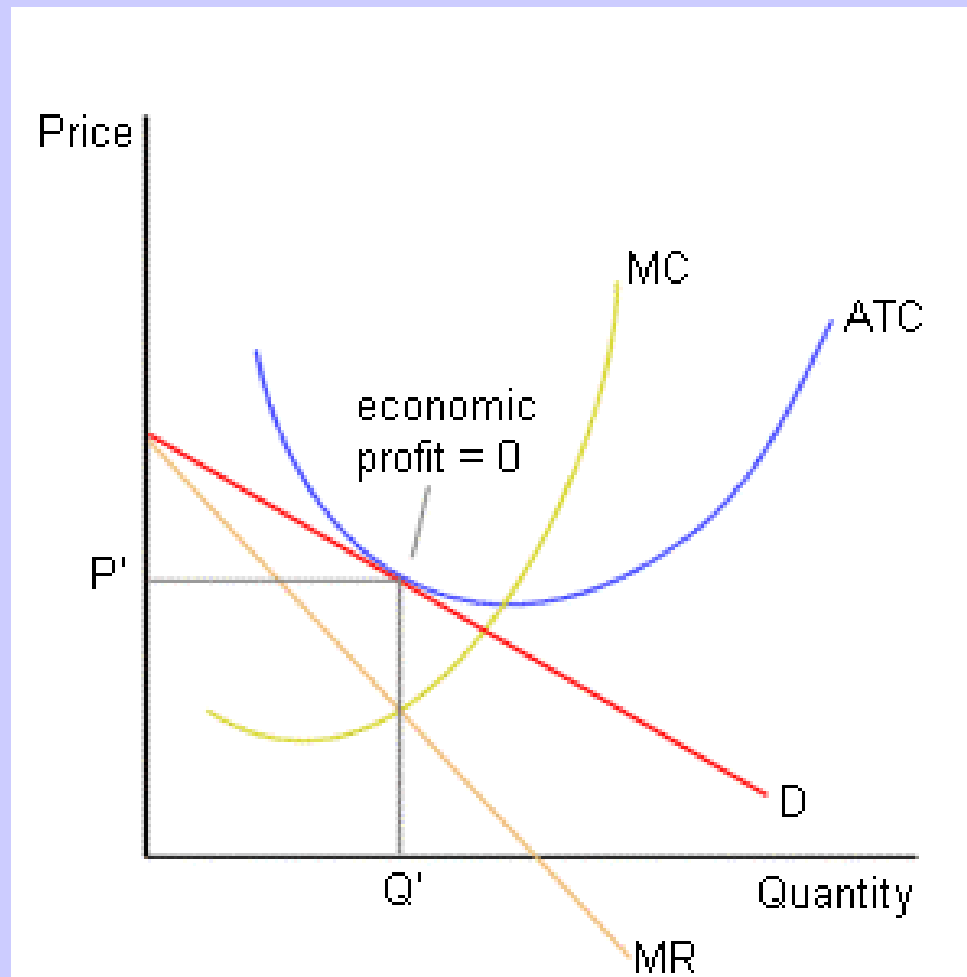
- Entry continues until economic profit equals zero for a typical firm.
- This equilibrium is often referred to as a “tangency equilibrium.”



Short-run equilibrium with economic losses

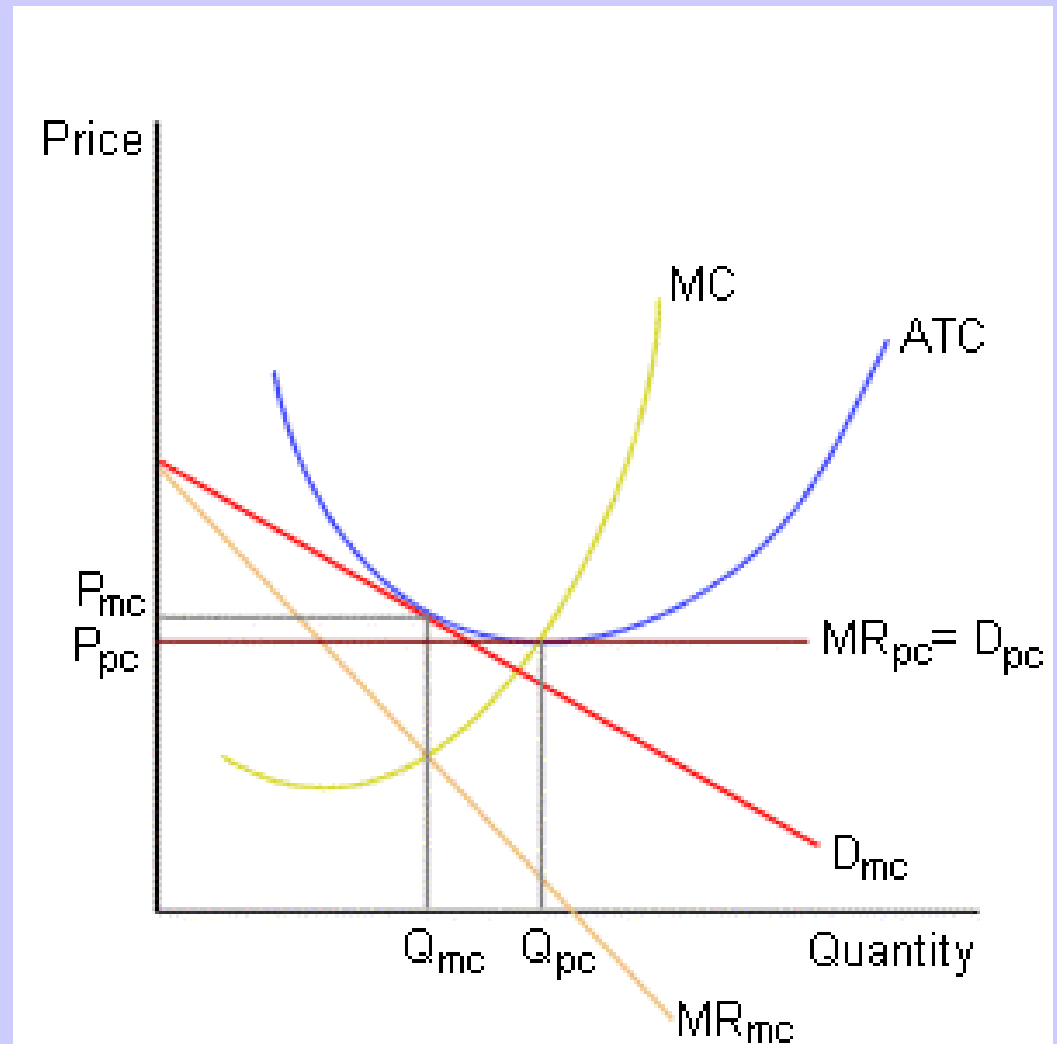


Long-run equilibrium



Monopolistic competition vs. perfect competition

- A monopolistically competitive firm, in the long run, has “excess capacity” – (*i.e.*, it produces a level of output that is below the least-cost level).
- This is a cost of product variety.



Monopolistic competition and efficiency

- As the number of firms rises, a monopolistically competitive firm's demand curve becomes more elastic.
- As the number of firms in a market expands, the market approaches a perfectly competitive market.
- Thus, economic inefficiency may be smaller when there is a large number of firms in a monopolistically competitive market.

Product Differentiation, Advertising and Social Welfare

- *Product differentiation* is a strategy that firms use to achieve market power.
- Accomplished by producing products that have distinct positive identities in consumers' minds.
- This differentiation is often accomplished through advertising.

Product Differentiation and Advertising

- The advocates of free and open competition believe that differentiated products and advertising give the market system its vitality and are the basis of its power.
- Product differentiation helps to ensure high quality and efficient production.

Product Differentiation and Advertising

- Advertising provides consumers with the valuable information on product availability, quality, and price that they need to make efficient choices in the marketplace.

Product Differentiation and Advertising

- Critics of product differentiation and advertising argue that they amount to nothing more than waste and inefficiency.
- Enormous sums are spent to create minute, meaningless, and possibly nonexistent differences among products.

Product Differentiation and Advertising

- Advertising raises the cost of products and frequently contains very little information. Often, it is merely an annoyance.
- People exist to satisfy the needs of the economy, not vice versa.
- Advertising can lead to unproductive warfare and may serve as a barrier to entry, thus reducing real competition.

Location decisions

- Monopolistically competitive firms often locate near each other to appeal to the “median” customer in a geographical region. (*e.g.*, fast food restaurants and car dealerships)