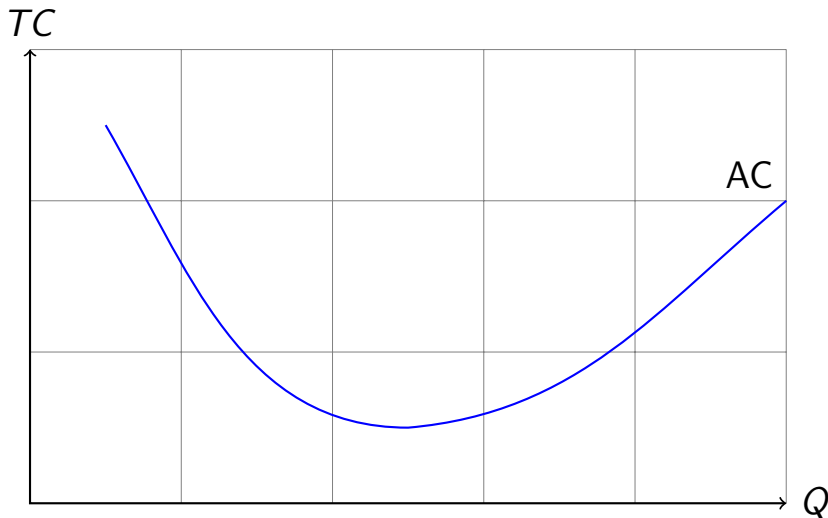


# Monopoly-competition

Rob Hayward

December 9, 2014

# Average Costs

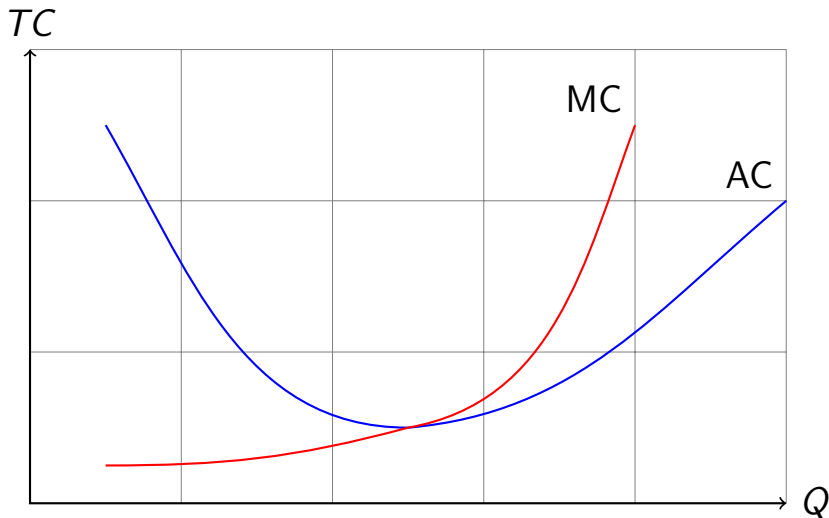


# Shape of average cost

The average cost curve is U shaped because

- Average costs initially fall with specialisation
- Average costs initially fall because fixed costs are spread
- Average costs eventually rise because of *diminishing returns* in the short-run
- Average costs eventually rise because of *diseconomies of scale* in the long-run

# Marginal costs



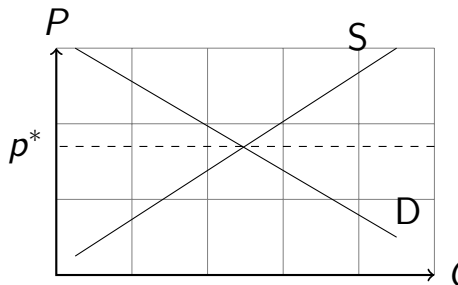
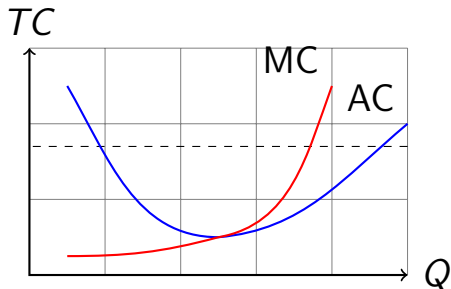
# Shape and position of the marginal cost

The average cost curve is U shaped because

- The marginal cost is the cost of one more unit of output
- The marginal cost is below the average cost while average cost is falling
- The marginal cost is above the average cost while the average cost is rising
- The marginal cost cuts the average cost at the lowest point on the average cost

# Perfect Competition

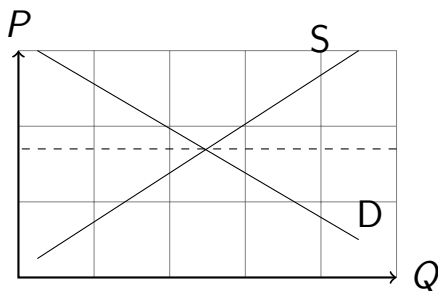
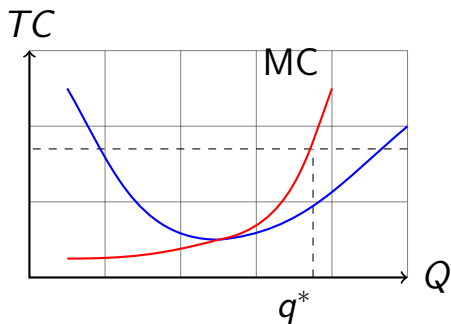
In a perfectly competitive market, the marginal cost curve is the firm supply curve



Equilibrium price =  $p^* = AR = MR$

# Profit maximisation

Profit maximised at  $MR = MC$



Profit-maximising output moves along the MC curve

# Profits and supply

Costs include *normal profits*

$$\pi = TR - TC$$

Profit per unit sold (average profit)

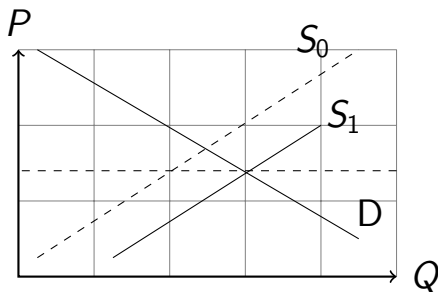
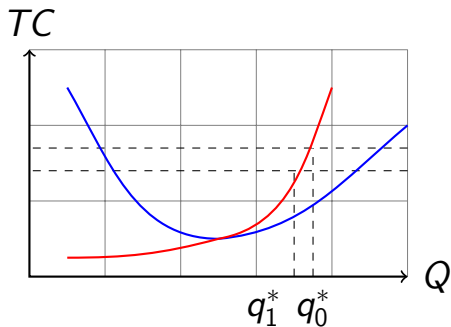
$$\frac{\pi}{Q} = AR - AC$$

Where there are *super-normal profits* new firms will enter the industry.



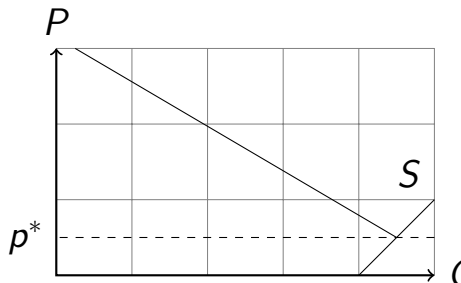
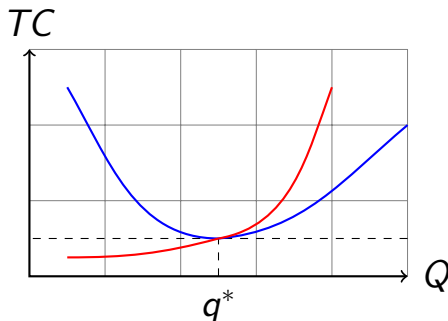
# Supply increase

Profit maximised at  $MR = MC$



Profit-maximising output moves along the MC curve

# Long-run Equilibrium



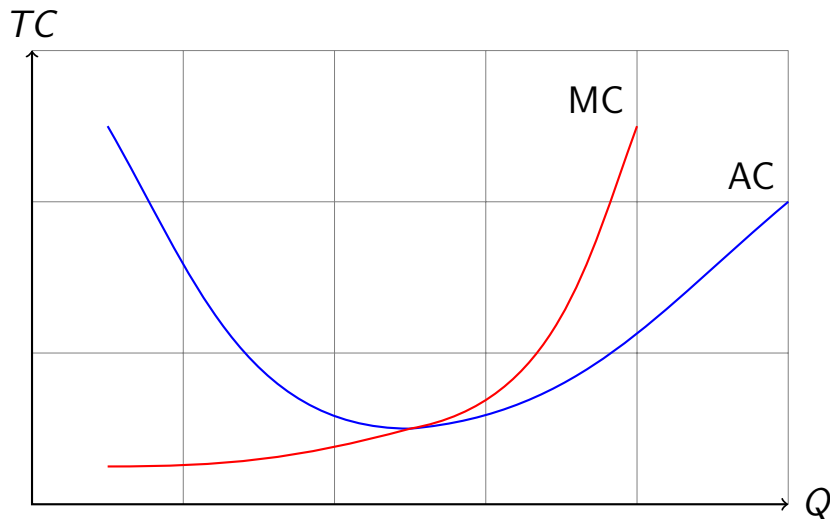
Long-run equilibrium when price is equal to the minimum on the average cost curve.

# Monopoly

For monopoly, the firm and the market are the same  
There are barriers to entry

- Government or regulatory
- Patents or unique product
- Access to customers or materials
- First-mover advantage
- Threats
- Agreements

# Monopoly firm

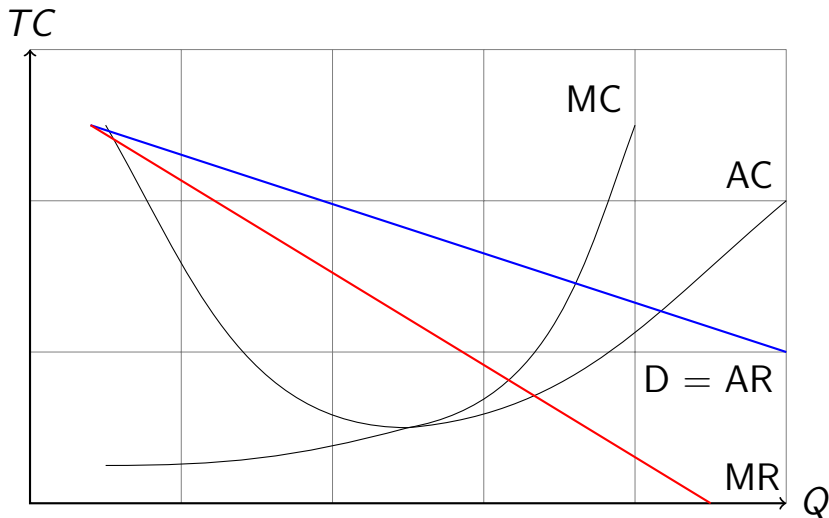


# Monopoly vs perfect competition

Consider a large number of market stalls

- Each firm takes the market price
- One monopolist buys all the small market traders
- The monopolist manages market stalls to maximise profits
- $MR = MC$
- Reduce output to the point where there is *unit elasticity*

# Monopoly firm

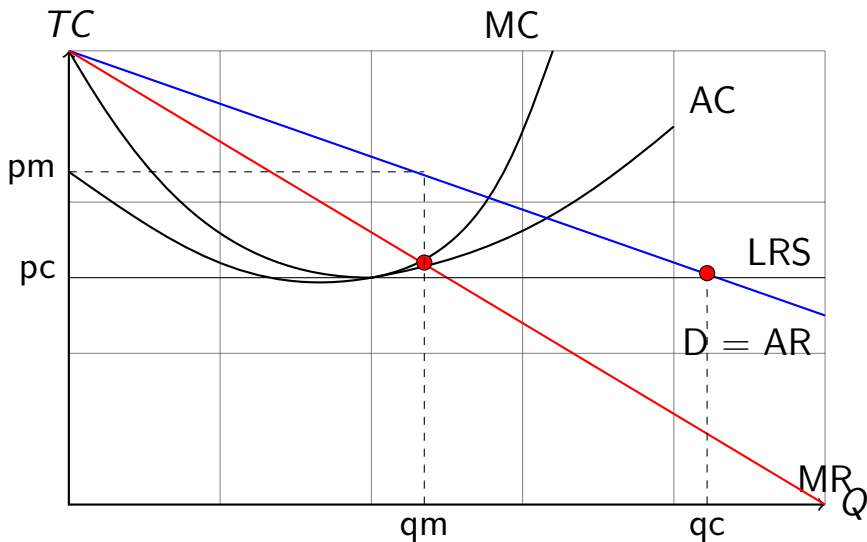


# Average revenue and marginal revenue

The marginal revenue will be below the average revenue

P	Q	TR ( $P \cdot Q$ )	AR ( $TR/Q$ )	MR ( $\Delta TR / \Delta Q$ )
5	1	5	5	5
4	2	8	4	3
3	3	9	3	1
2	4	8	2	-1

# Competition vs monopoly 2





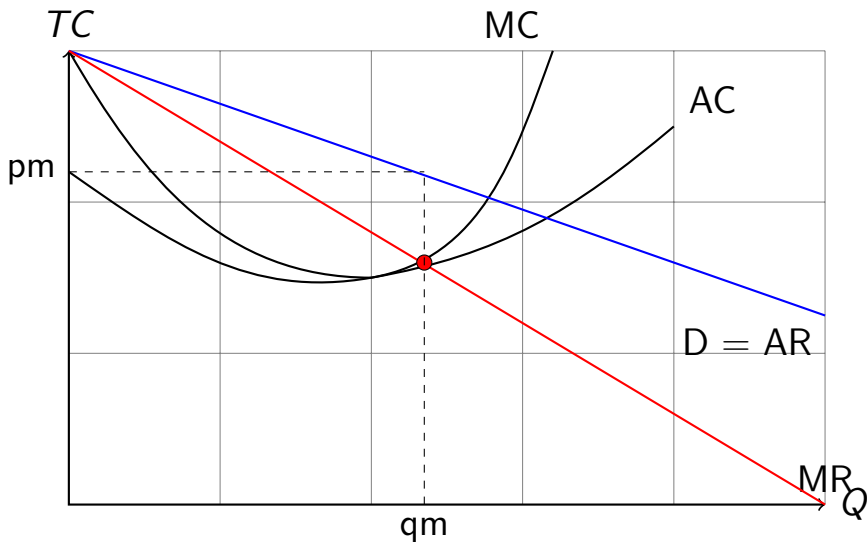
# Competition vs monopoly 3

When costs do not change, monopoly will charge a higher price and will therefore provide less product. However, costs are likely to change

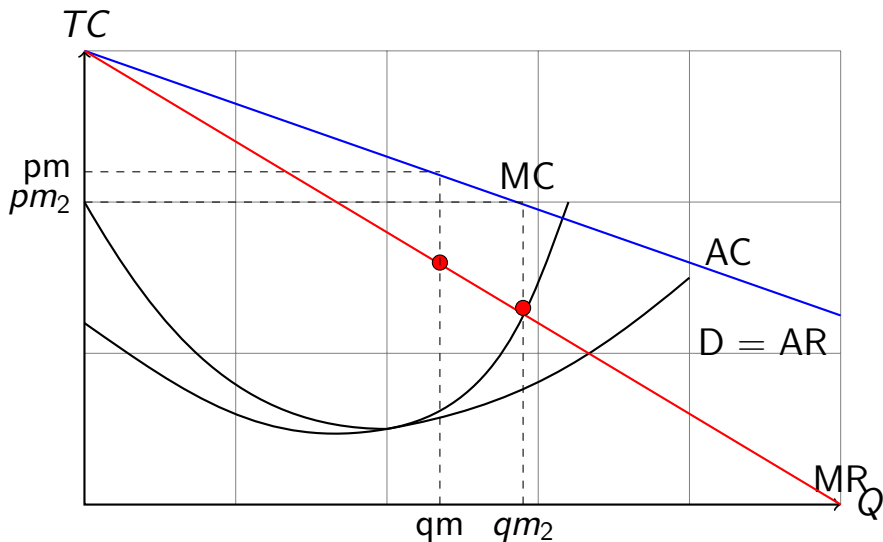
- Specialisation
- Economies of scale

If the cost curve shifts lower after the take-over, it is possible that more can be supplied at a lower price. Monopoly may be able to use super-normal profits for Research and Development (improve products and lower costs)

# Competition vs monopoly 3



# Competition vs monopoly 3



# Regulation

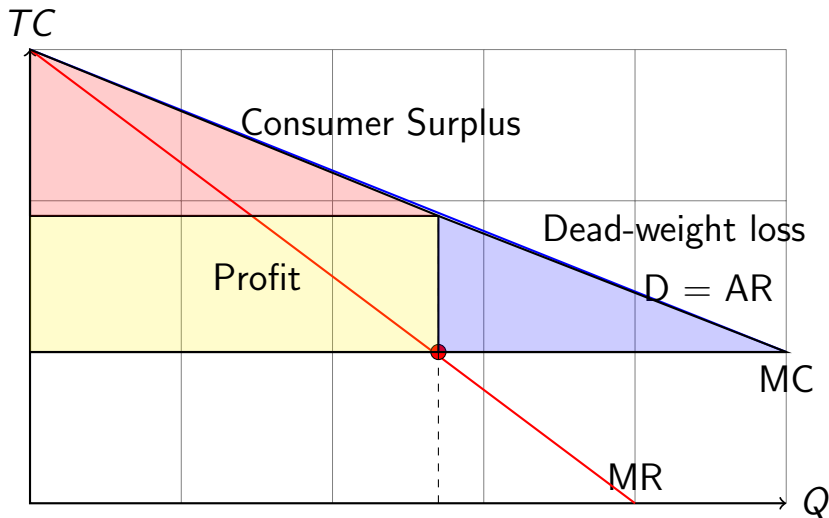
It is also possible to regulate

- Monopolies commission in UK can prevent mergers that generate too much market power
- Regulator can set prices and determine output (OFCOM, OFWAT)
- Public ownership (agency and political issues)

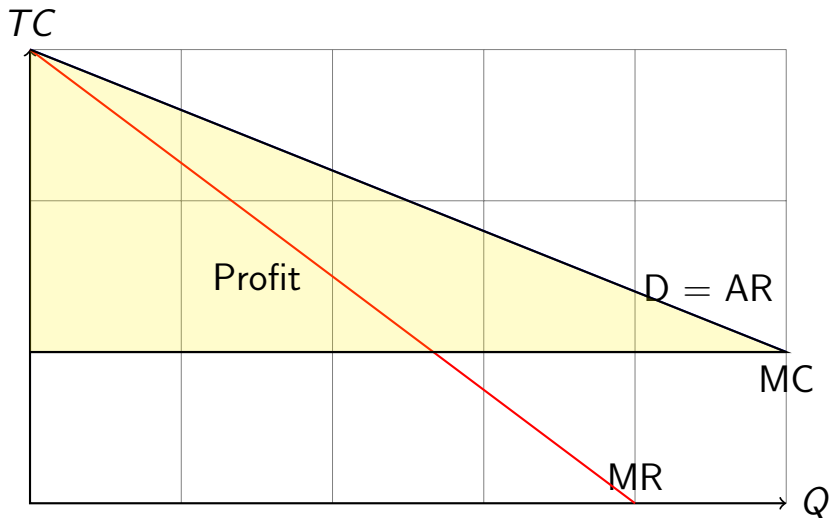
# Price Discrimination

- Charge different prices to different customers
- Higher price for those with less elastic demand
- This will increase the revenue and profits of the firm
- Ethical issues
- Branding issues

# Price Discrimination



# Perfect Price Discrimination



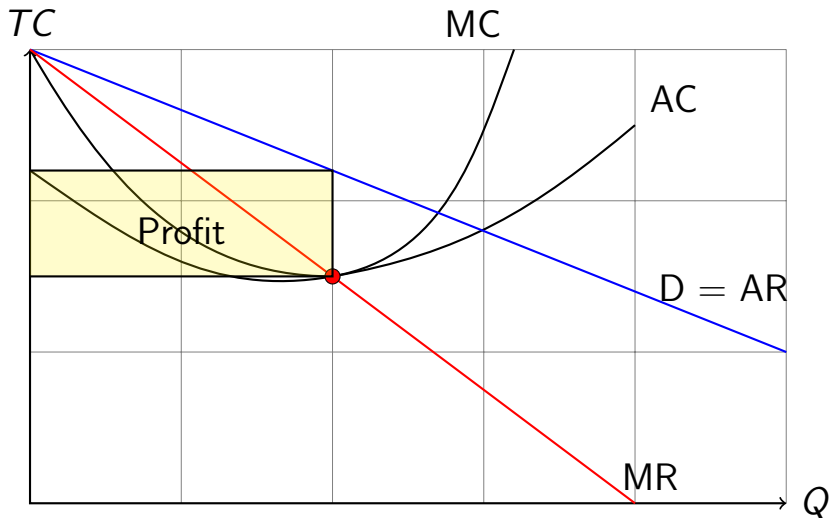
# Monopolistic competition

Monopolistic competition A combination of monopoly and competition

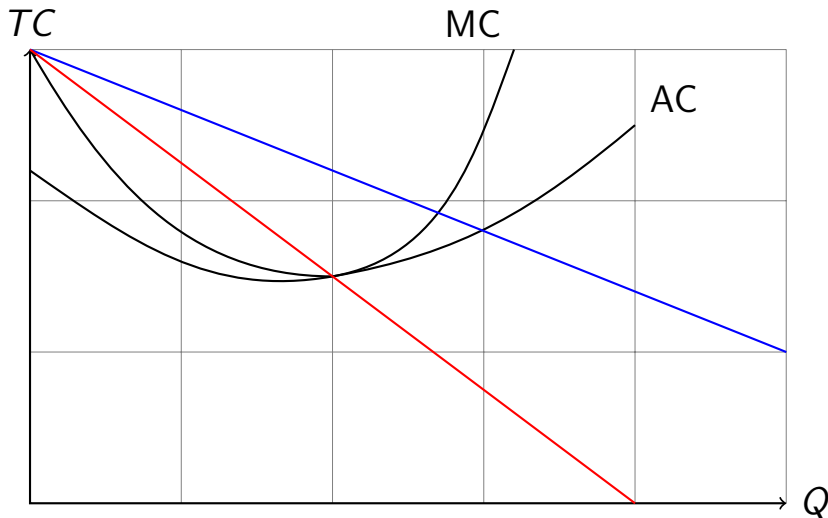
- There are no significant barriers to entry
- However, there is pricing power so firms face a downward sloping demand curve
- There is *product differentiation*
- Restaurants, game makers, Cinemas ...



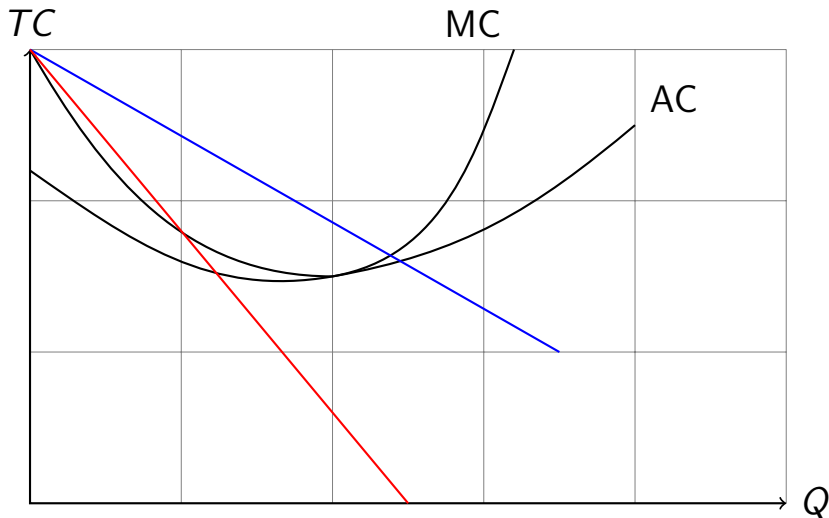
# Monopolistic Competition



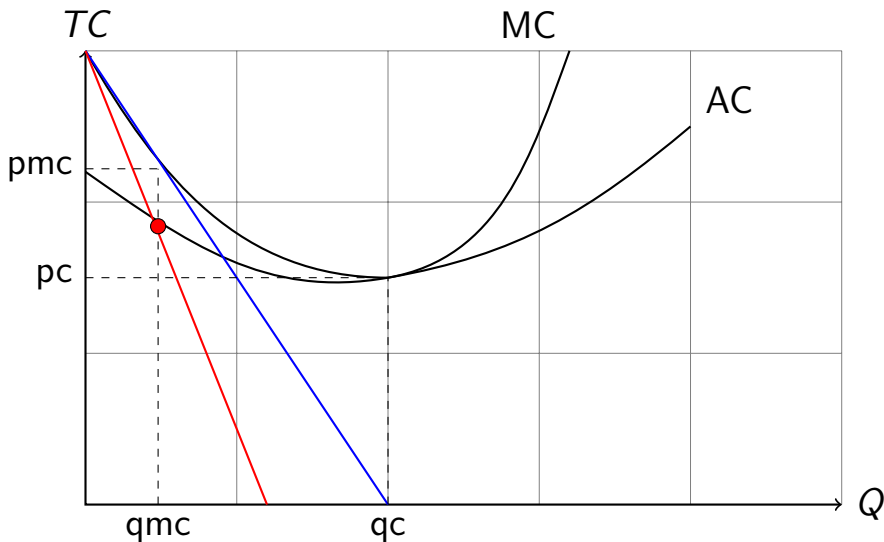
# Monopolistic Competition: Long run 1



## Monopolistic Competition: Long run 2



# Monopolistic Competition: Long run 3



# Difference Perfect competition and monopolistic competition

- There is spare capacity in monopolistic competition
- Firms operate at the efficient scale (lowest point on the average cost curve) in perfect competition
- Price is above marginal cost in monopolistic competition