BS2243 – Lecture 1
Competition and Monopoly

Spring 2012

(Dr. Sumon Bhaumik)

Economics

- What is economics?
  - Reconciliation of limited resources and unlimited wants
- What is the key to this reconciliation process?
  - Efficient use of resources
- How is this enshrined in economic theory?
  - The principle of minimising opportunity cost

Role of competition

- “Competition has pervasive and long-lasting effects on firm performance by affecting economic actors' incentive structure by encouraging their innovative activities, and by selecting more efficient ones from less efficient ones over time.”
  - Ahn (2002)

Making competition happen

- "Questions about the *desirability* of competition - whether it directs incentives positively - should not be confused with questions about its *inevitability*. There is no inconsistency in regarding competition as beneficial but vulnerable to being undermined - for example by cartel activity. … in short, being pro-competition is by no means the same as being pro-*laissez faire*. … Hence the importance of public policies to safeguard and promote competitive incentives. In a sense, the competition policy is judicious regulation to bring out the best in *laissez faire*. A competitive market is generally a far better regulator than any regulator can hope to be"
  - Vickers (2003)

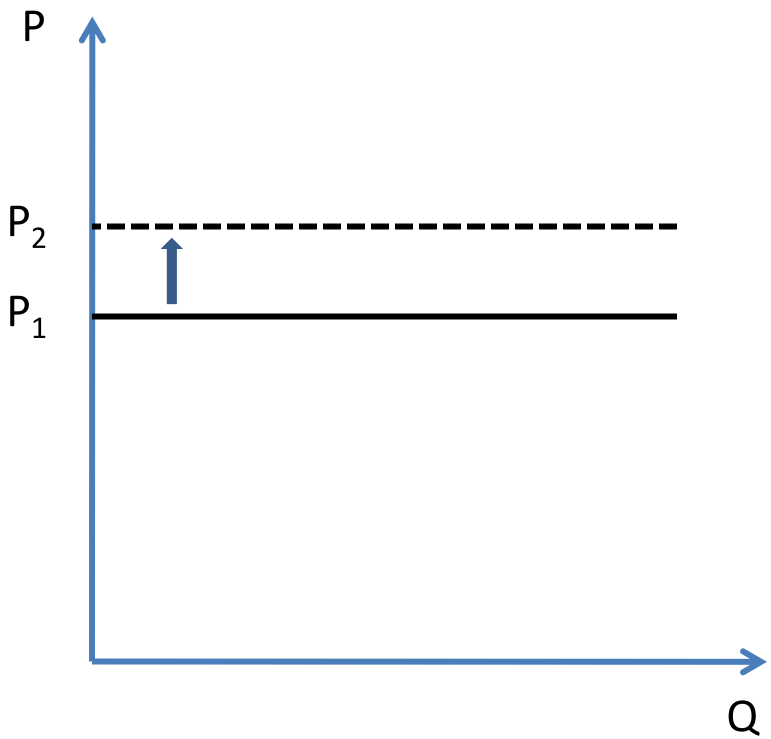
Structure of the lecture

- Firm behaviour and markets under competition and monopoly
- Welfare implications of these market structures
- Facilitating competition – institutions and regulations

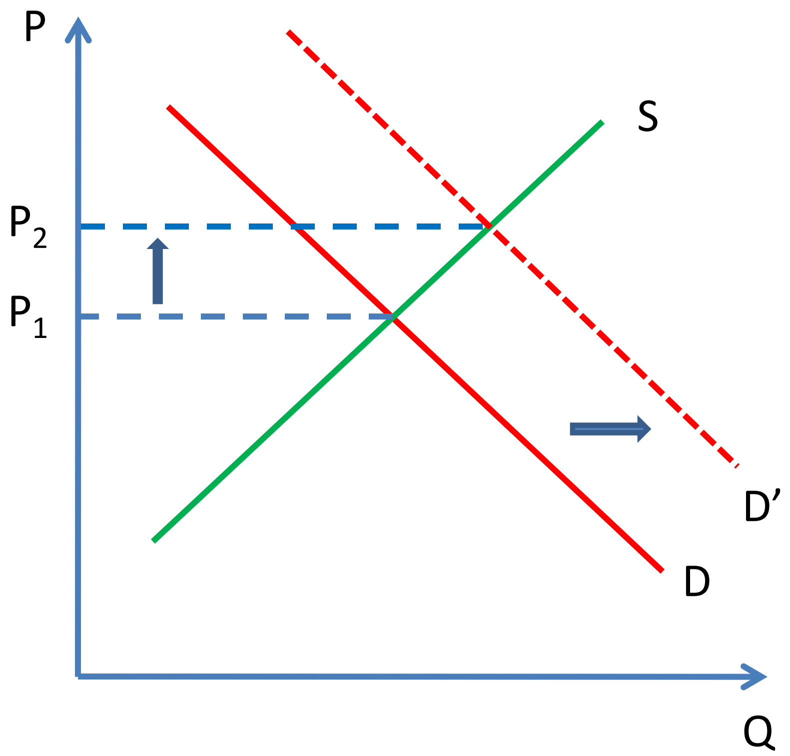
Competition - assumptions

- Homogeneous perfectly divisible output
- Perfect information
- No transactions cost (free entry and exit)
- No externalities
- Price taking

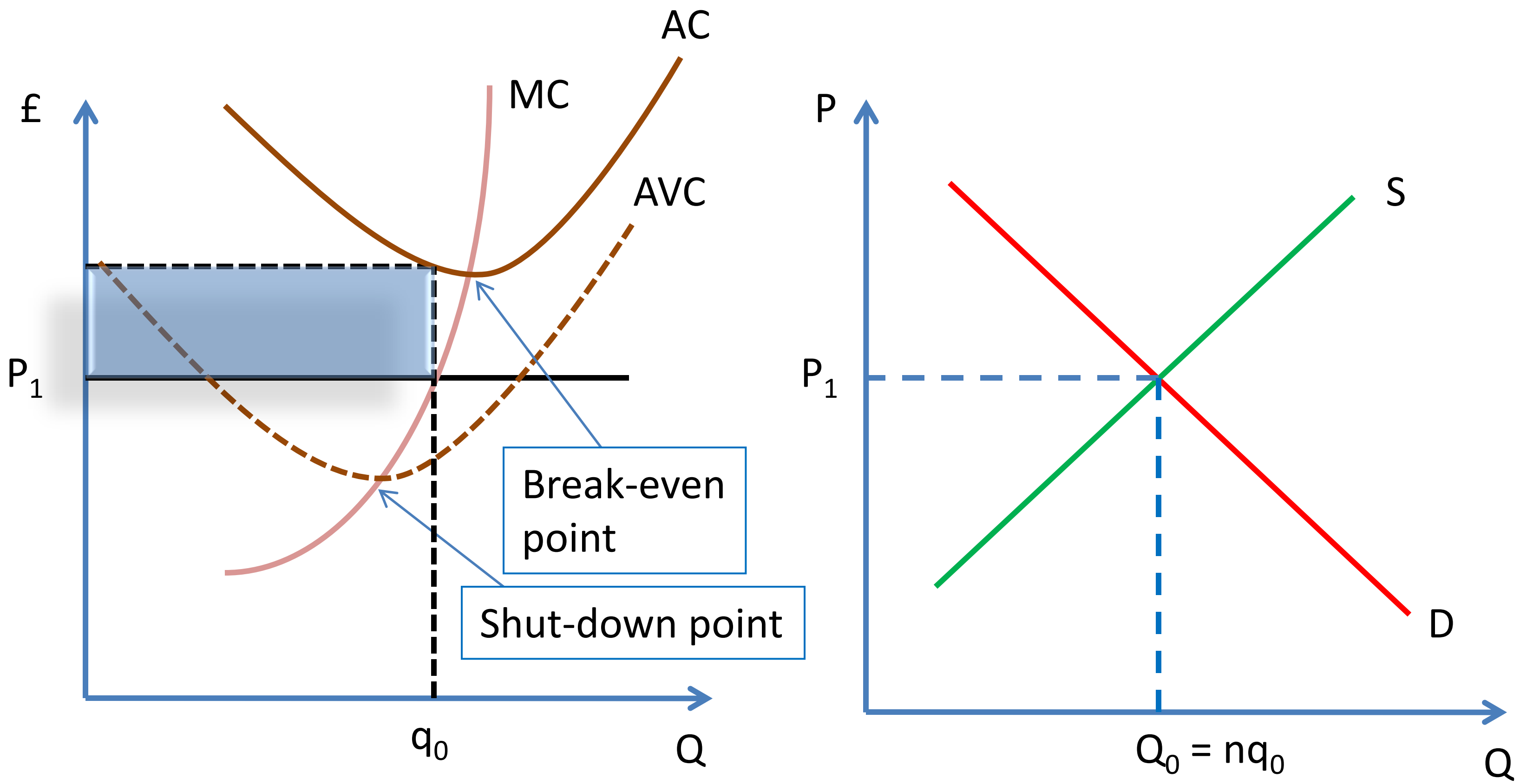
Competition - implication



Price taking behaviour



Competition – short run equilibrium



Short run equilibrium - algebra

- Profit of a firm:

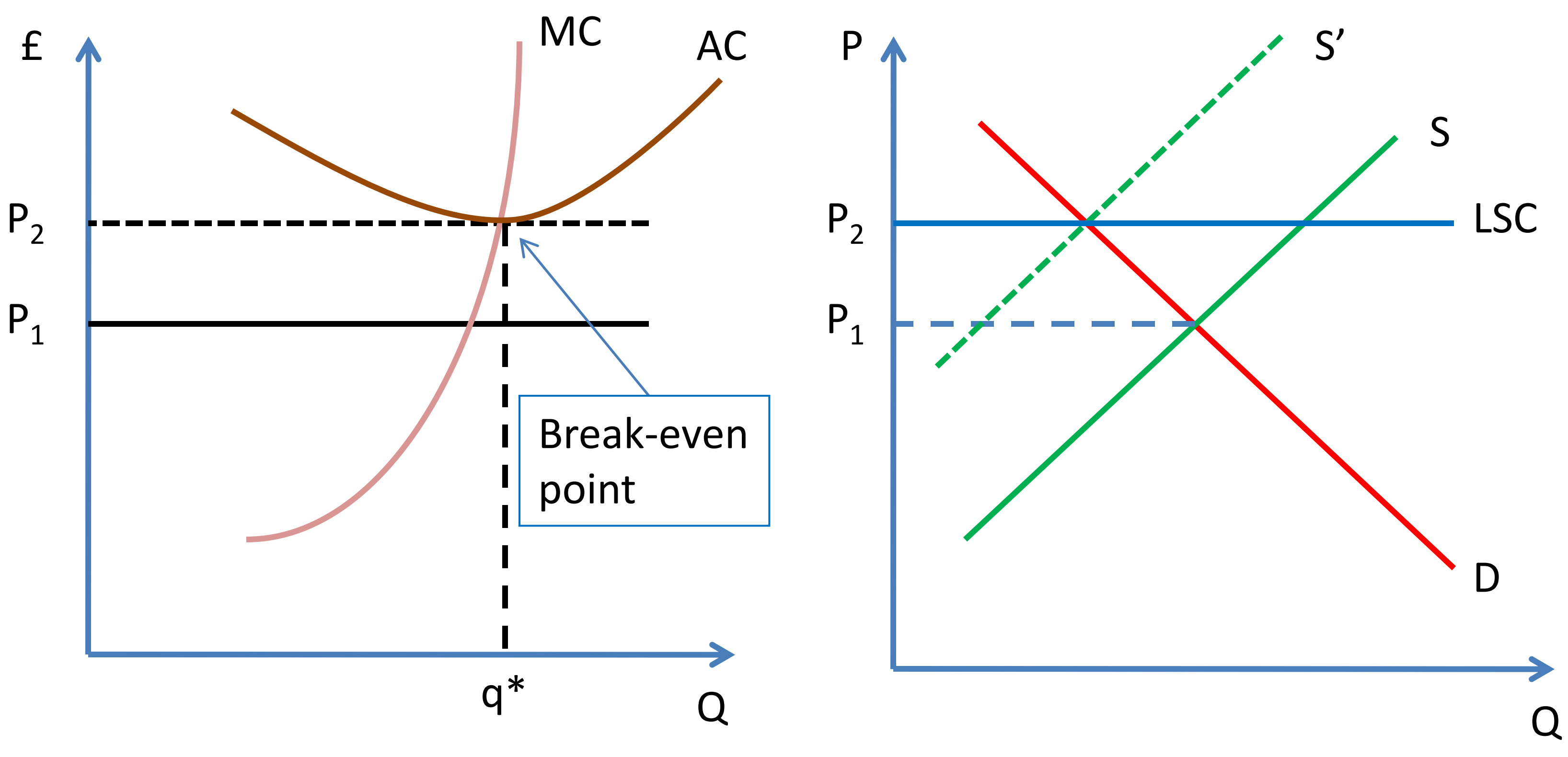
$$\pi = pq - C(q)$$

- Choice variable: *q*

- Profit maximisation:

$$\frac{\partial \pi}{\partial q} = p - \frac{\partial C(q)}{\partial q} \Leftrightarrow p = MC$$

Competition – long run equilibrium



Upward sloping LSC

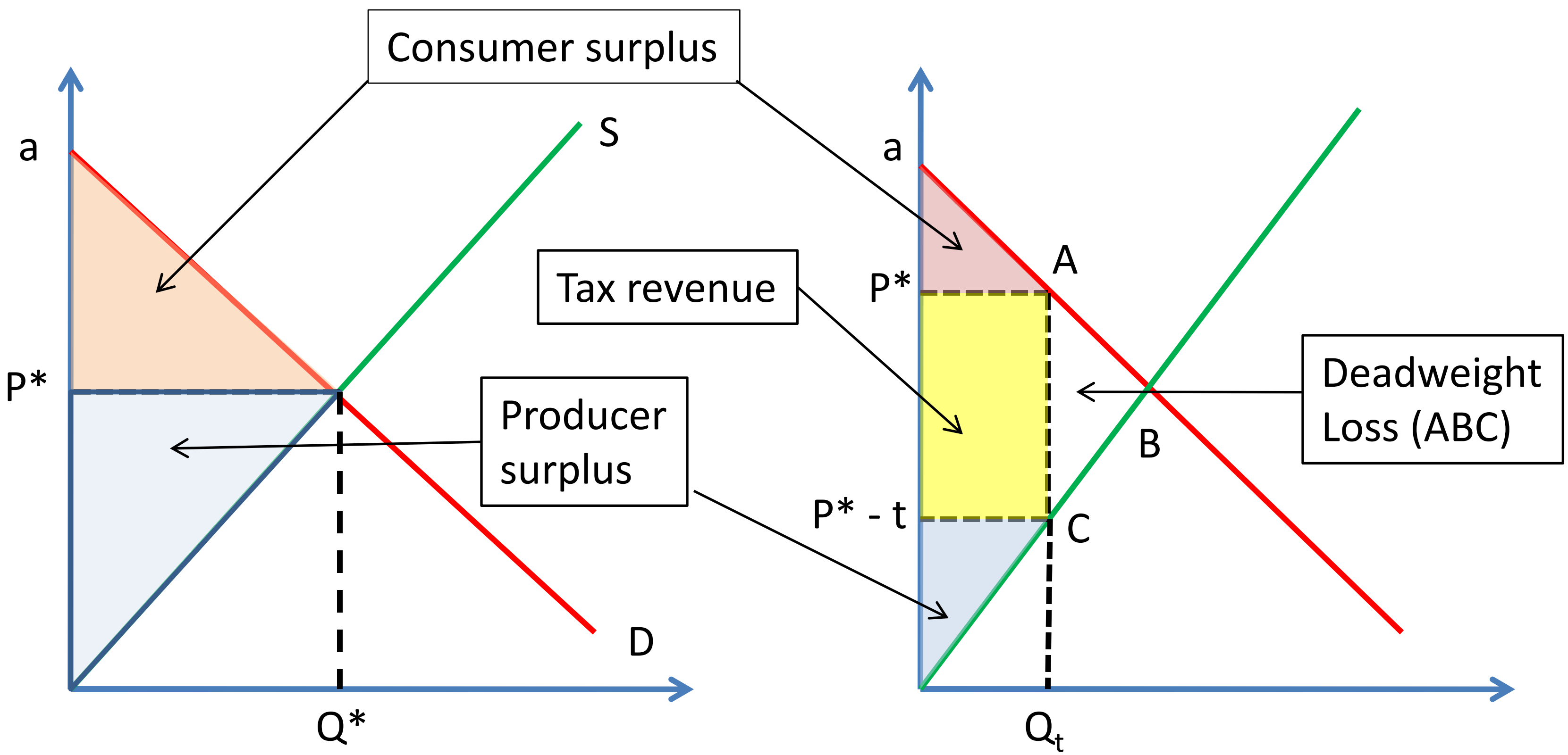
- When price of a factor input rises as new firms enter the market
- When firms with different cost levels co-exist in the industry in the long run

Review question 1

- Can you use a diagram to explain why the long run industry supply curve in a competitive industry will be upward sloping if
  - (a) one of the factor inputs is fixed in supply, and
  - (b) firms with different cost levels coexist in the industry in the long run equilibrium?

Hint: Check Figure 3.4 on page 64 of C&P

Competition – welfare analysis



Demand: P = a – bQ

Welfare analysis – algebra

- Consumer surplus:

  $CS = 0.5 \times (P^* - a) \times Q_t$

- Producer surplus:

  $PS = 0.5 \times (P^* - t) \times Q_t$

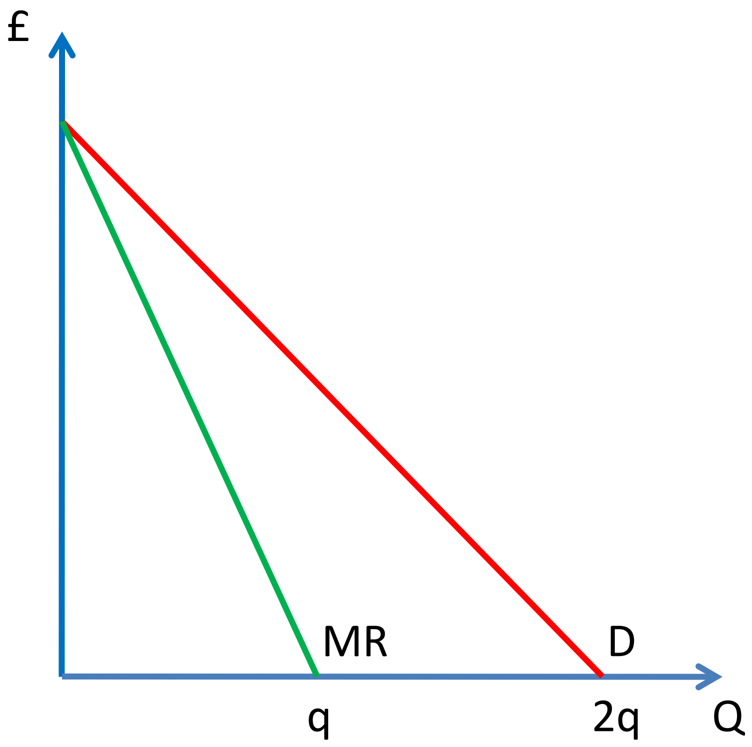
- Tax revenue:

  $T = t \times Q_t$

- Deadweight loss:

  $ABC = (0.5 \times a \times Q^*) – (CS + PS + T)$

Monopoly – Demand and MR



- Demand

  $P = a - bQ$

- Total revenue

  $TR = (a - bQ) \times Q$

  $TR = aQ - bQ^2$

- Marginal revenue

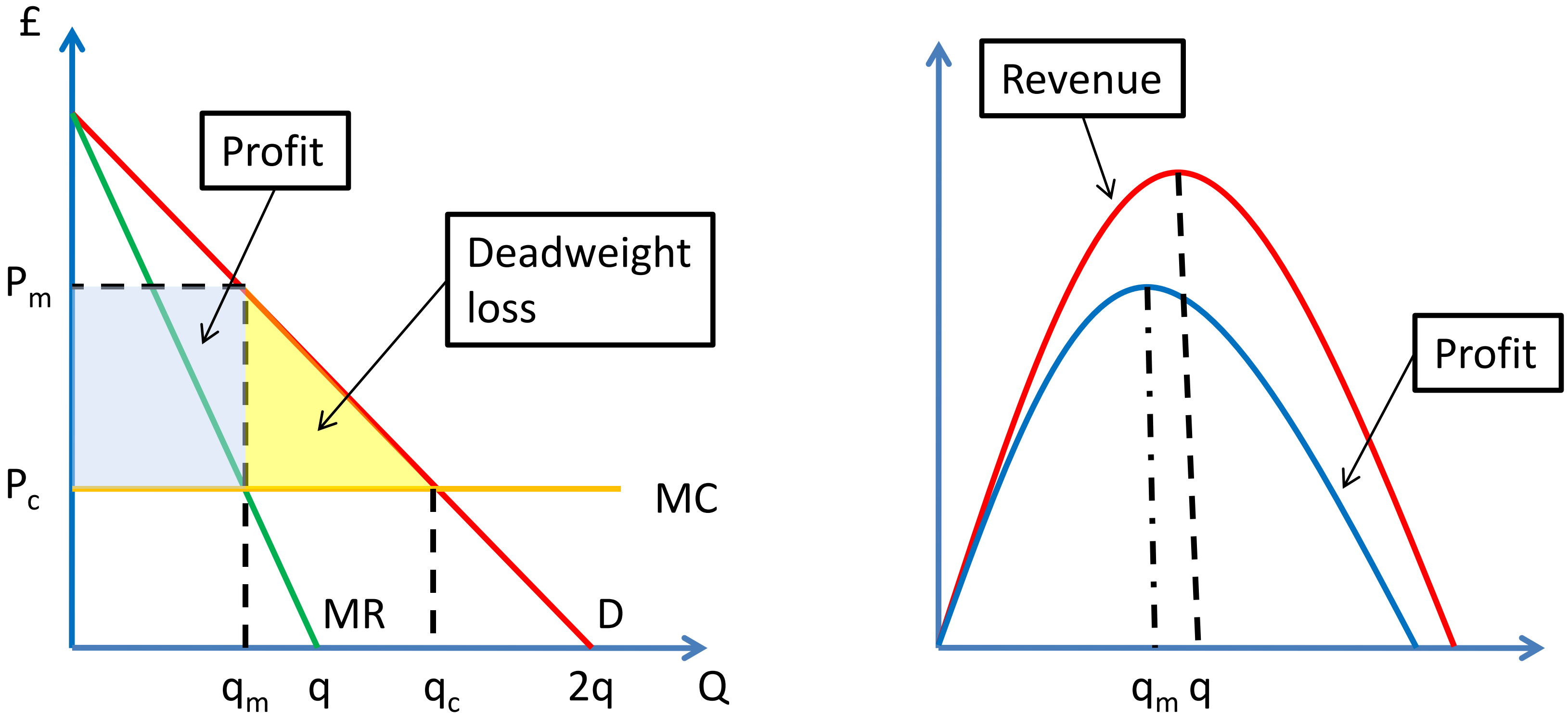
  $MR = dTR/dQ$

  $MR = a - 2bQ$

Demand and MR – example

- Demand curve: $P = 100 - Q$
- Initial price = £60
- Initial quantity: 40
- Initial revenue = £2400
- Target sales = 41
- Target price = £59
- Revenue for target sales = £2419
- Marginal revenue = £2419 – 2400 = £19 < P

Monopoly – TR and profit

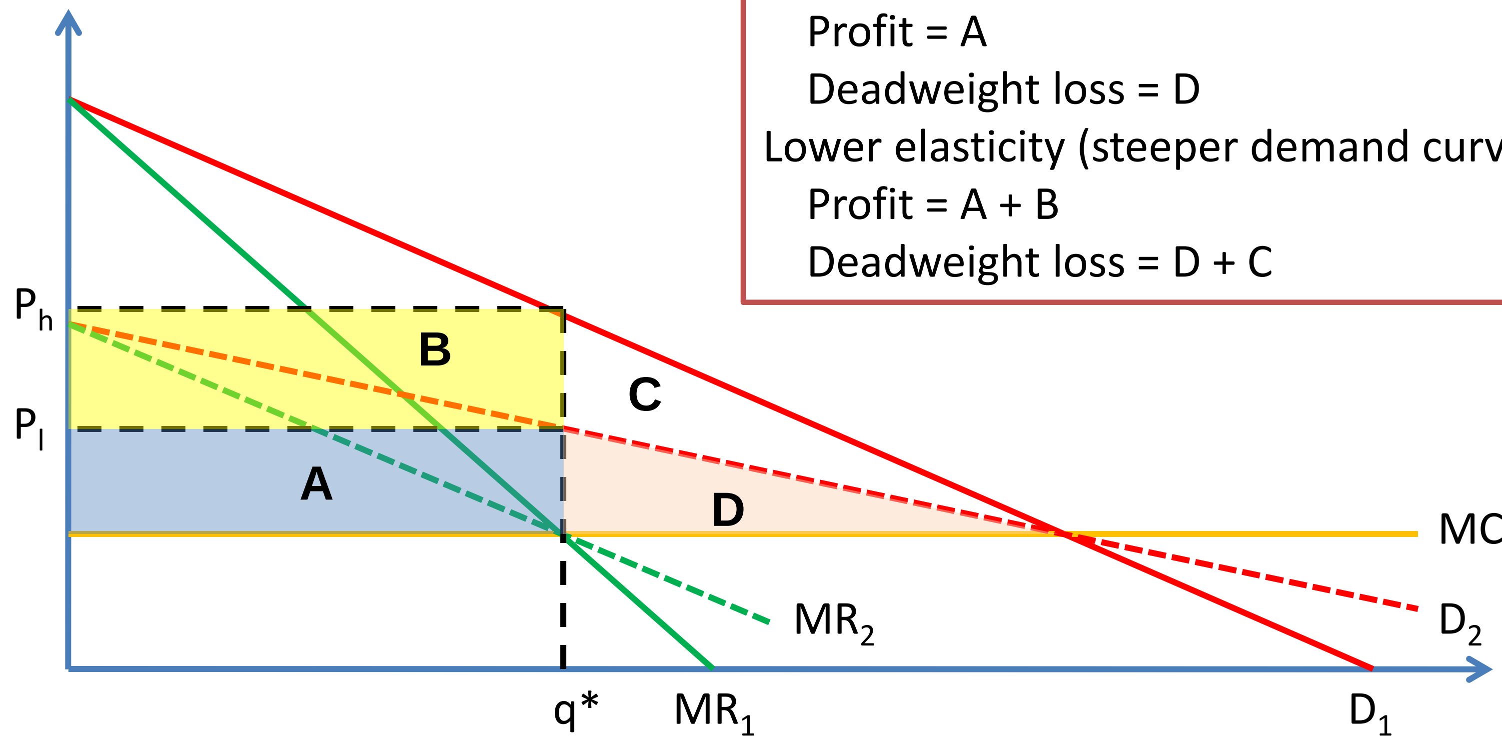


Implications

- Monopoly vs. Perfect competition
  - In equilibrium, less is produced in monopoly
  - In equilibrium, the price is higher in monopoly
  - In equilibrium, there is deadweight loss in monopoly

- Monopoly
  - Quantity at which revenue is maximised higher than revenue at which profit is maximised

Demand elasticity & deadweight loss



Higher elasticity (flatter demand curve):

Profit = A

Deadweight loss = D

Lower elasticity (steeper demand curve):

Profit = A + B

Deadweight loss = D + C

Review question 2

- Consider two industries: food and consumer electronics. In both industries, it would be better to have a competitive market than a monopoly. But for which market would a monopoly be socially more harmful?

Contrasting views

- Government
  - Policies should aim to create conditions under which competition thrives
- Firms
  - Adopt strategies that would generate monopoly power

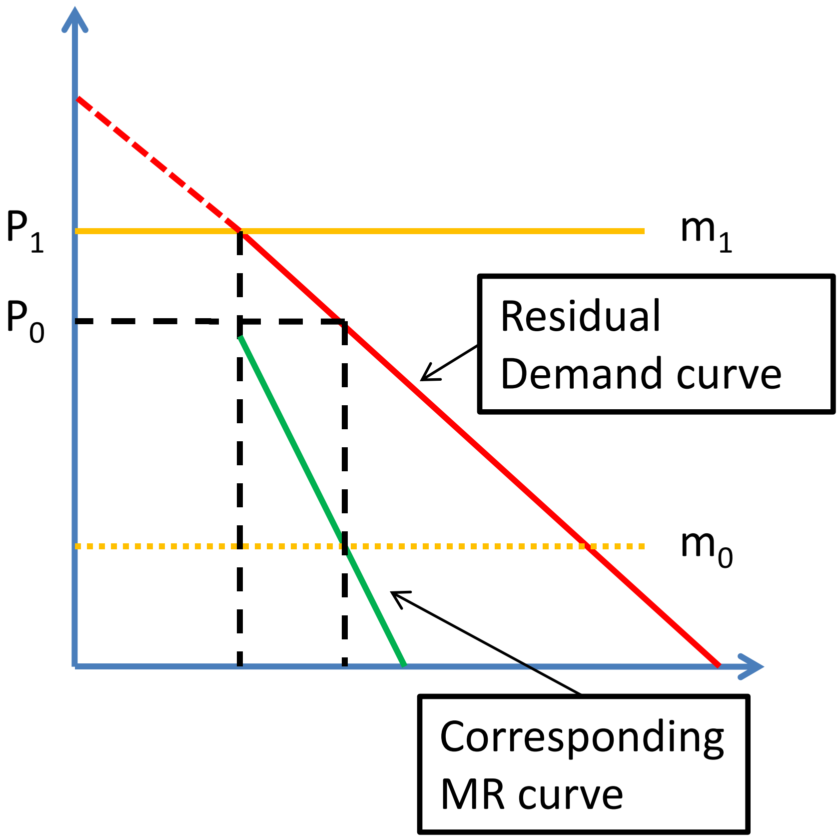
Trade offs for government policy

- Should generic drug companies be allowed to manufacture HIV drugs at low cost for developing countries and poor people in general, even if it violates patents of large pharmaceutical companies?

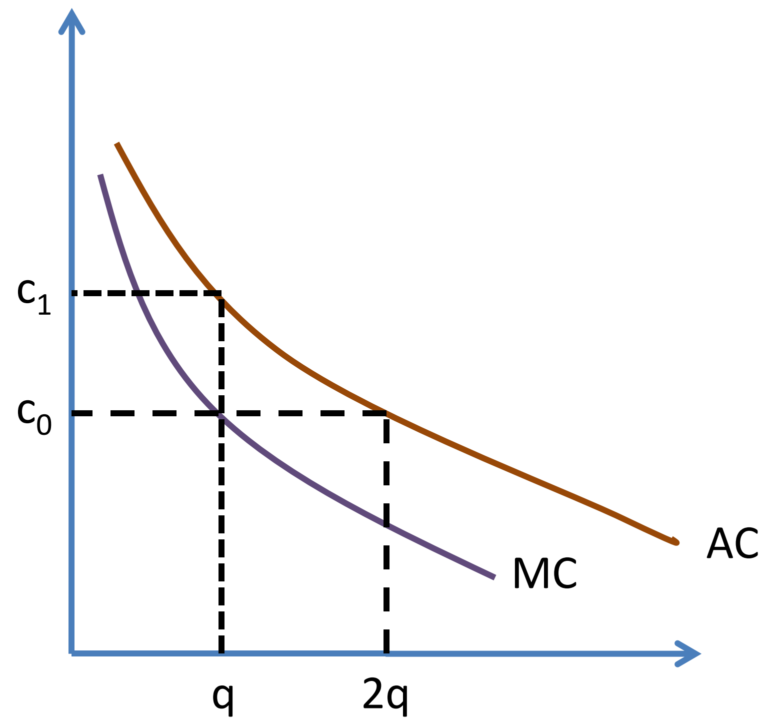
- Was it a good idea to allow unfettered competition in the banking sector, whereby each bank was trying to attract customers from rival banks by offering more attractive loan characteristics and better deposit rates?

Firm characteristics favouring monopoly

- Knowledge advantage



- Natural monopoly



Doing business rankings

United Kingdom

- Overall rank
  - 2010 rank = 5th
  - 2009 rank = 6th

- Dealing with construction permits:
  - 2010 rank = 16th
  - 2009 rank = 61st

China

- Overall rank
  - 2010 rank = 89th
  - 2009 rank = 86th

- Paying taxes
  - 2010 rank = 125th
  - 2009 rank = 135th

Doing business in China

	China	OECD average
Starting a business	37 days 131% of income per capita	13 days 15.5% of income per capita
Dealing with construction permits	336 days 579% of income per capita	157 days 56% of income per capita
Employing workers	Difficulty of hiring = 11 Difficulty of redundancy = 50	Difficulty of hiring = 26.5 Difficulty of redundancy = 22.6
Registering property	29 days	25 days
Getting credit	Legal rights index (0-10) = 6 Depth of credit info (0-6) = 4	Legal rights index (0-10) = 6.8 Depth of credit info (0-6) = 4.9
Protecting investors	Extent of disclosure (0-10) = 10 Extent of director liability = 1	Extent of disclosure (0-10) = 5.9 Extent of director liability = 5
Paying taxes	504 hours per year	194 hours per year
Enforcing contracts	406 days	462 days

Digression – Corruption

- Grand vs. petty
- Cost vs. uncertainty
- Inhibiting vs. facilitating

Government policy

- Bureaucratic discretion
  - Entry restrictions like licences
  - Exit – bankruptcy procedures
- Creditor/investor protection
- Contract enforcement

Firm strategy

- Innovation
  - Knowledge advantage
  - Cost advantage
- Mergers and acquisitions
  - Market power
  - Economies of scale and scope
- Lobbying
  - Incumbents vs. potential entrants