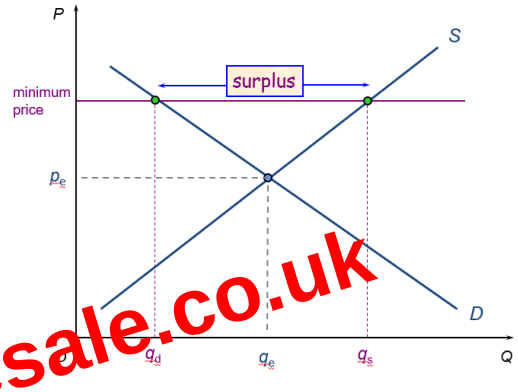
- **Pareto efficiency**: occurs if one person cannot be made better off without making another person worse off.
- **Kaldor-Hicks efficiency:** where potential Pareto efficiency can be achieved when the gainers can fully compensate the losers and there is still a net gain.
    - e.g. if a new airport benefitted group X but made group Y worse off, the benefits to X could outweigh the costs to Y, and the costs be compensated.

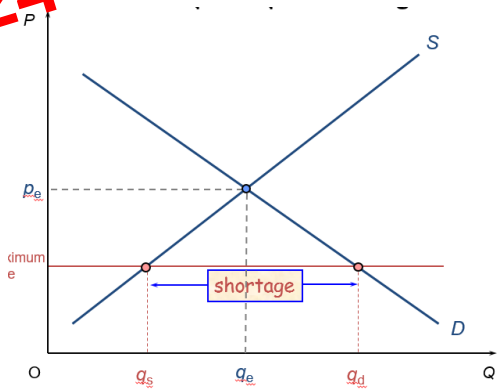
Topic 4: Government Intervention

Price Controls

- Price floors have the advantages of:
    - They protect producers' incomes.
    - They create surpluses.
    - The minimum wage can be used to reduce poverty and inequality.
    - It encourages investment in new technology.
- Price floors have the disadvantages of:
    - Protecting inefficient producers.
    - Creating an inefficient allocation of resources.



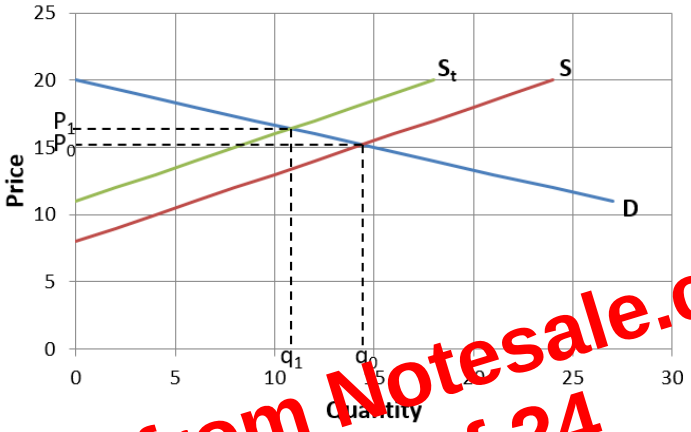
- Price ceilings have the advantage of creating fairness – and making basic goods more affordable when there are shortages.
- However, they may lead to rationing, underground markets and reduce incentives to invest and supply.



- Equilibrium price with a *specific tax*: If sales tax is 3 per unit on QS
  In the absence of tax: Ps = P
  Price after tax: P = Ps + T
  Rearranging gives: Ps = P – T

- Quantity supplied is now given by: Qs = 2ps – 16
  = 2(p – 3) – 16
  = 2p – 6 – 16
  = 2p – 22

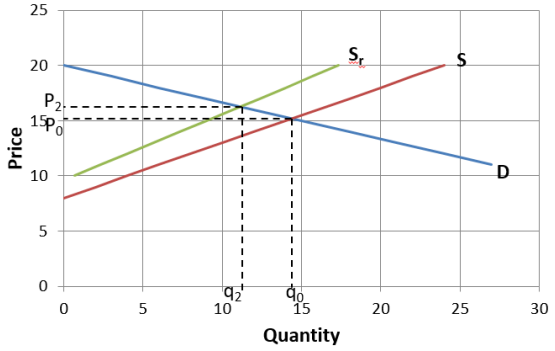
- Equilibrium price with a specific tax: Qs = Qd
  2p – 22 = 60 – 3p
  5p = 82
  p = 16.4
  q = 10.8



- Equilibrium with an *ad valorem* tax: Suppose tax is 20% of the selling price. The price after tax is: p = ps + rps = ps(1 + r)
  Rearranging gives: ps = p/(1 + r)

- Quantity supplied is now given by: Qs = 2ps – 16
  = 2p / (1 + r) – 16
  = 1.67p – 16

- Equilibrium with an ad valorem tax: Qs = Qd
  1.67p – 16 = 60 – 3p
  1.67p + 3p = 60 + 16
  4.67p = 76
  p = 16.27
  q = 11.19



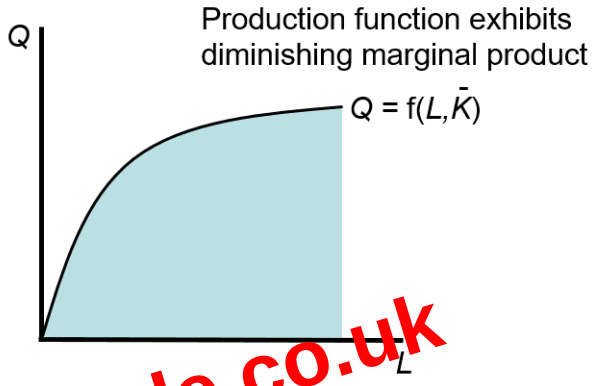
Topic 6: Production & Costs

The Firm

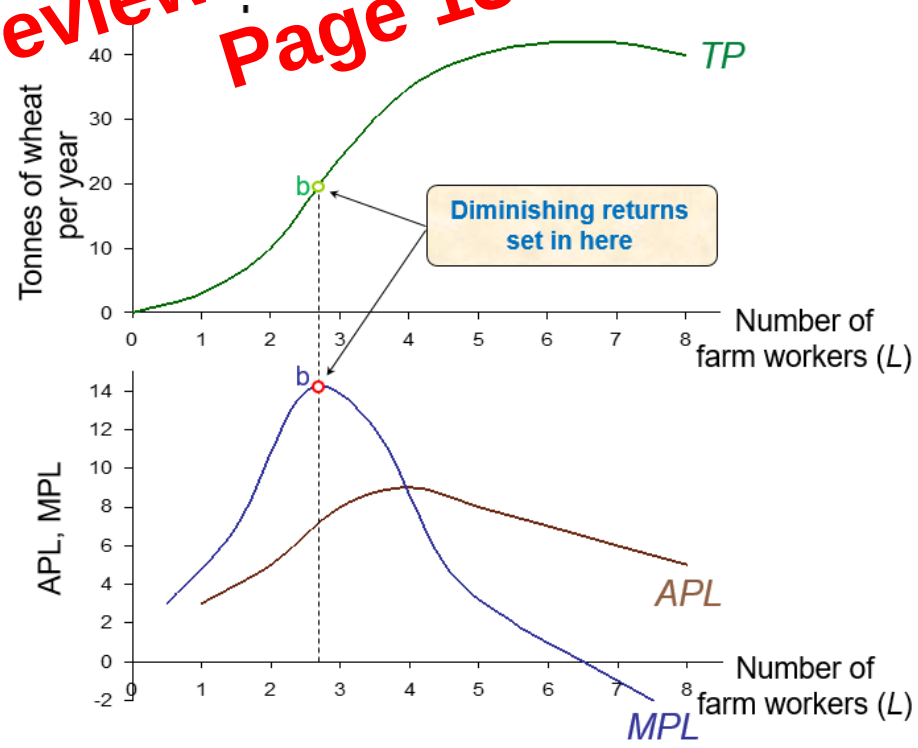
- Neoclassical perspective: the firm is a planning unit that turns factors of production into outputs.
- Firms objective is to maximise profit.
- Alternative theories may be: maximising revenue, growth or size).
- In the long-run, all factors of production are variable.
- In the short-run, at least one factor is fixed (e.g. capital: machinery and plant).

Production

- Production function: Q = f(x)
- Typically assume: Q = f(K, L) – Whereby K is capital, L is labour.

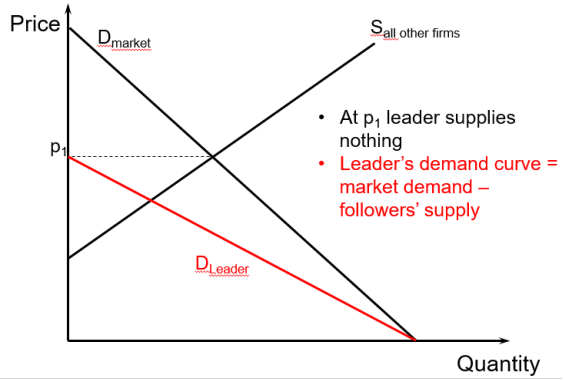


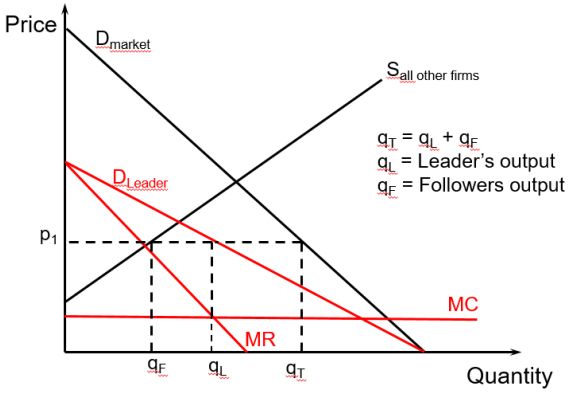
- In the short-run, production will rise to a maximum output, but before it gets there diminishing returns will set in. When diminishing returns sets in, marginal product falls and when MP is below AP, TP starts to fall. Also, where MP = 0, TP is at its highest. Illustrated by the diagrams below.



Tacit Collusion

- One firm has a large market share, and the remaining firms are small and competitive price-takers. Each follower faces a perfectly elastic demand curve as the price is set by the leader. This is leadership.





- A **barometric firm** is a firm that acts as a barometer of market conditions for other firms in the industry. The price the firm sets reveals information to other firms, but it has no 'power' to influence other firms prices.

Non-Collusive Oligopoly

- The kinked demand curve explains price rigidities. It explains conditions in which prices do not change when costs change.
- There are 2 key assumptions:
  - If a firm raises price, rivals will not follow.
  - If a firm lowers its price, rivals will follow.

- Above A – rivals do not match a price rise.
- Below A – rivals match the price rise.
- Kinked demand curve creates discontinuous MR curve.
- If MC shifts between points B and C, firm has no incentive to change price or output.