

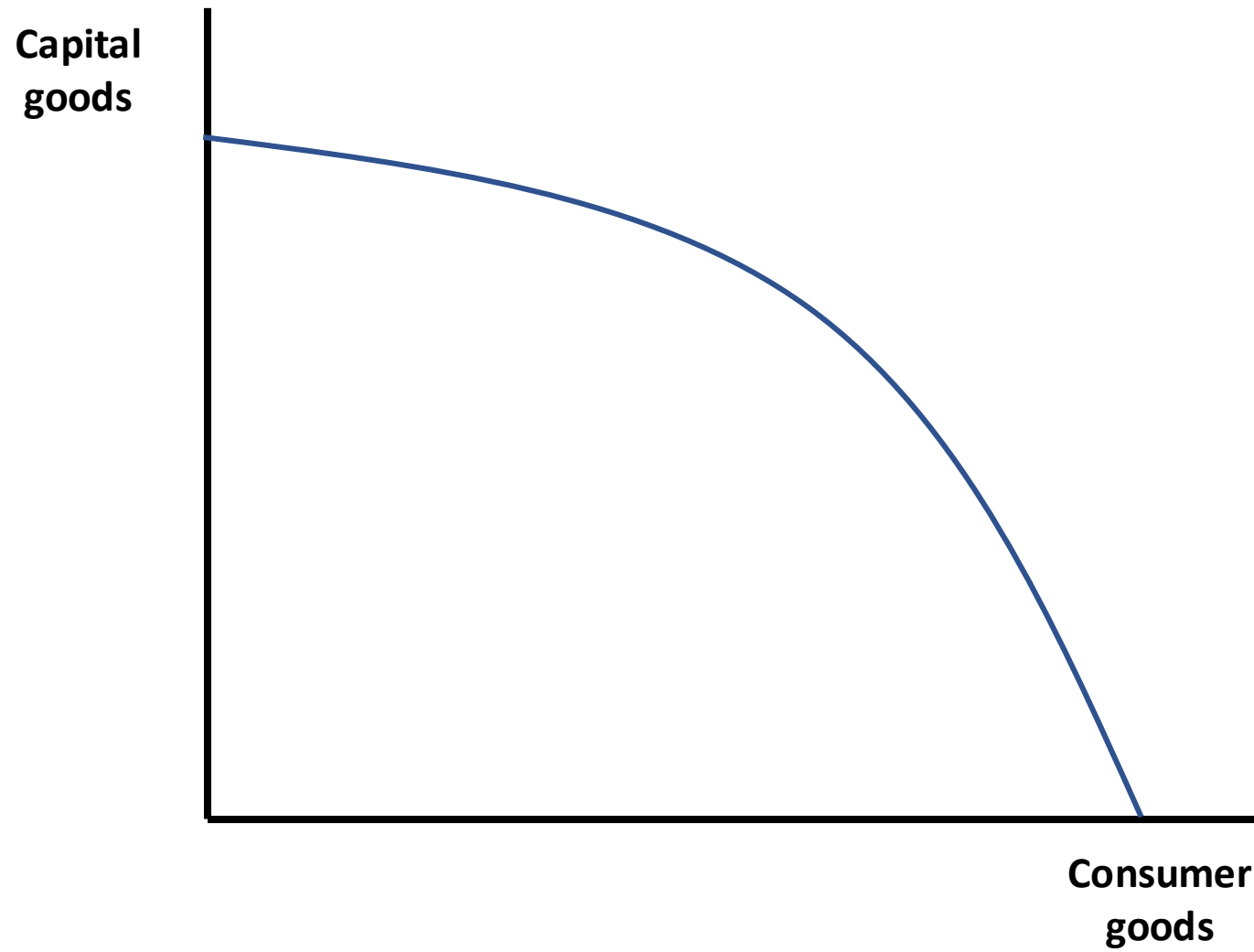
**A-LEVEL
ECONOMICS**

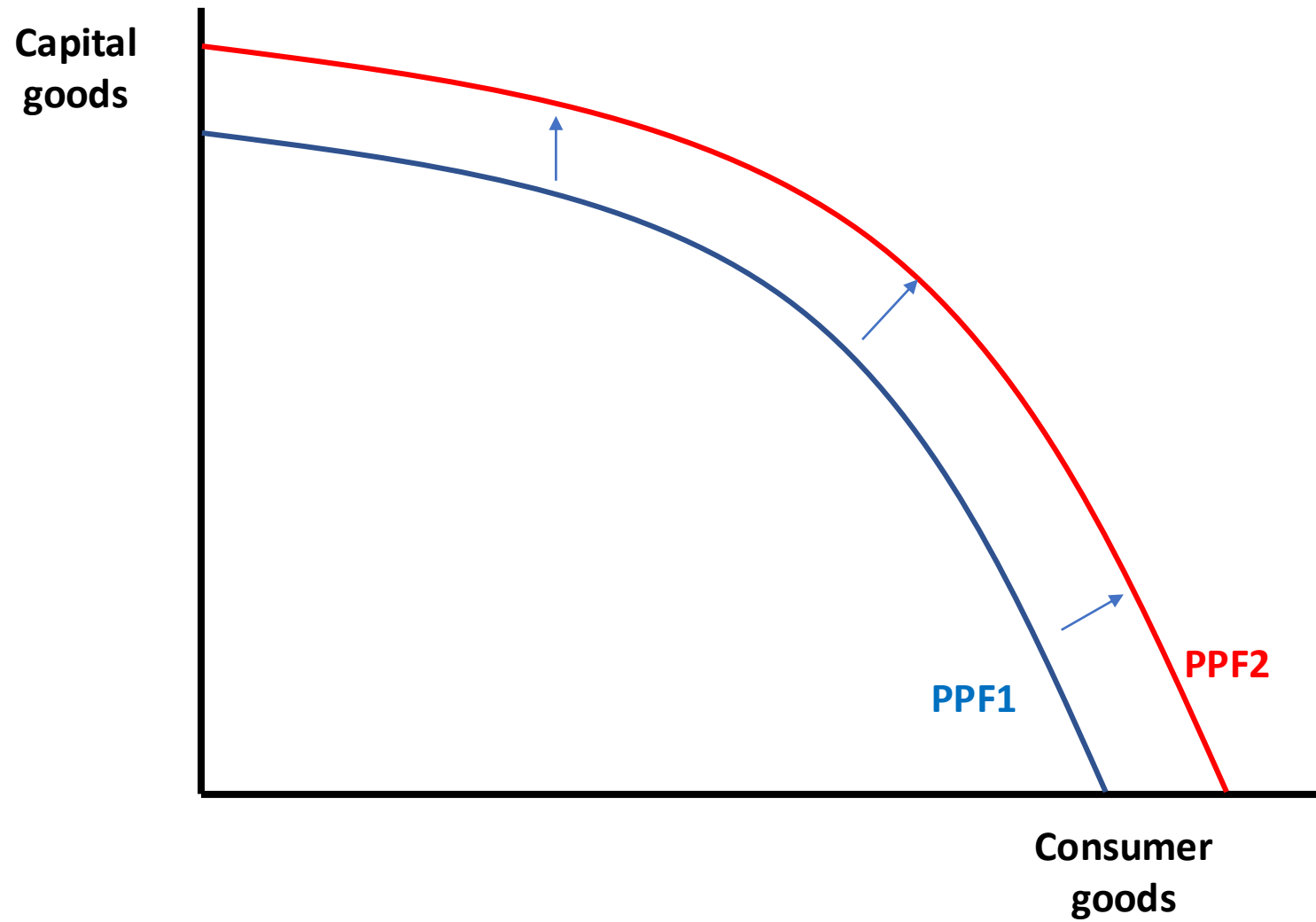


ECONOMICS DIAGRAM BANK

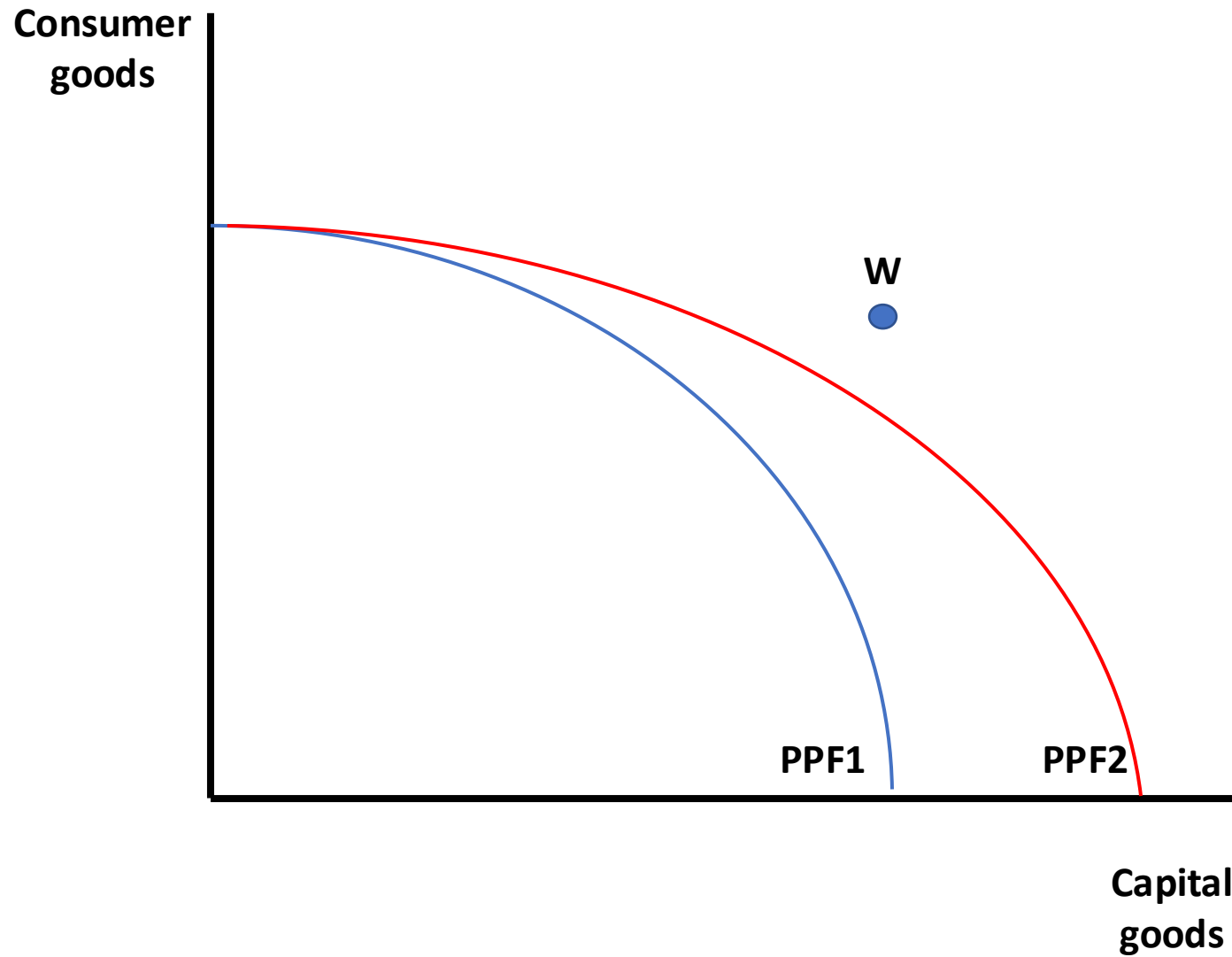
ECONOMICS DIAGRAMS

PRODUCTION POSSIBILITY DIAGRAMS

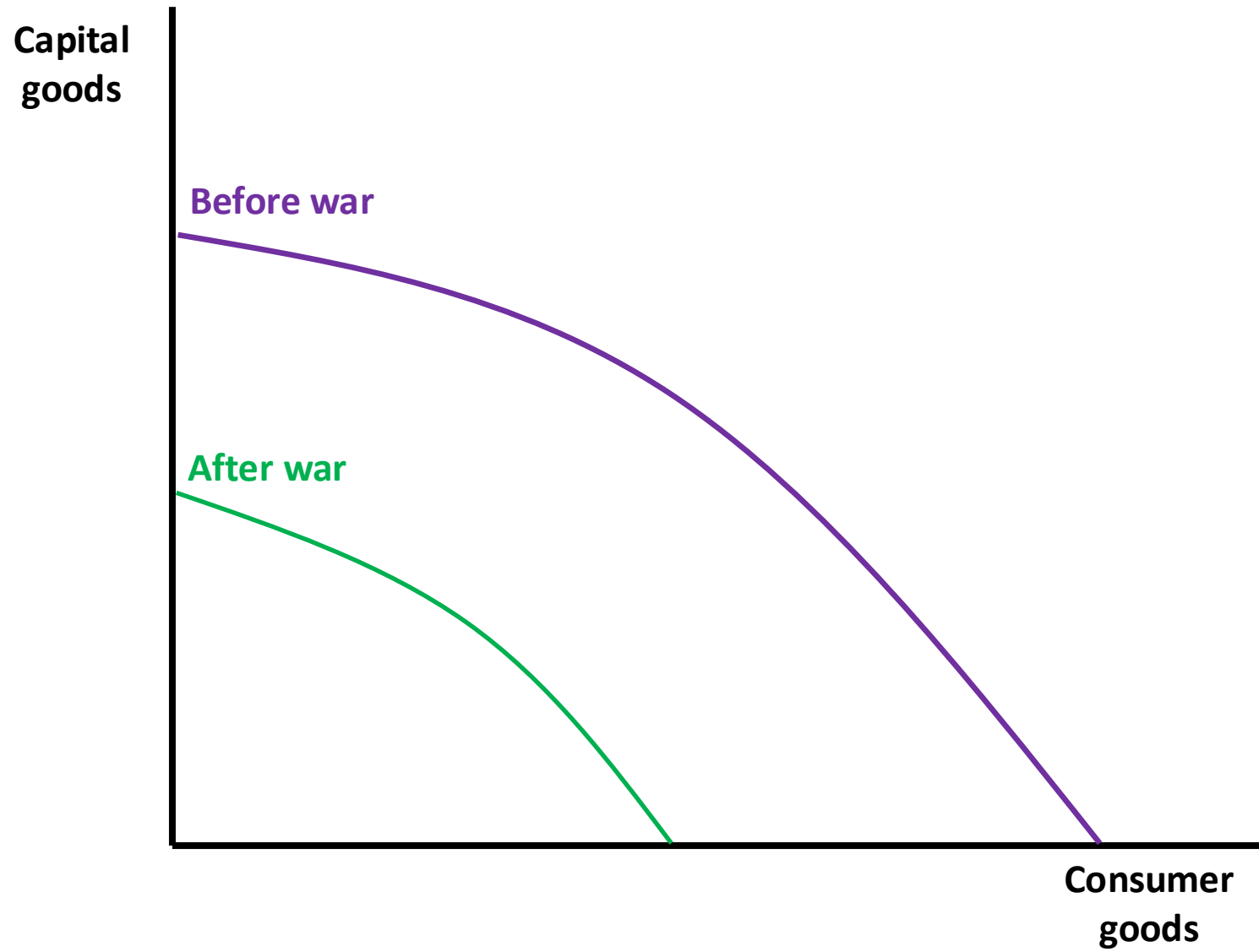




Outward shift in production possibility frontier – balanced economic growth

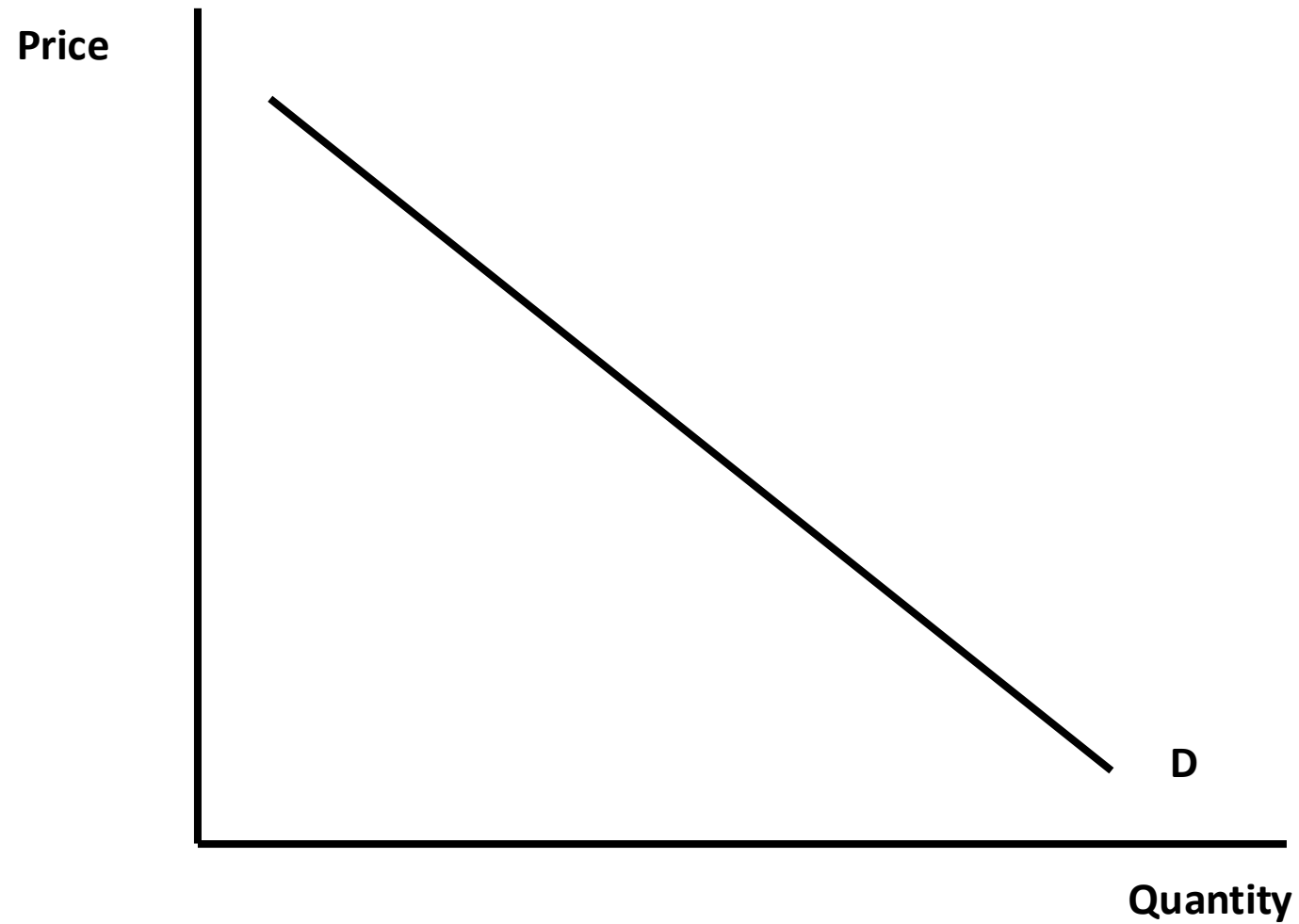


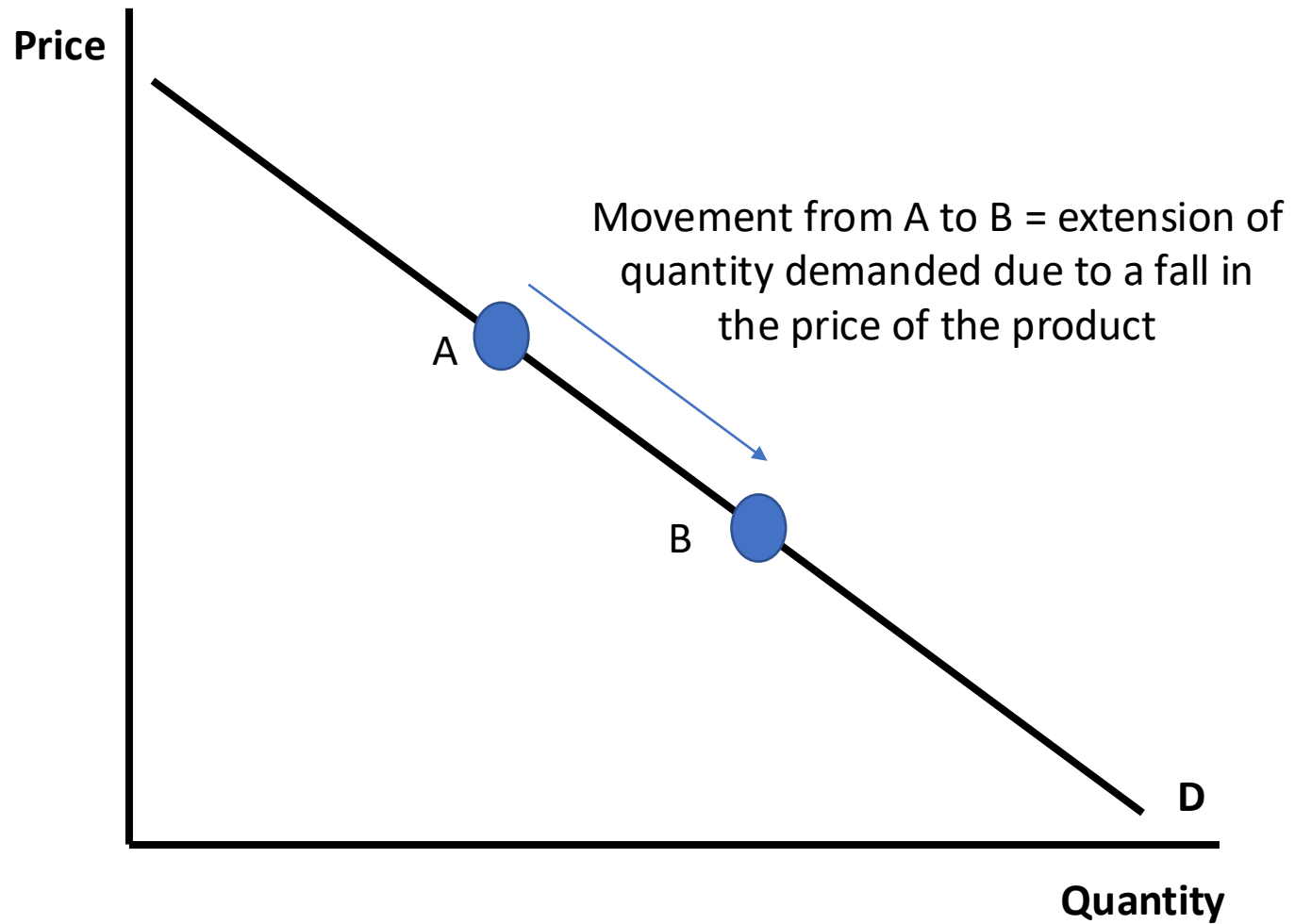
Increase in production possibility where change in technology affects the output of capital goods but not the output of consumer goods; Point W currently unattainable

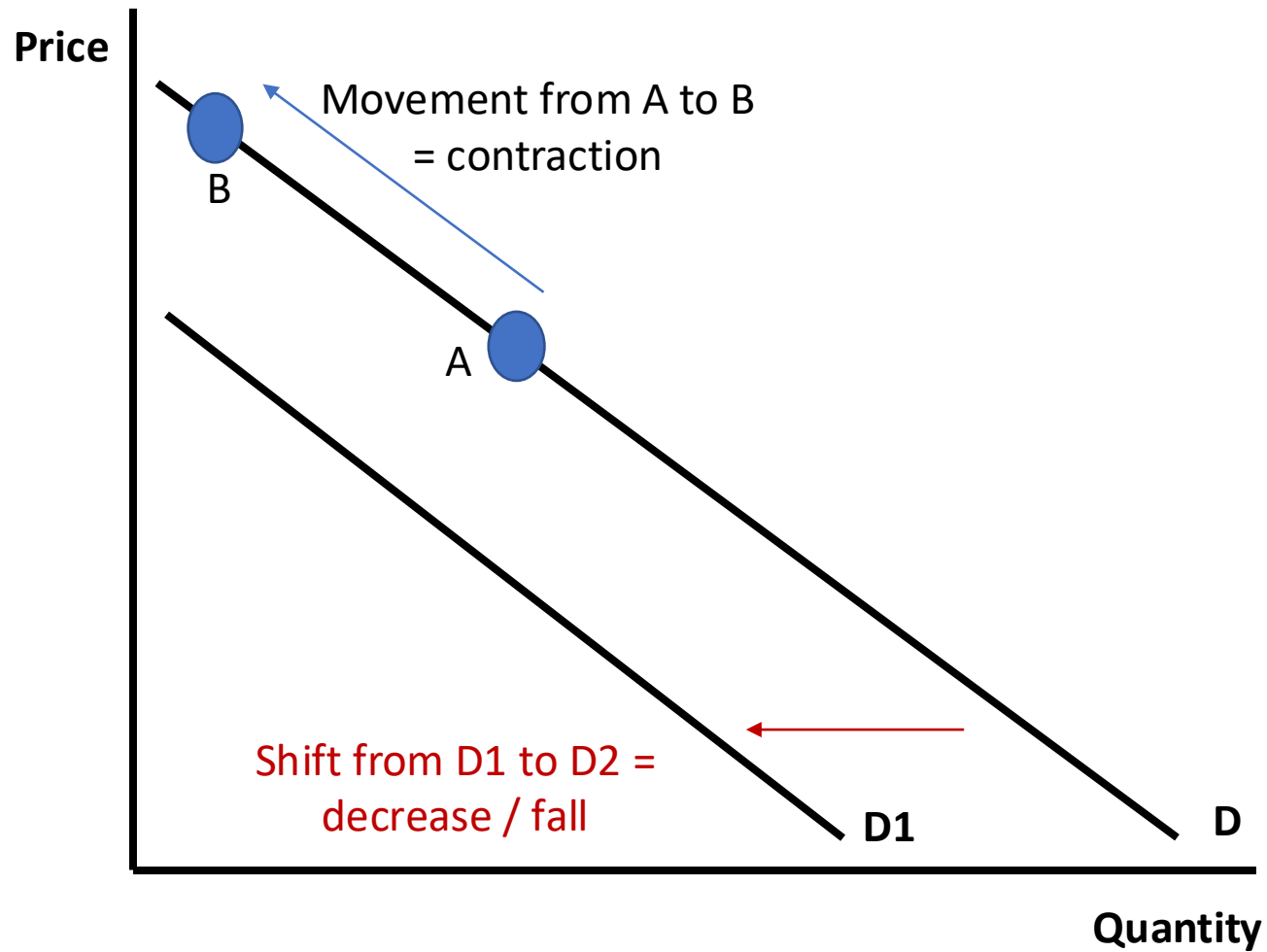


ECONOMICS DIAGRAMS

SIMPLE MARKET DIAGRAMS

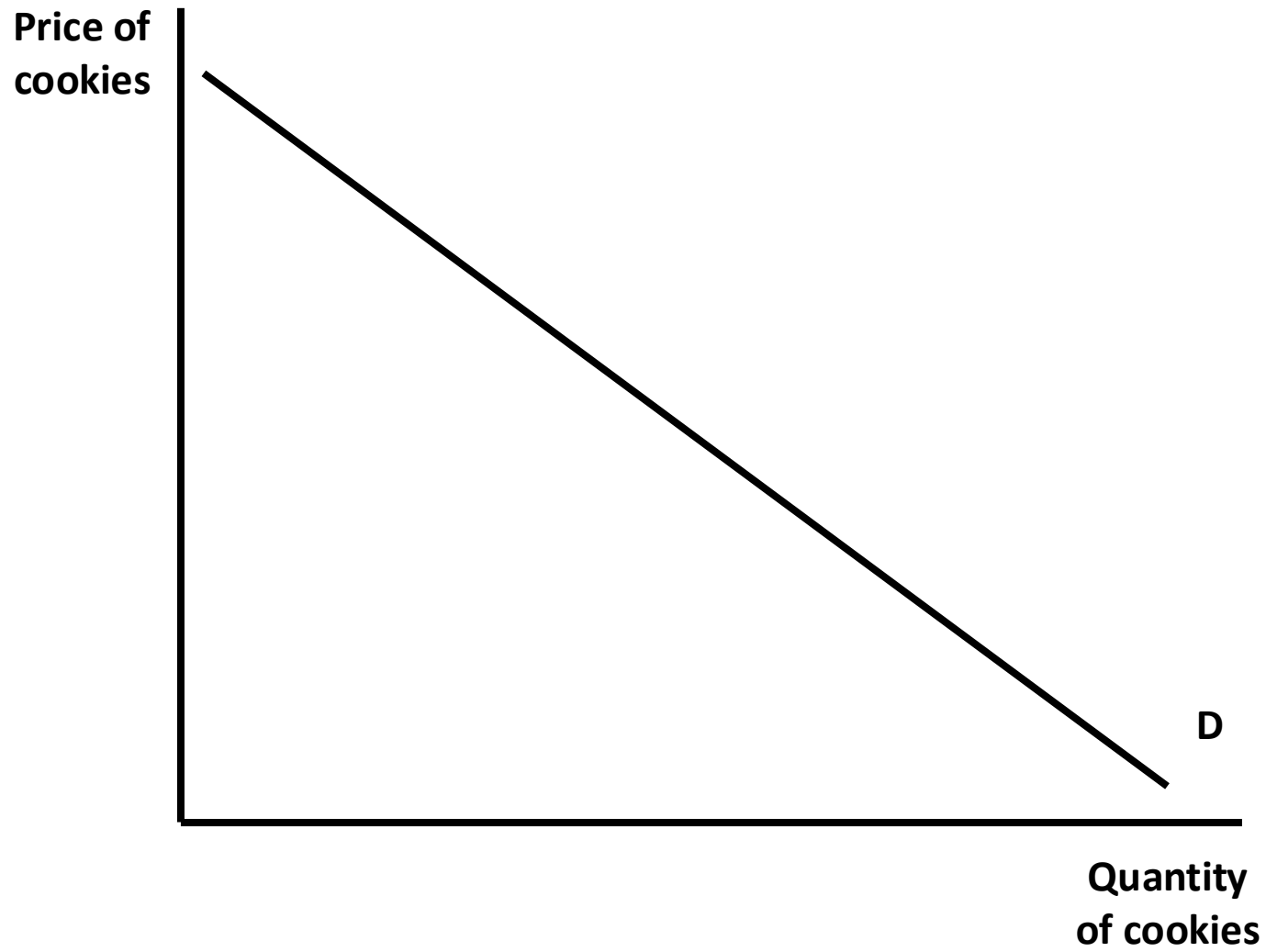






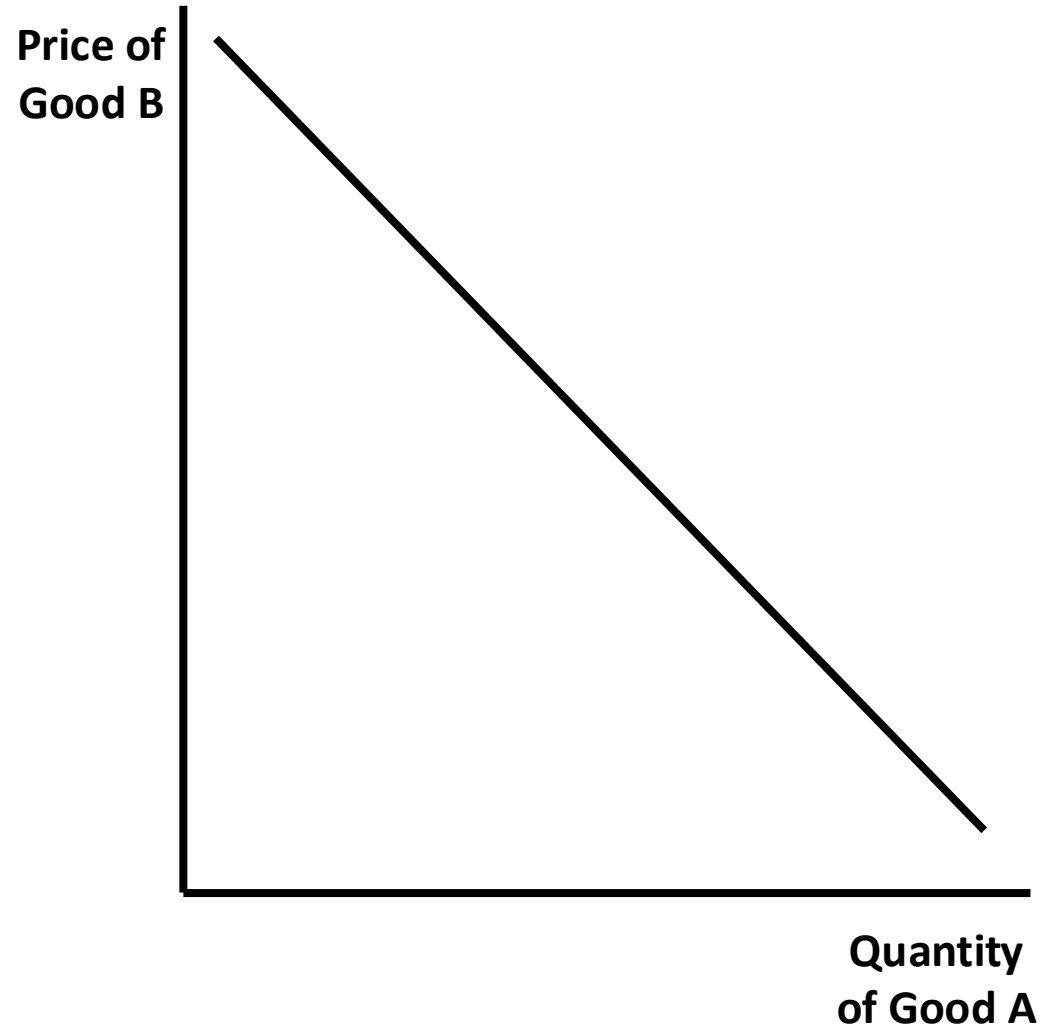


Increase in demand – demand shifts right; market demand is the sum of demand for individual firms

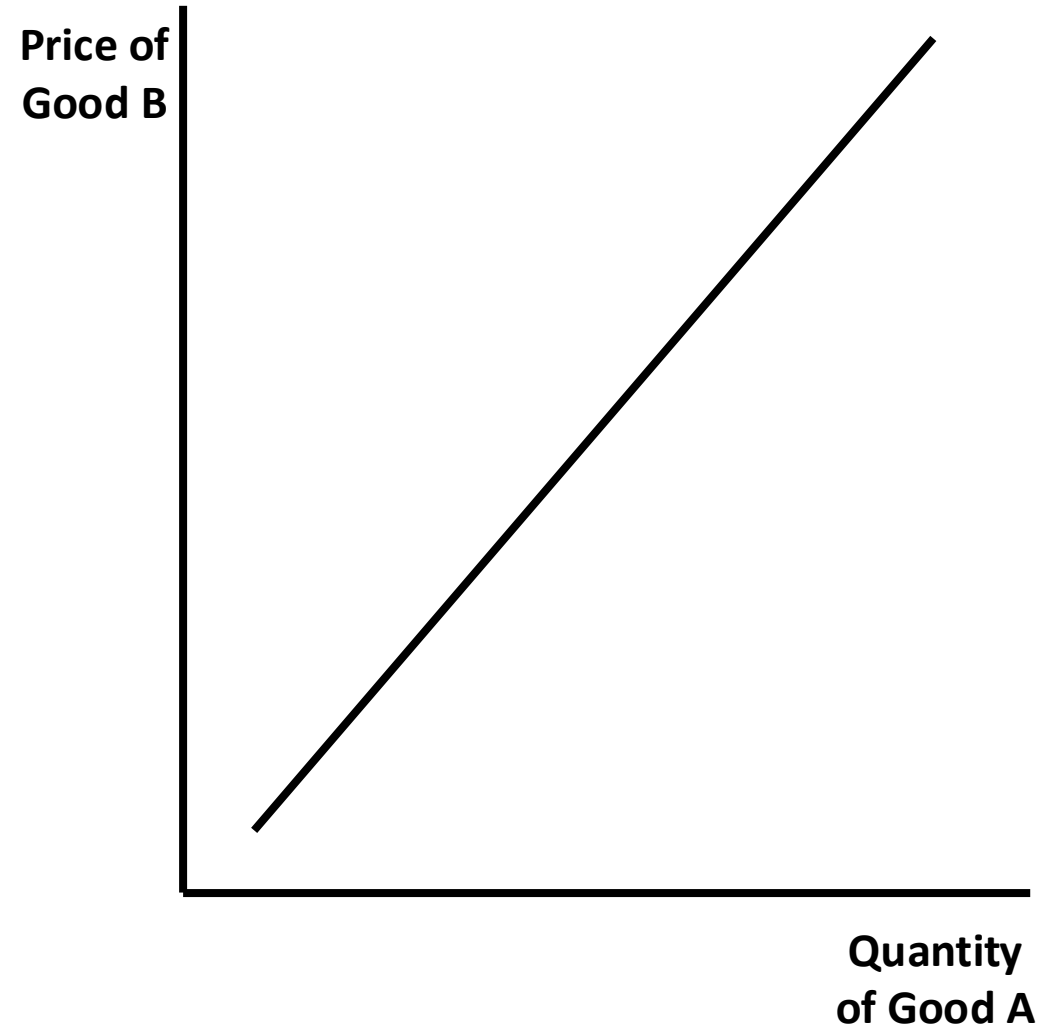


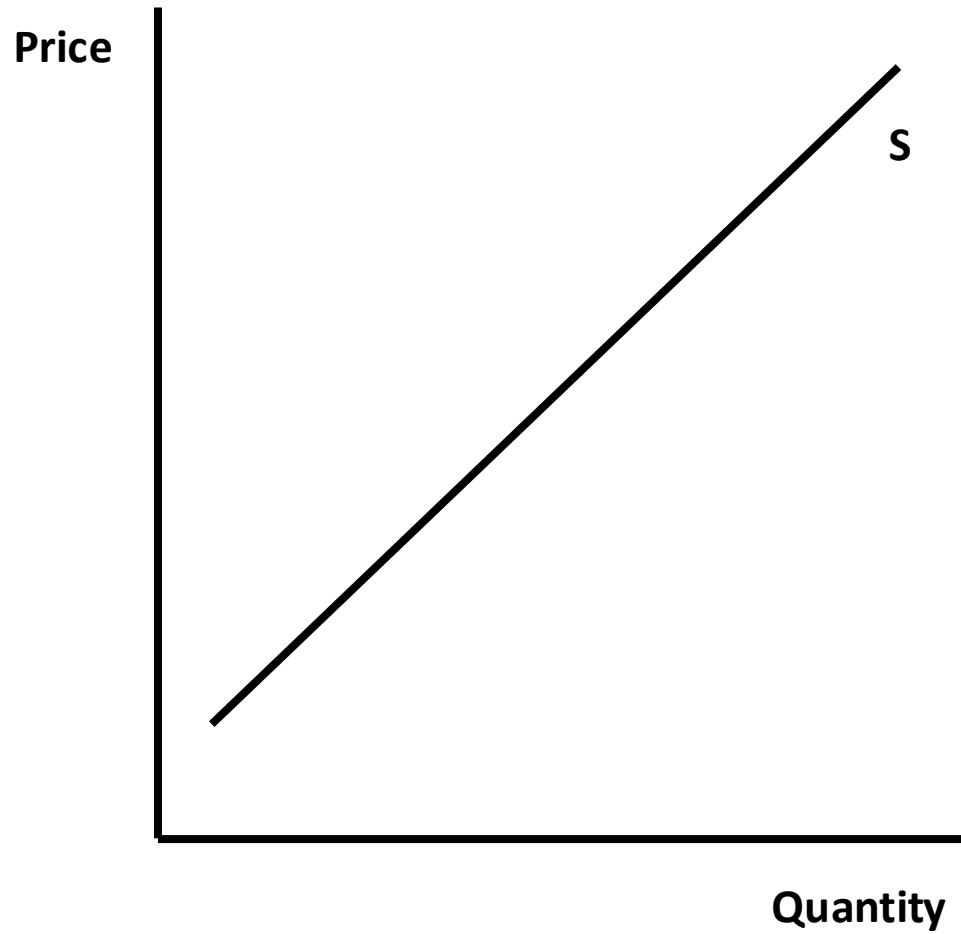
Demand curve in the cookie market

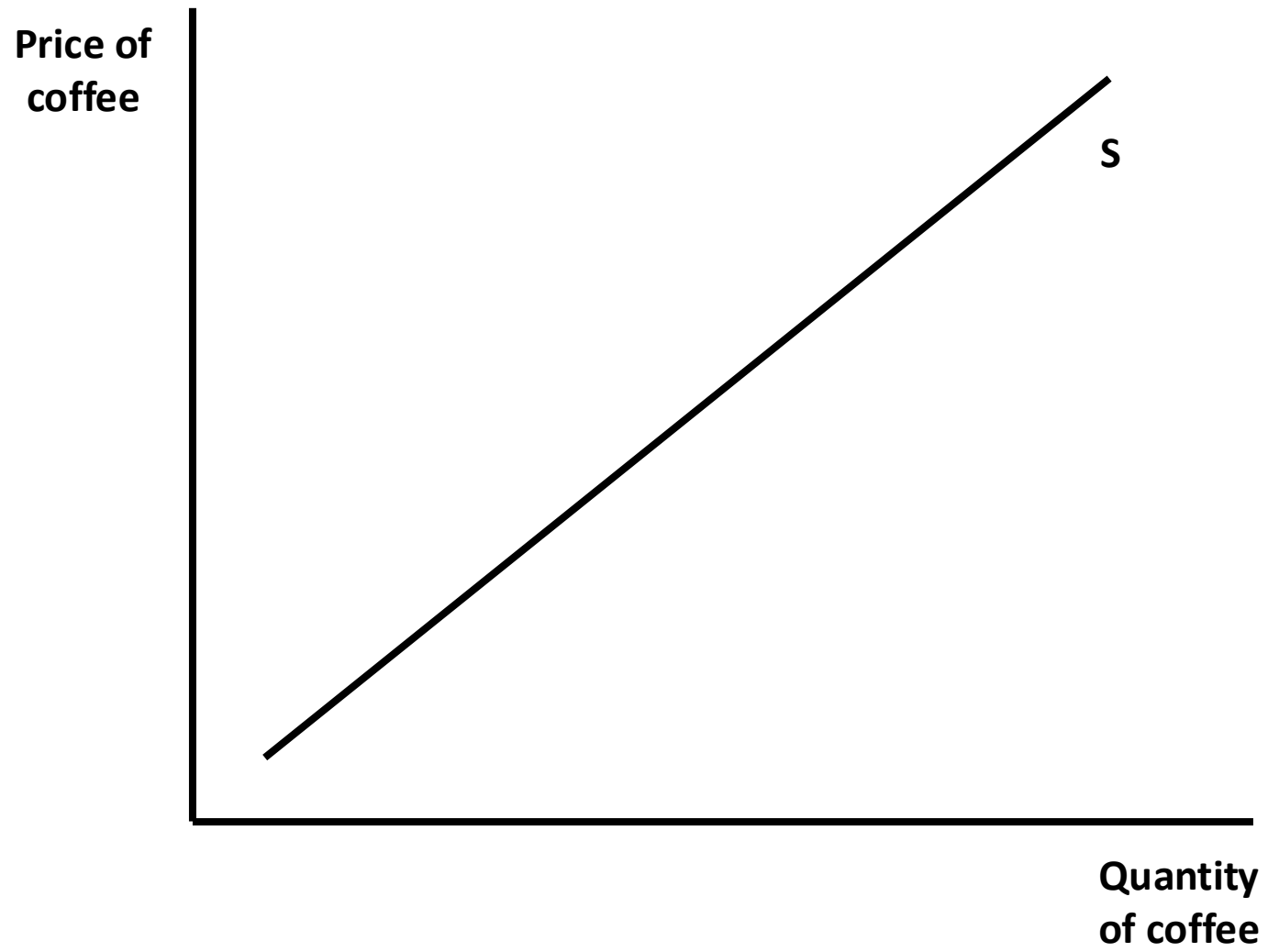
Complements

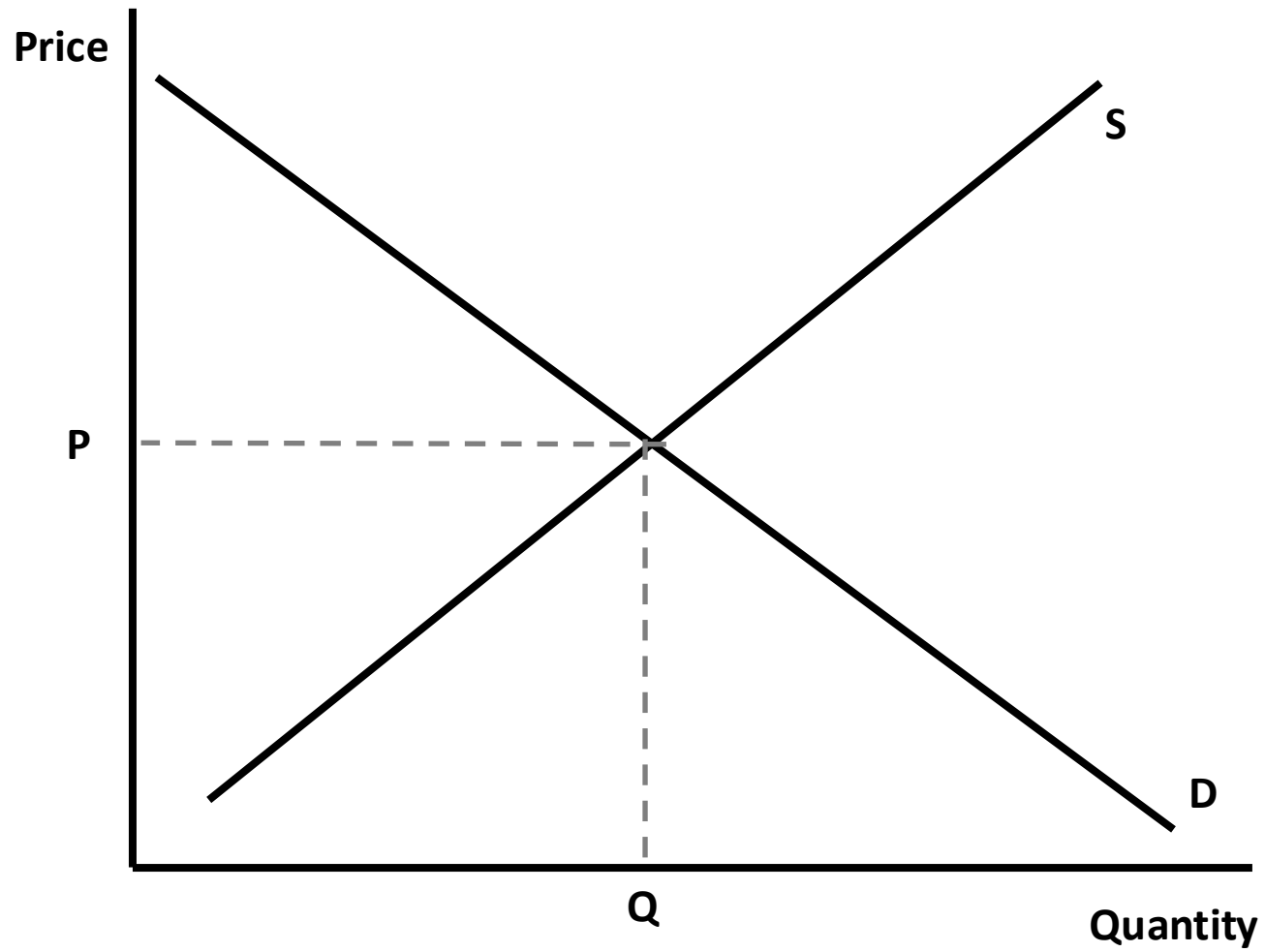


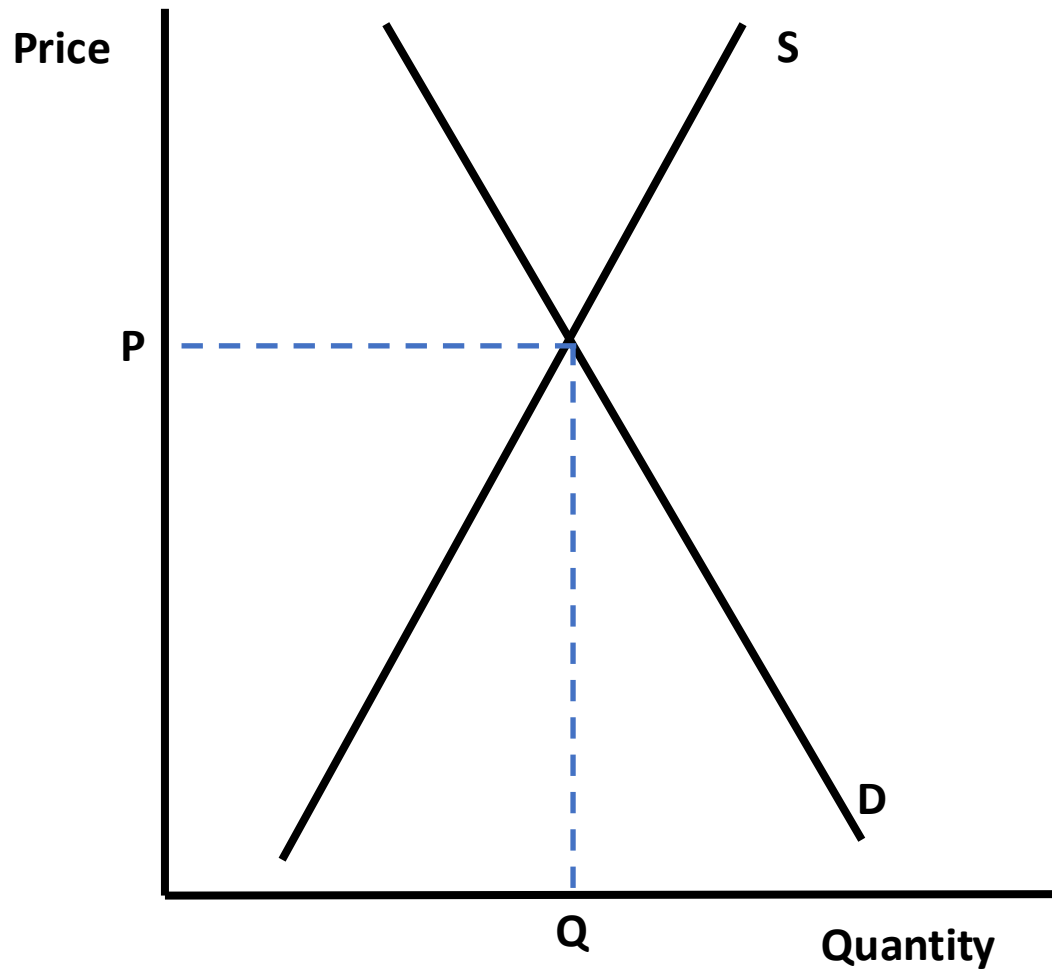
Substitutes



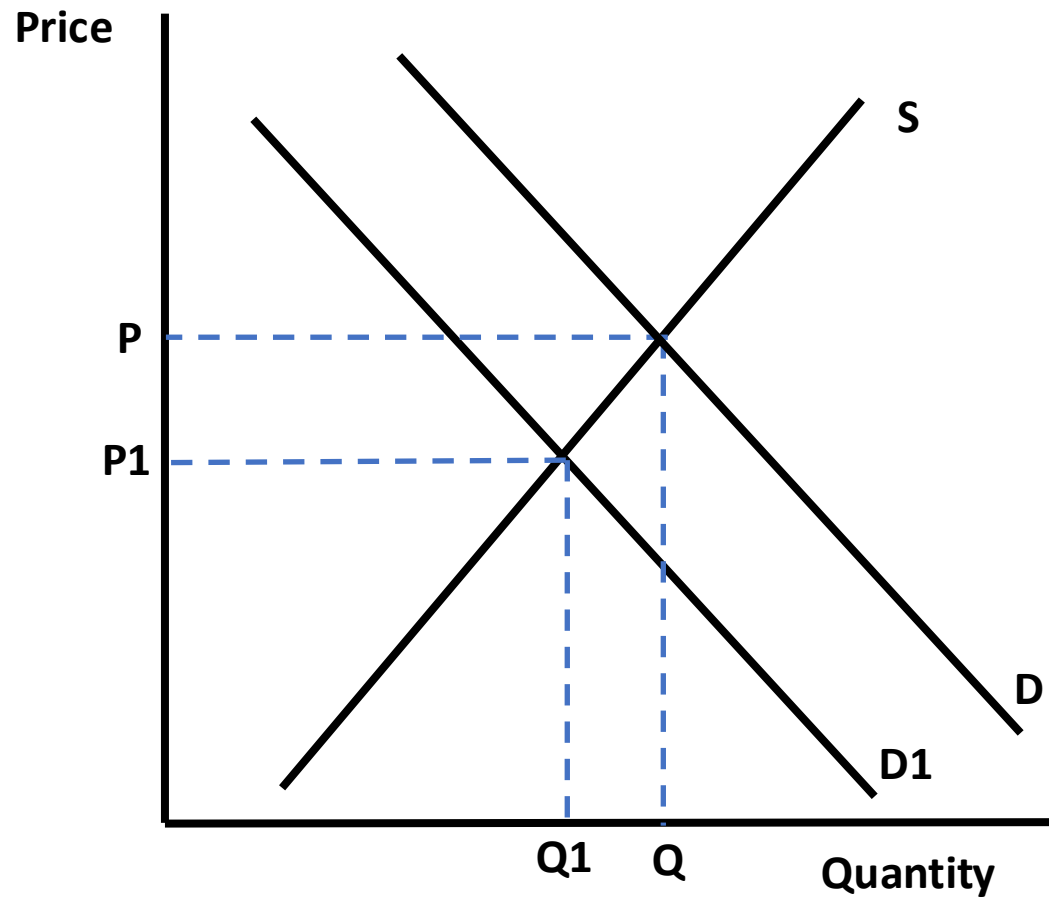




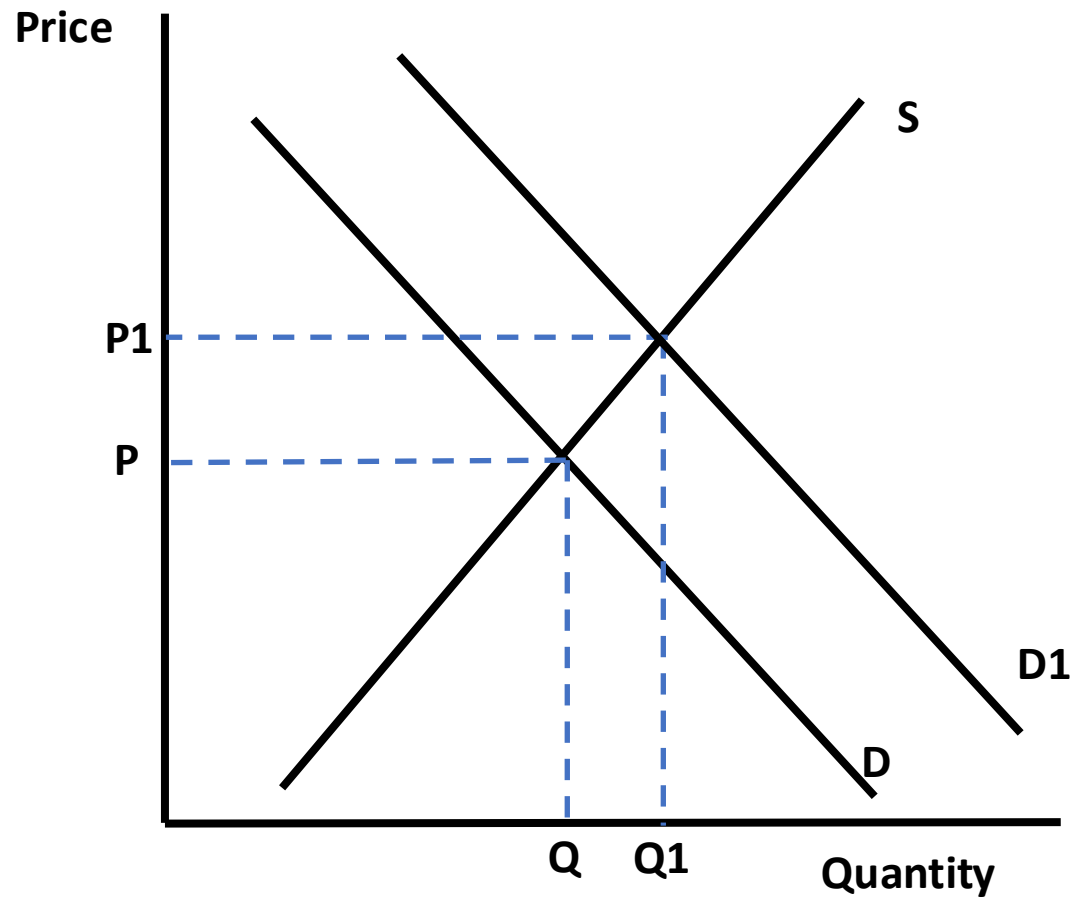




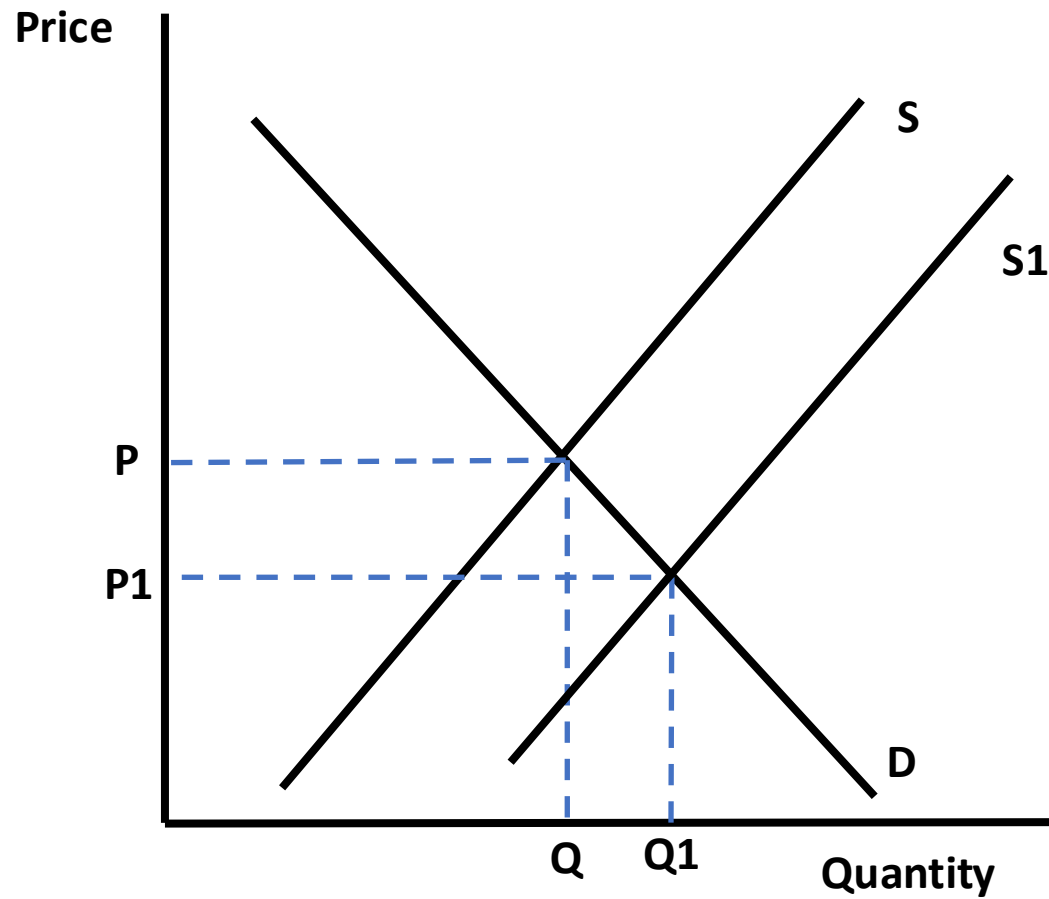
Market diagram equilibrium – relatively price inelastic demand and supply



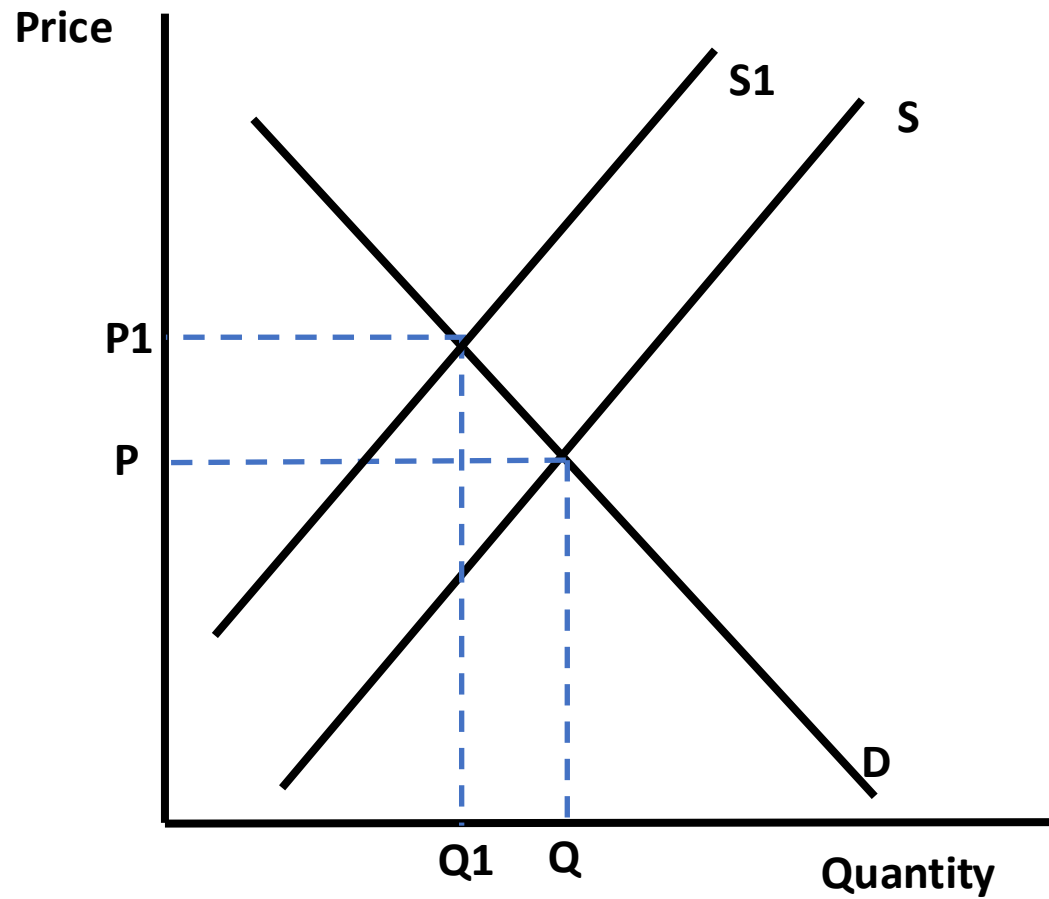
Decrease in market demand showing the impact on market equilibrium



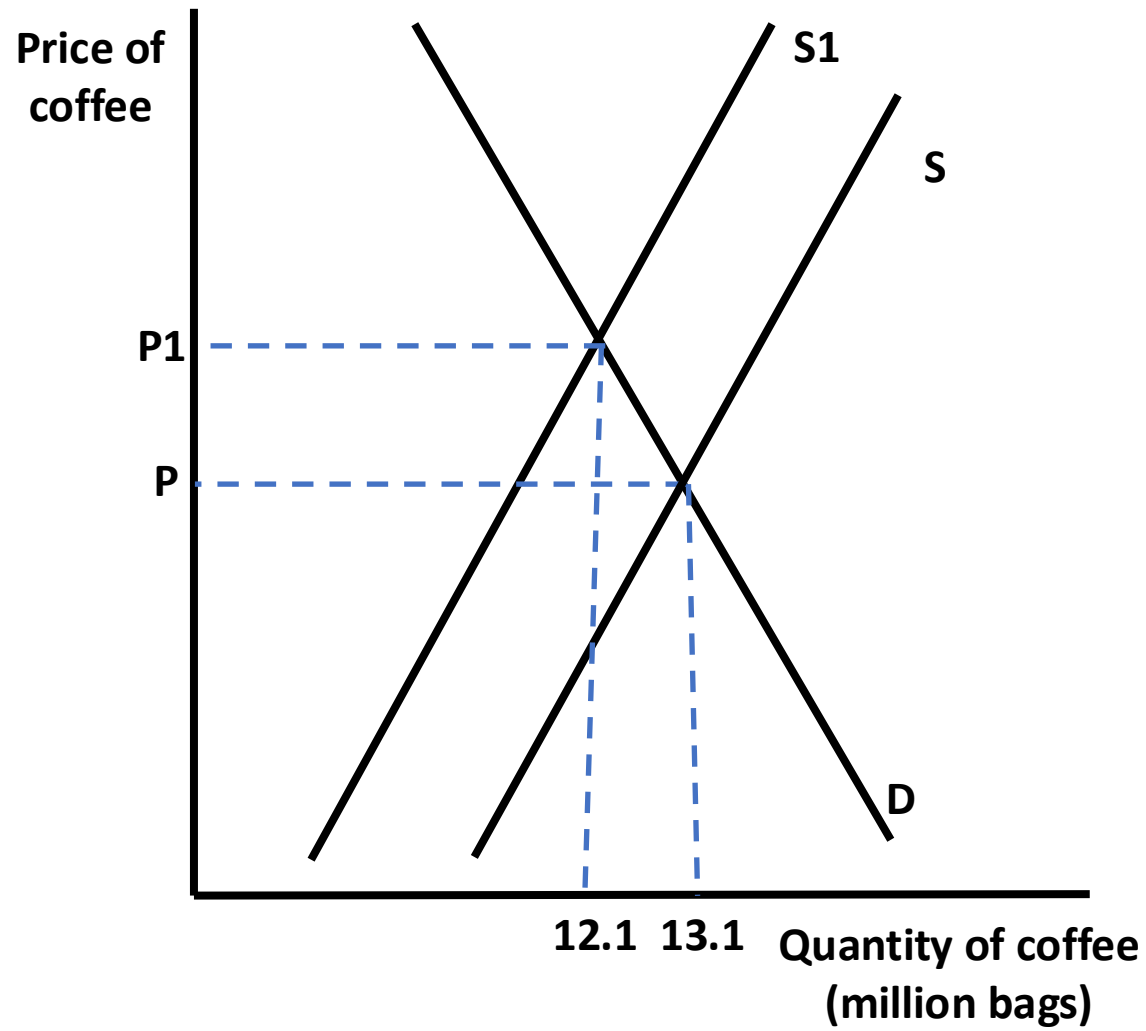
Increase in market demand showing the impact on market equilibrium



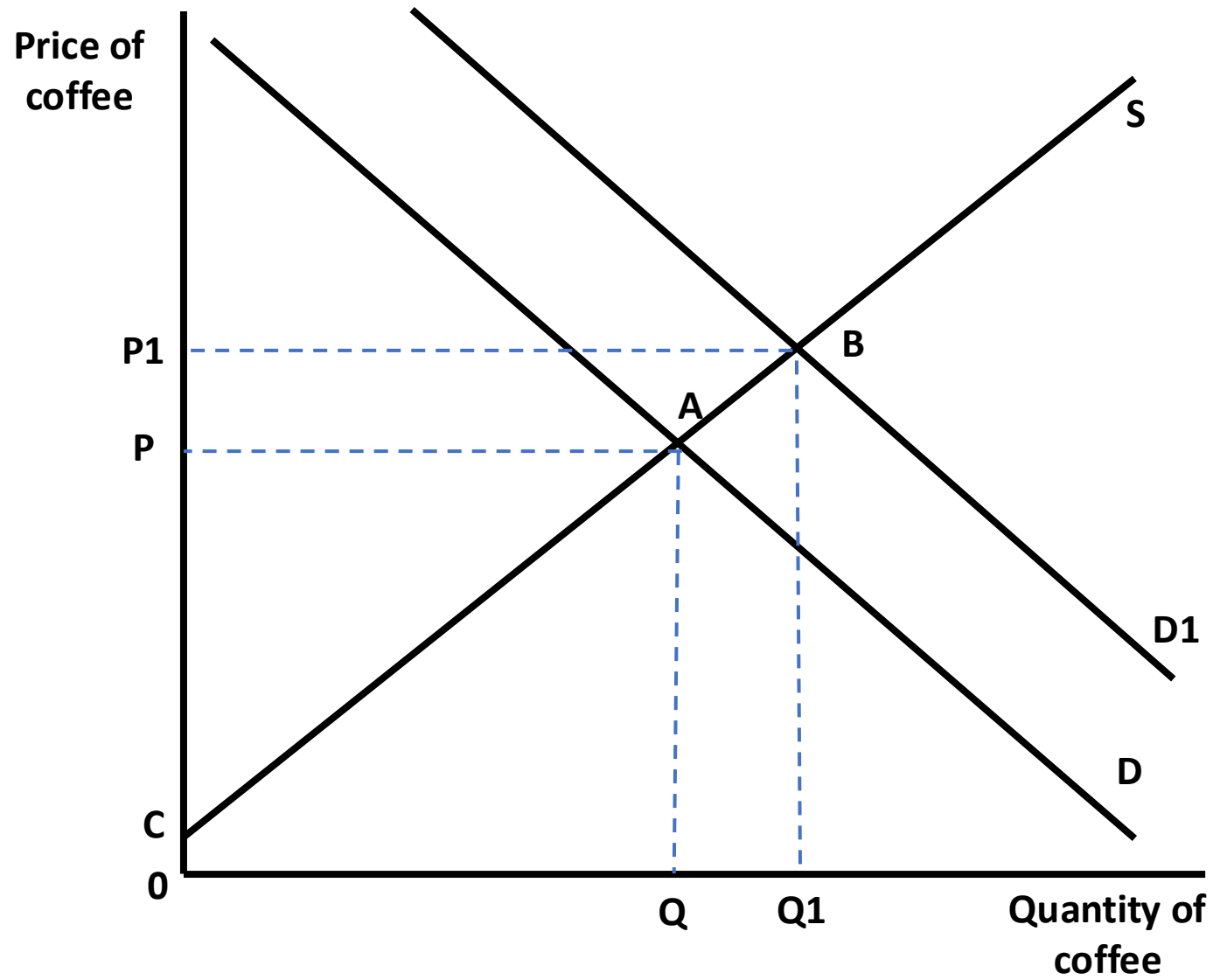
Increase in market supply showing the impact on market equilibrium



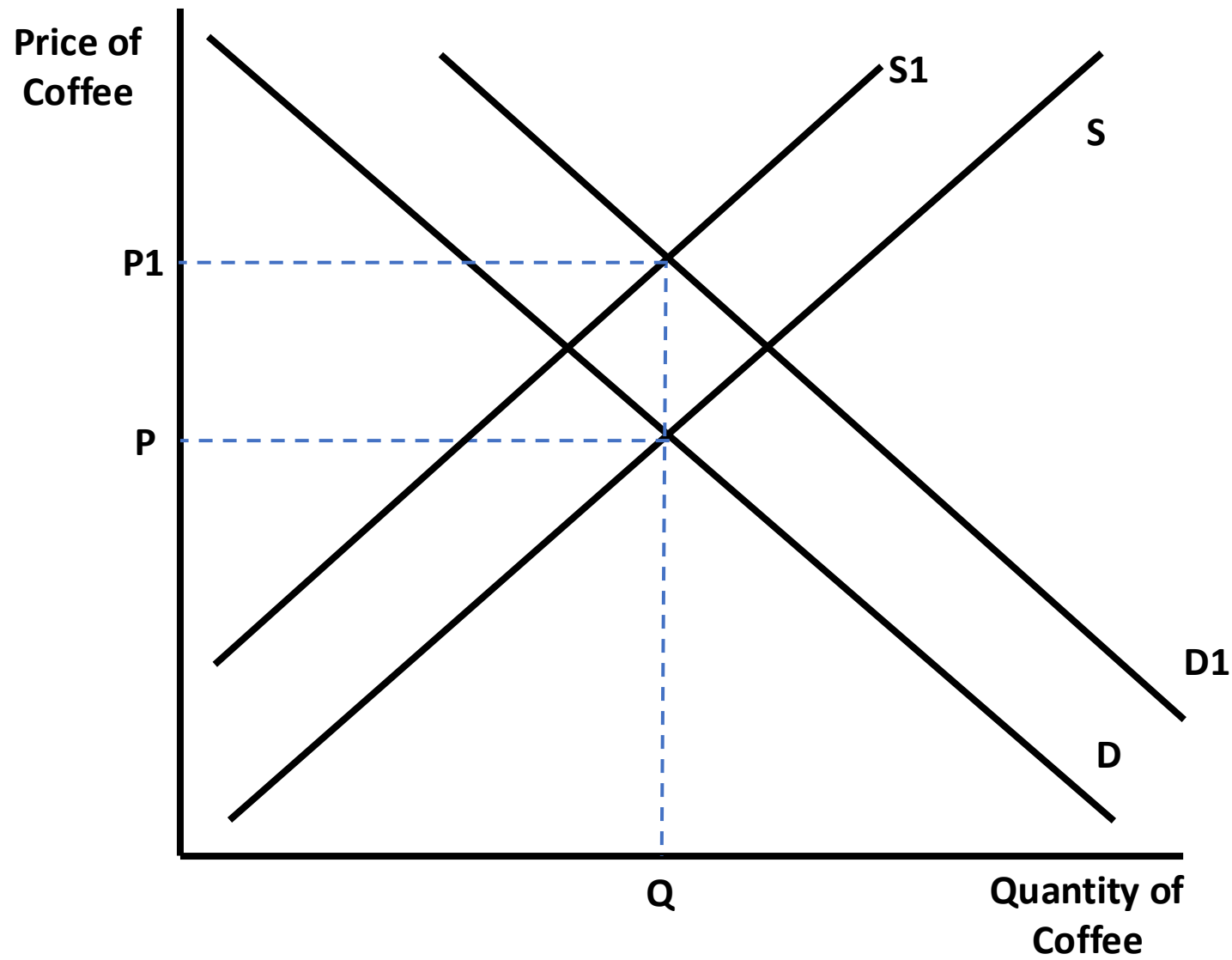
Decrease in market supply showing the impact on market equilibrium



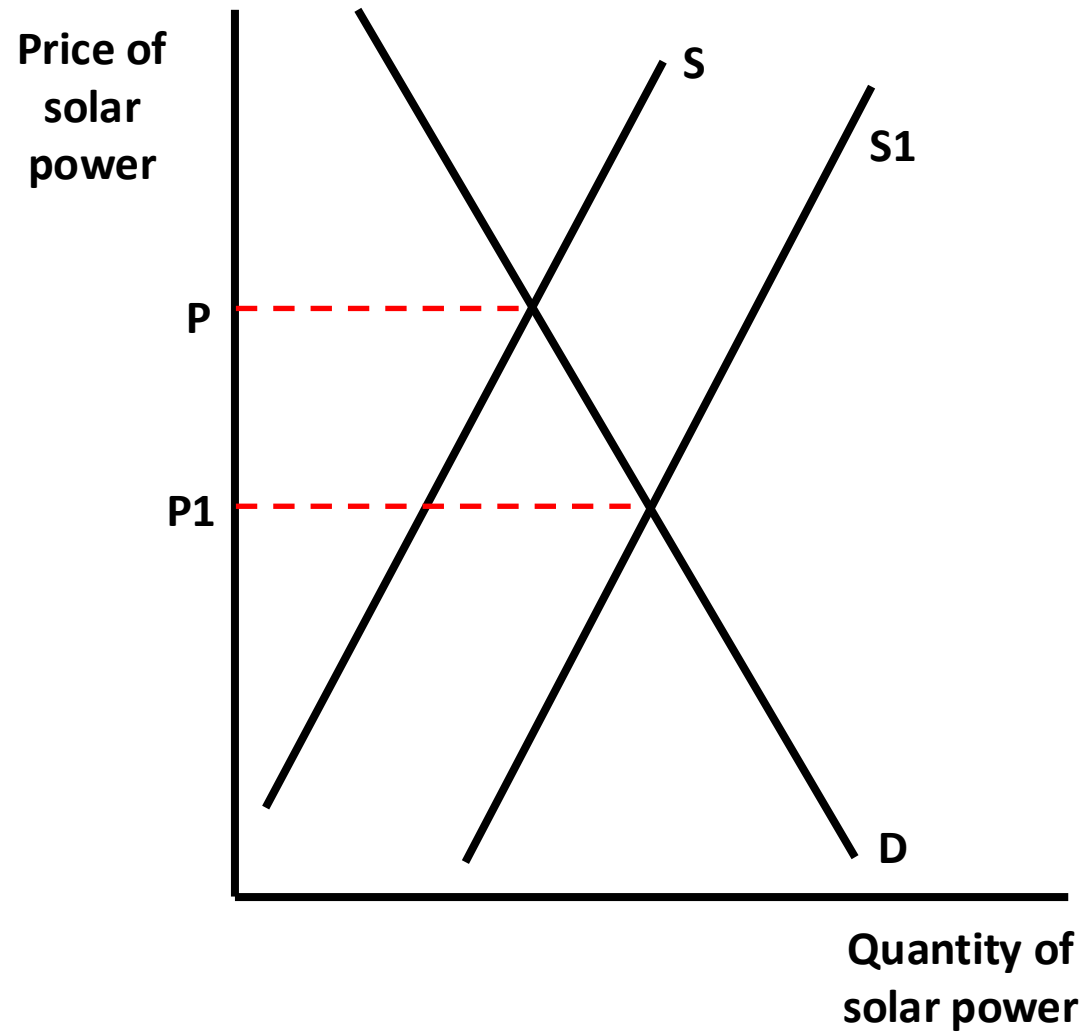
Impact of decrease in market supply of coffee on the equilibrium price and quantity of coffee



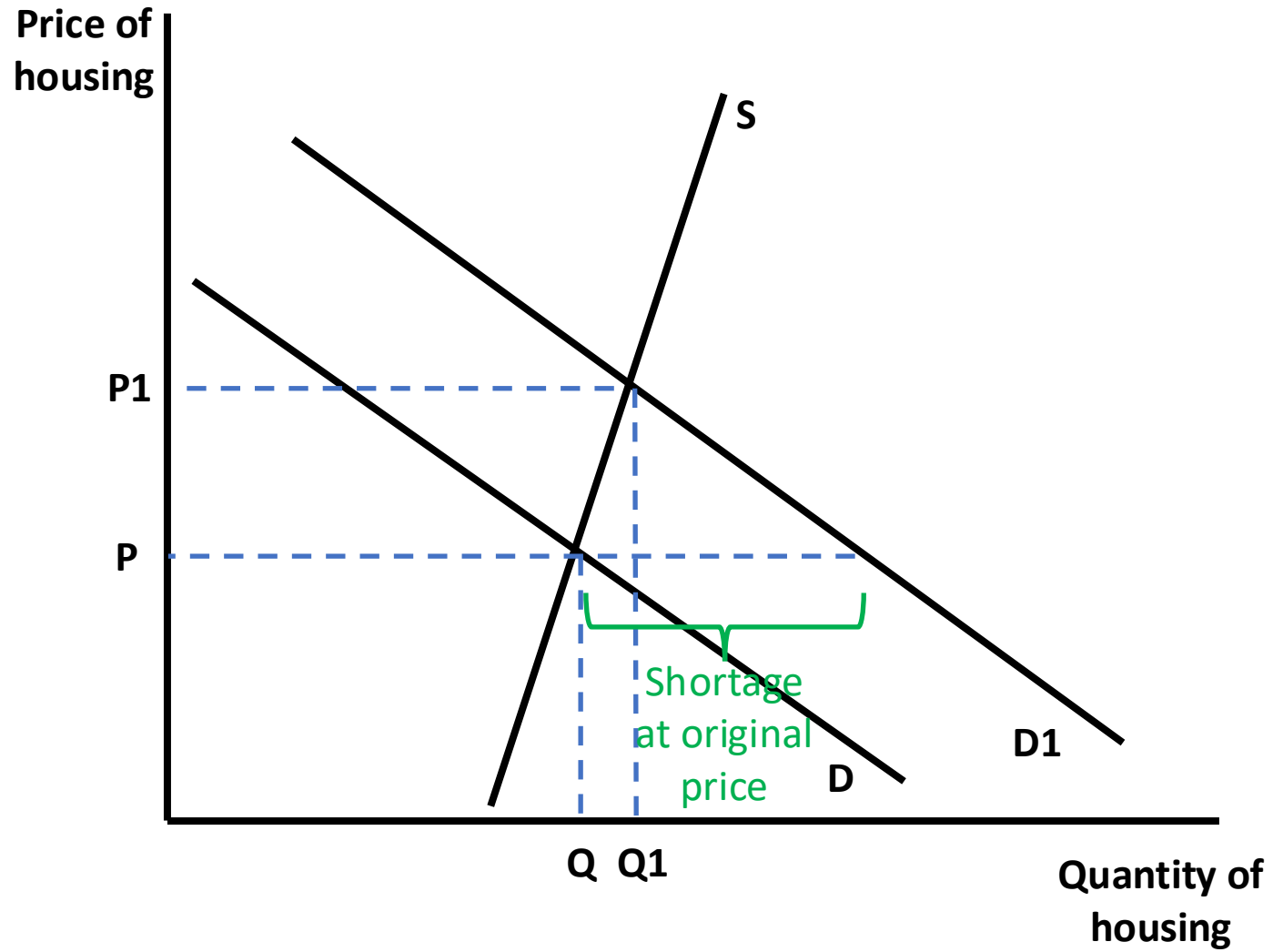
Impact of increase in market demand for coffee on the equilibrium price and quantity of coffee; increase in producer surplus from ACP to BCP1



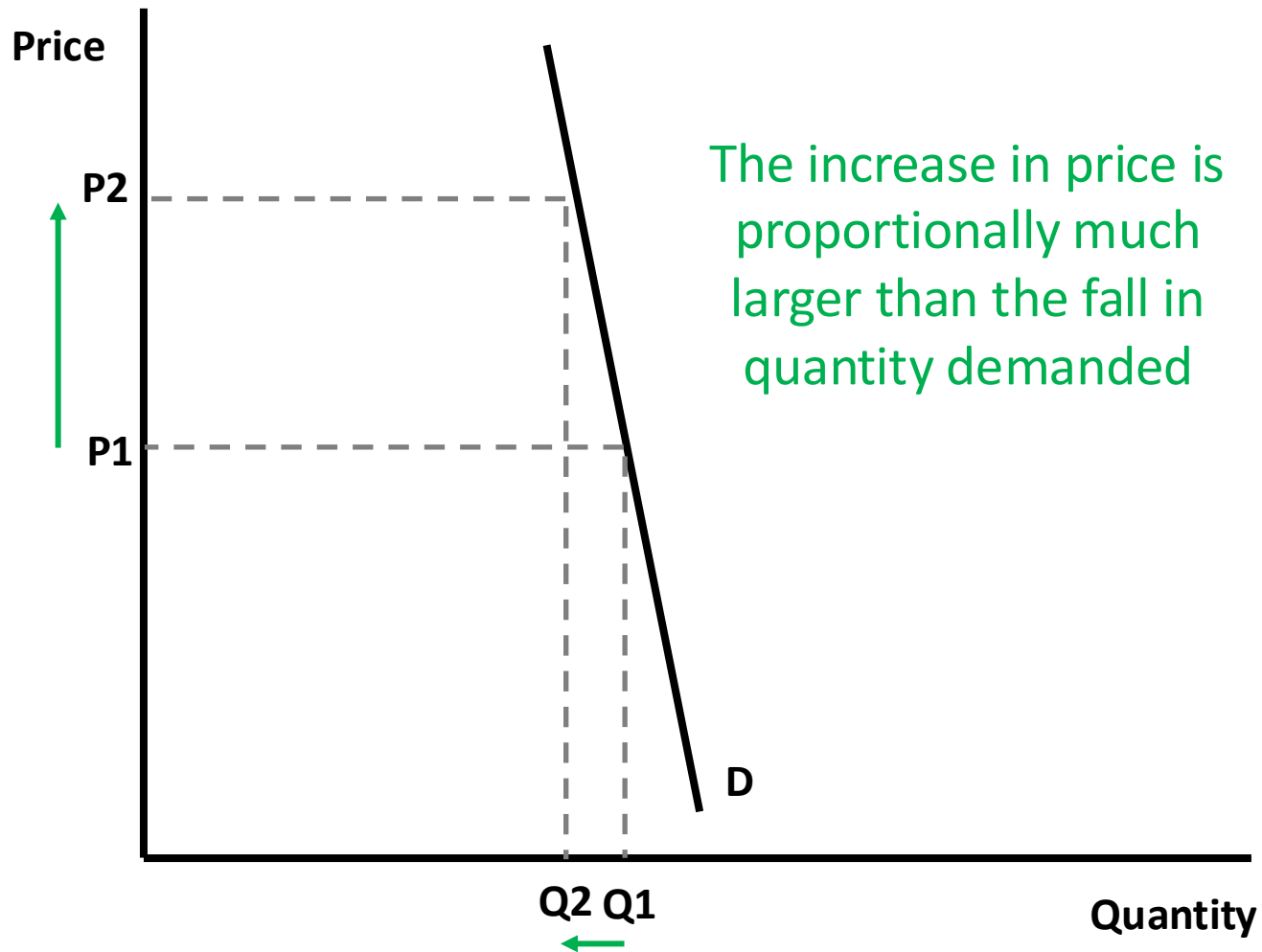
Impact of decrease in market supply and increase in market demand in coffee market on the equilibrium price and quantity of coffee

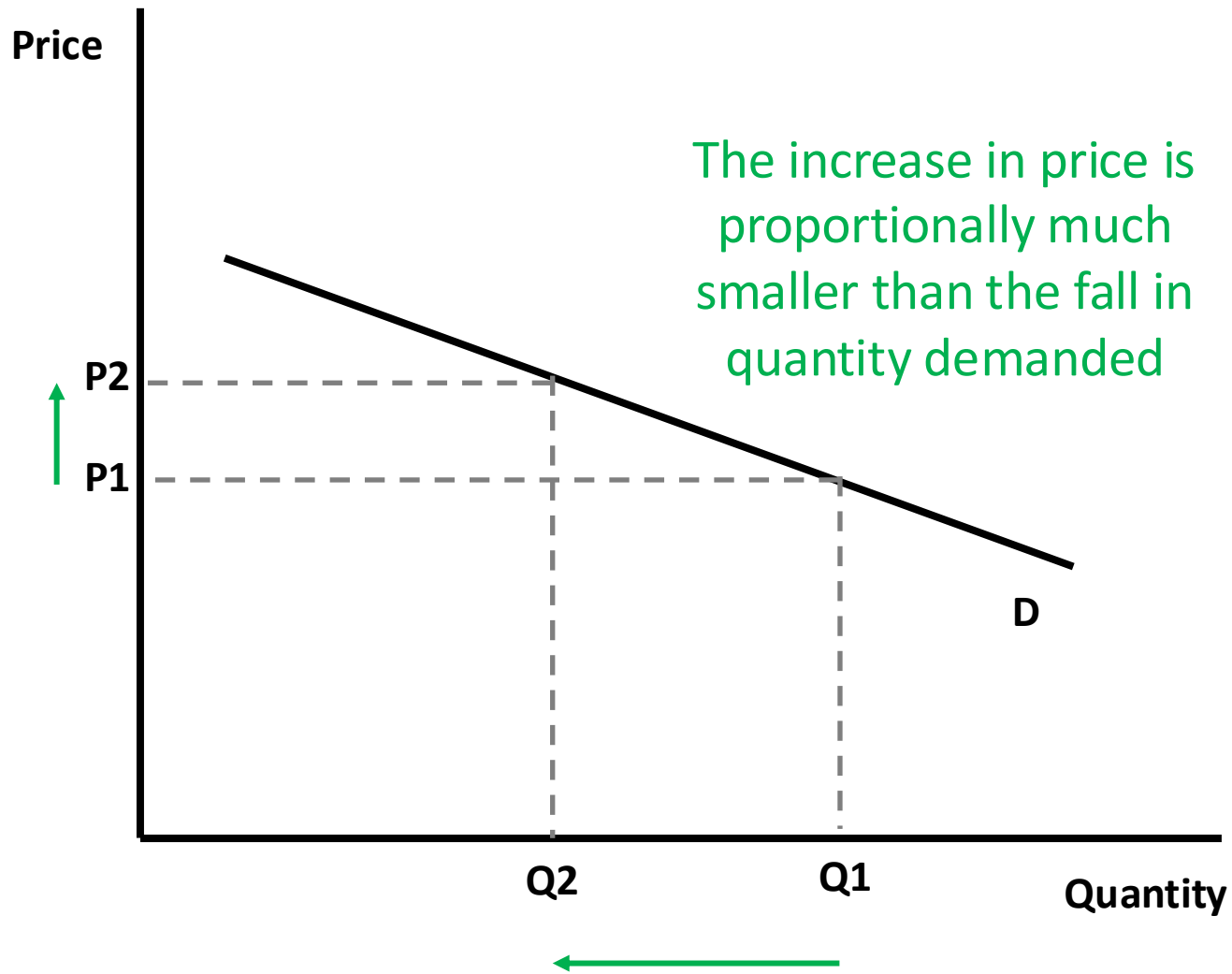


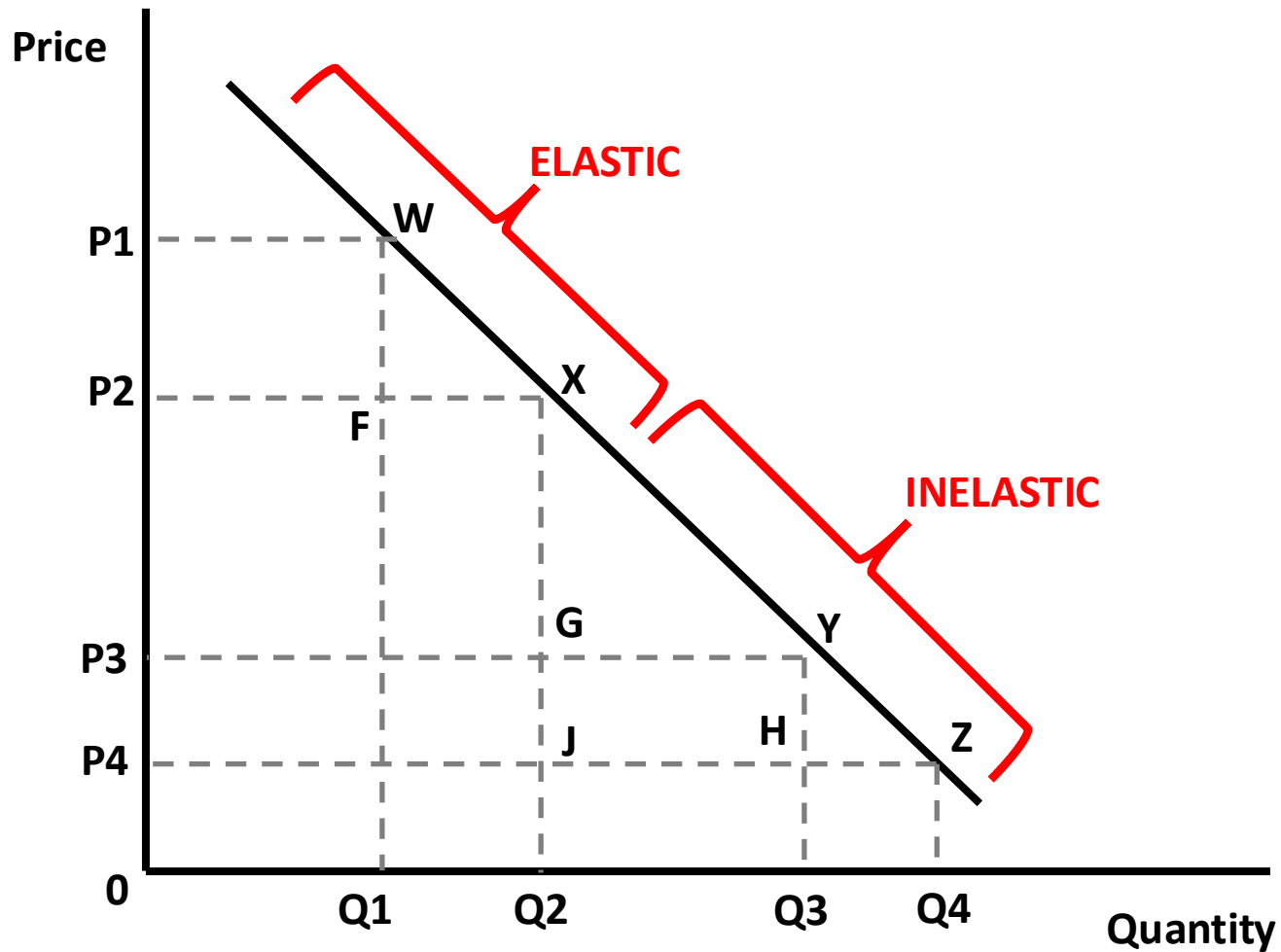
Decrease in the price of solar power caused by an increase in the supply of solar power



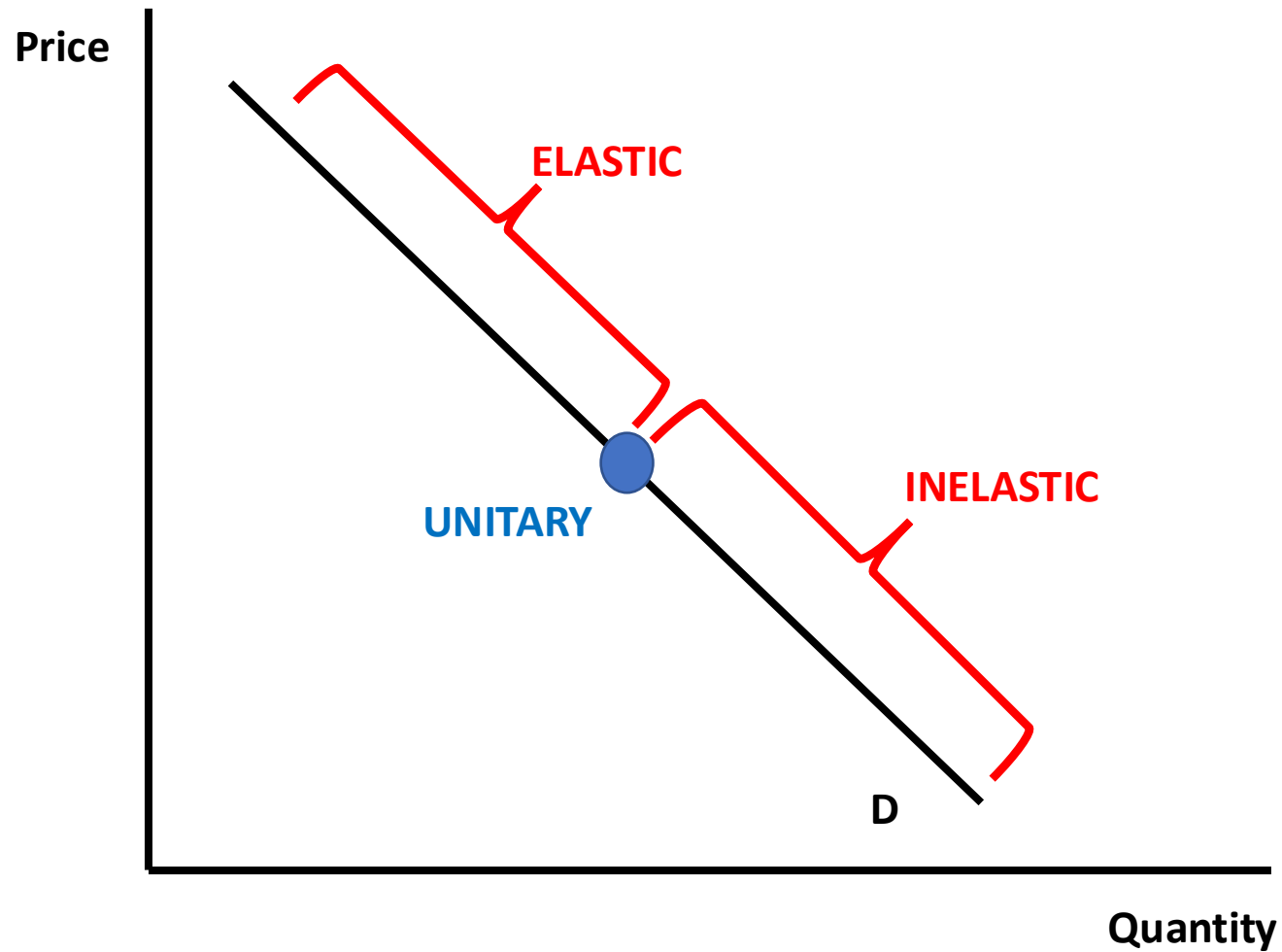
Adjustment to new market equilibrium in housing market after an increase in market demand showing excess demand at original price



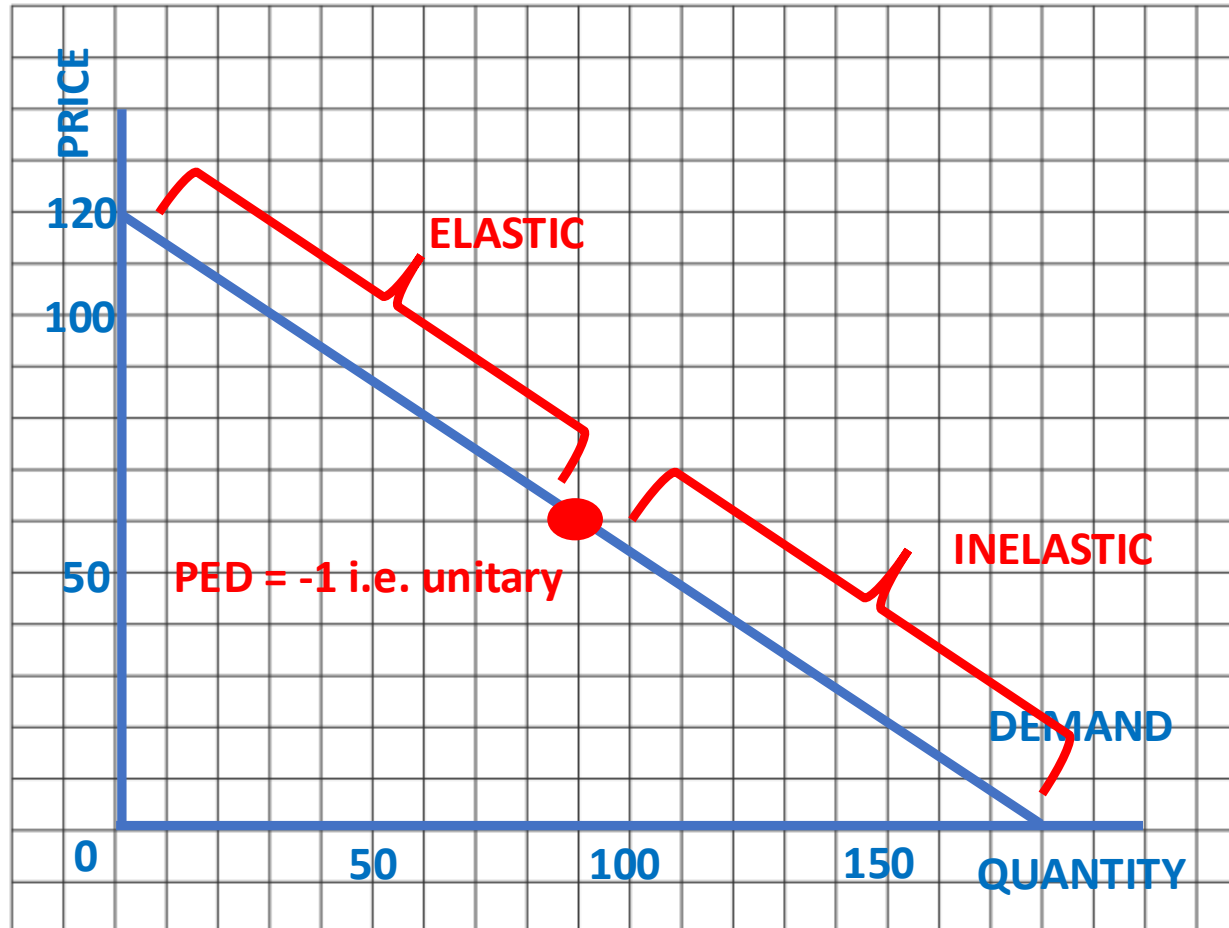




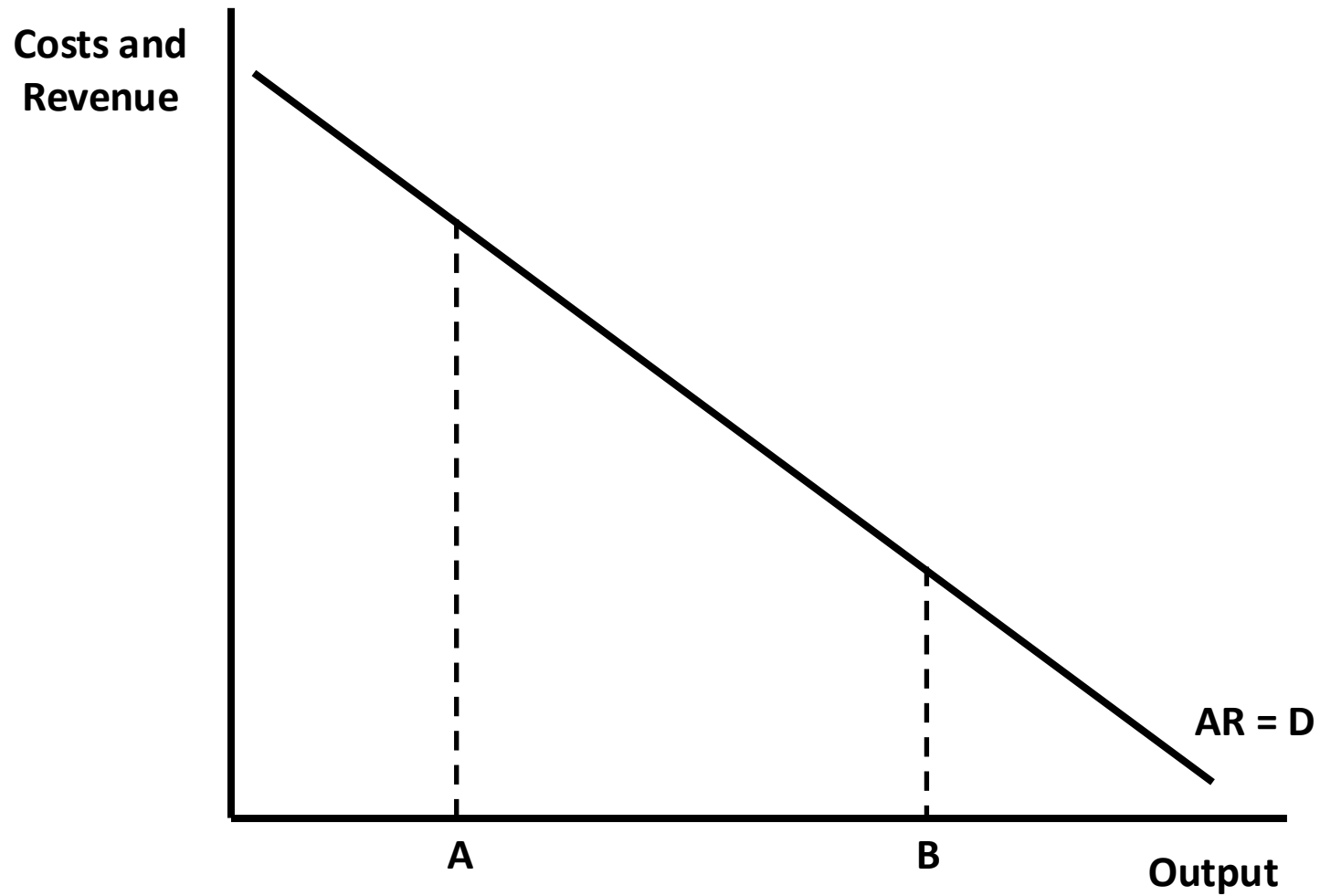
Changing price elasticity of demand along a straight-line demand curve (PED is not the gradient); letters can be used to analyse the impact on total revenue at each point along the demand curve



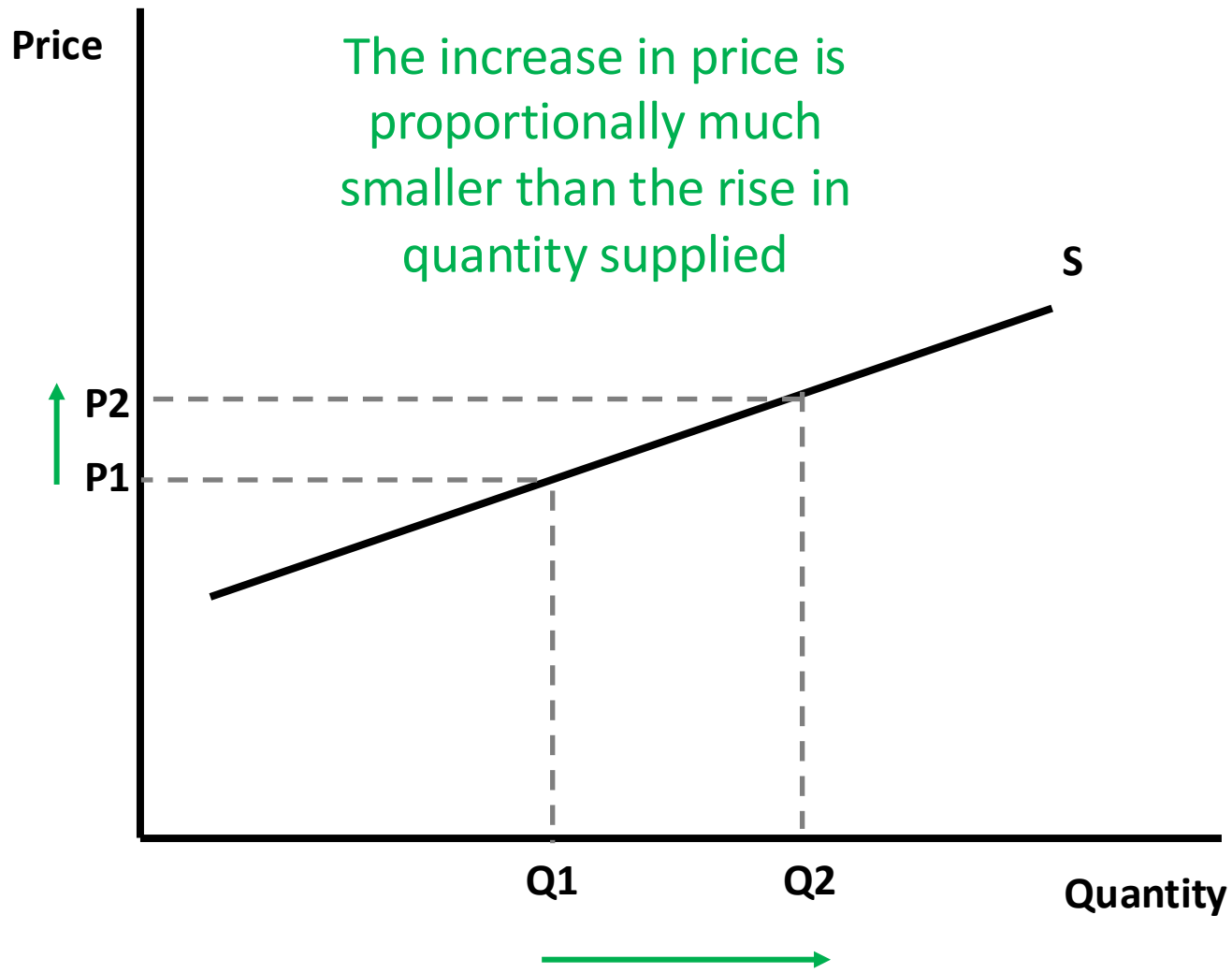
Unitary price elasticity of demand at midpoint ($PE_D = -1$)

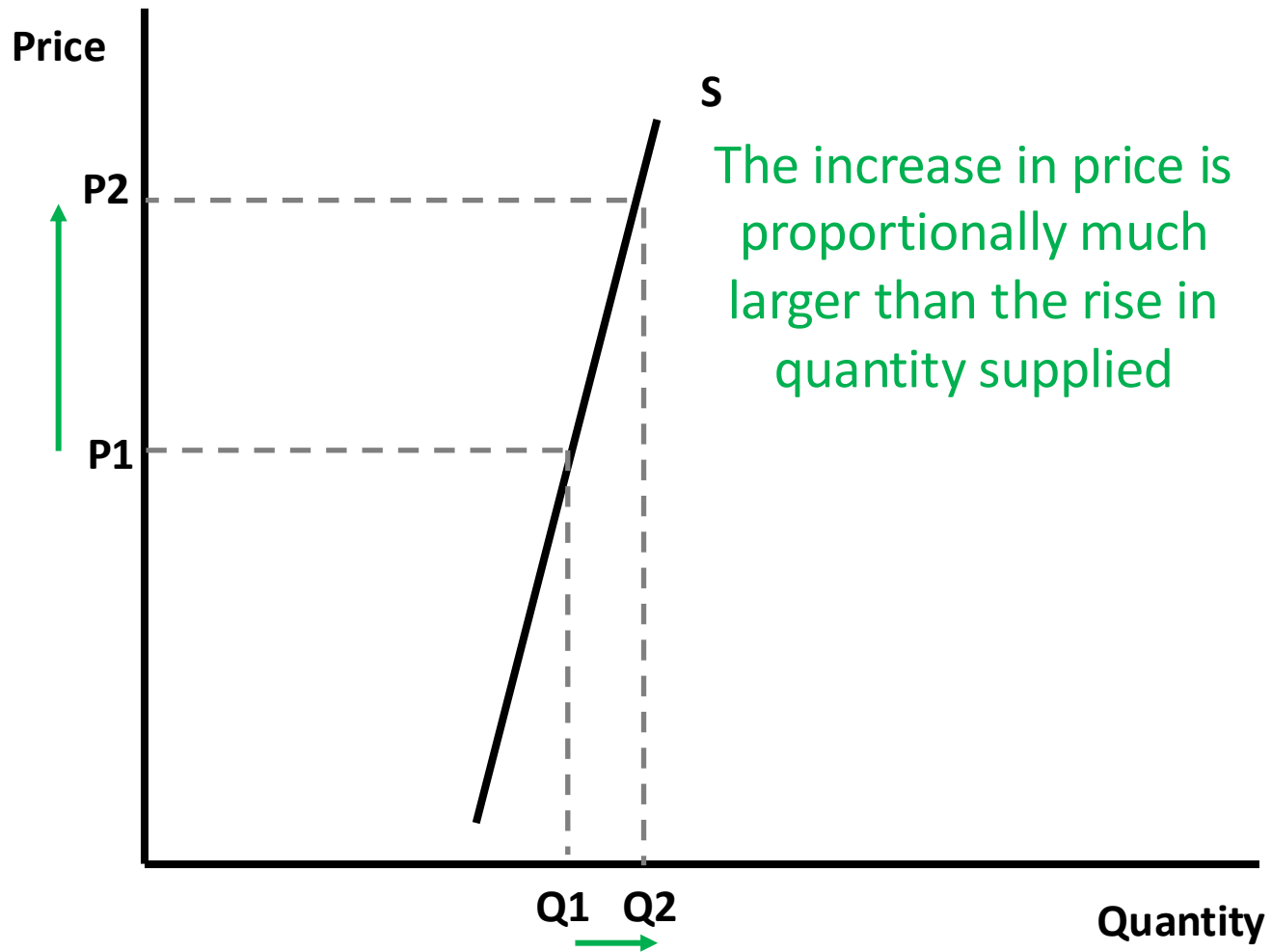


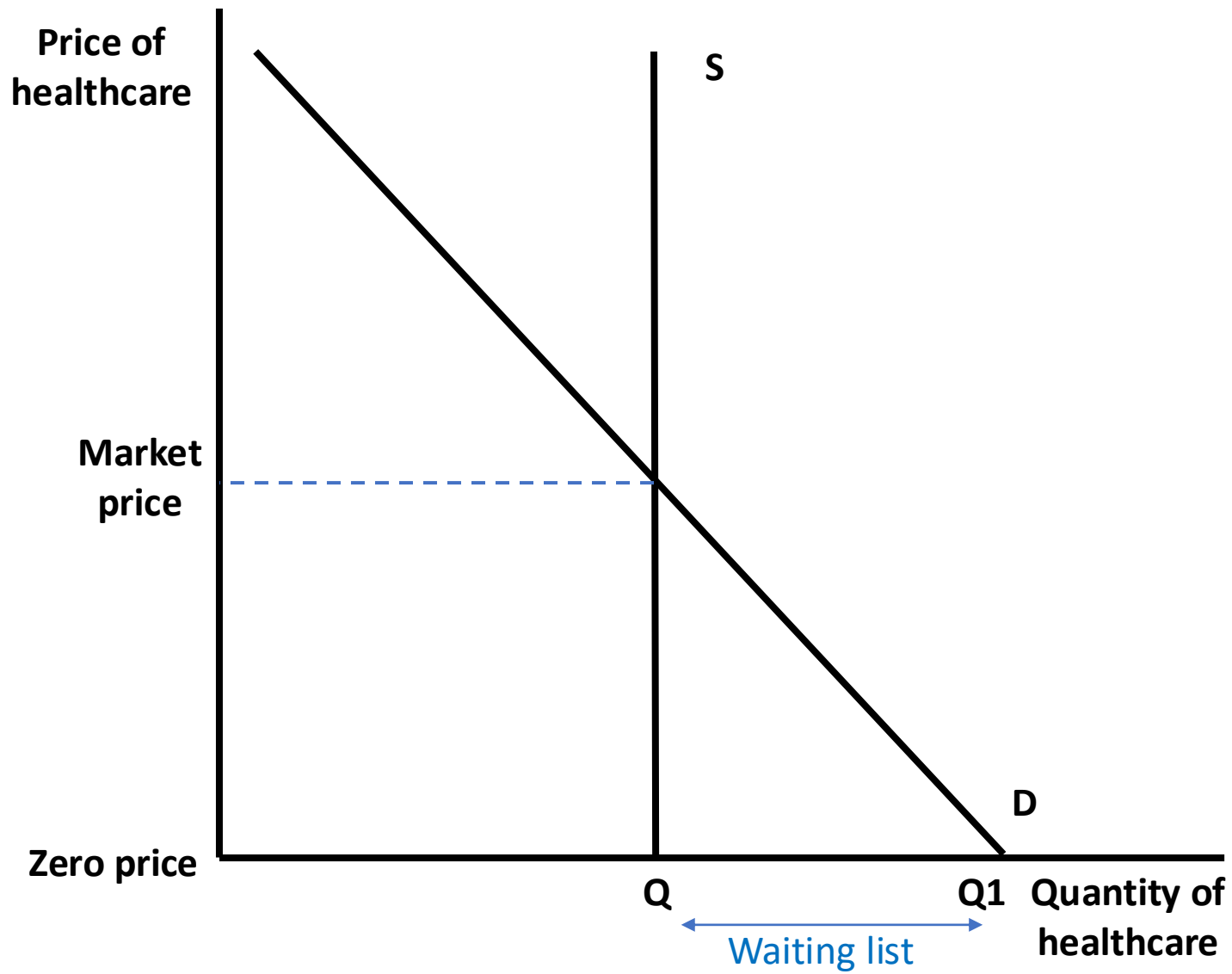
Changing PED along a straight-line demand curve, including numbers for deeper analysis



PED elastic at A and inelastic at B



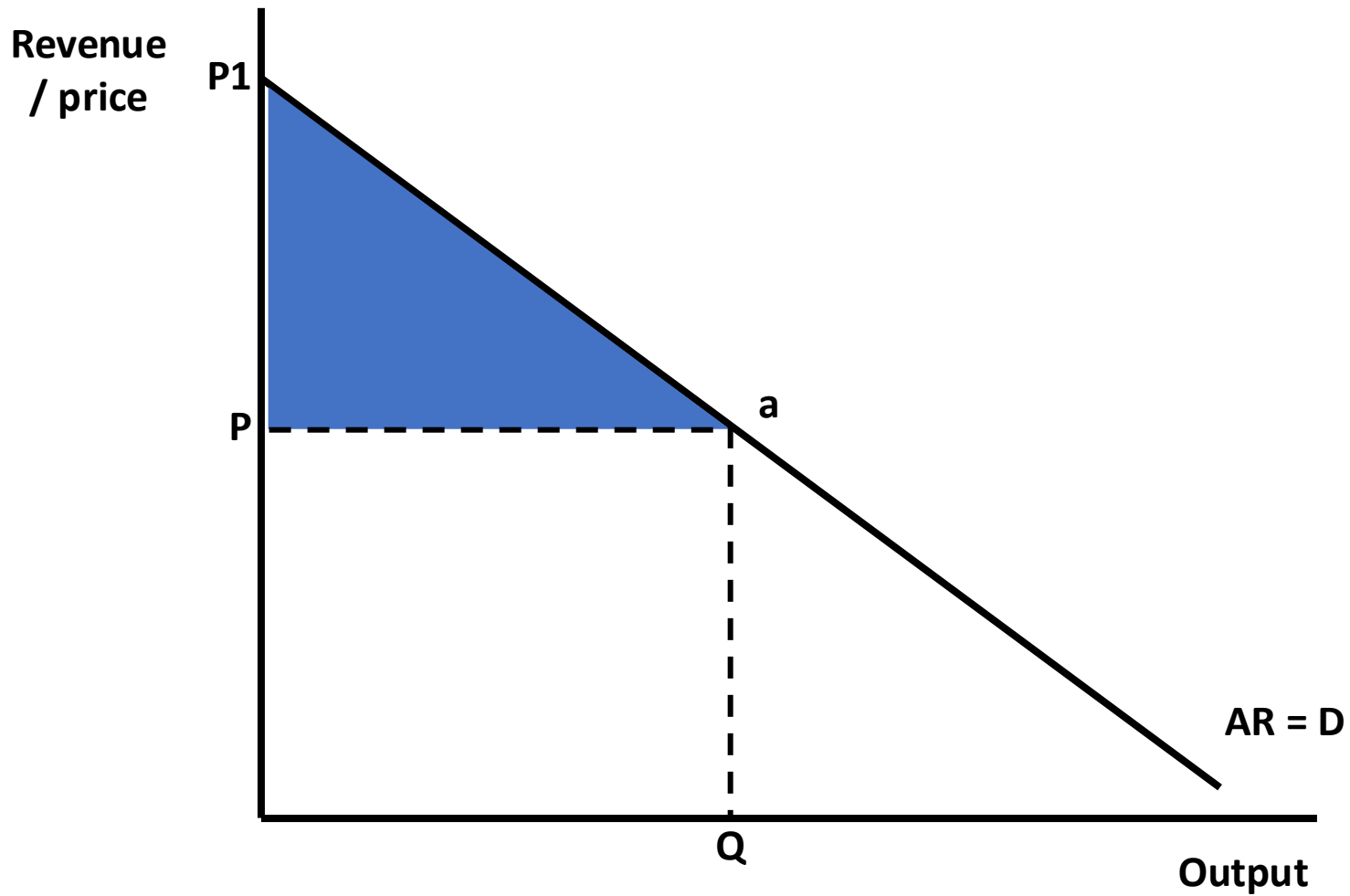


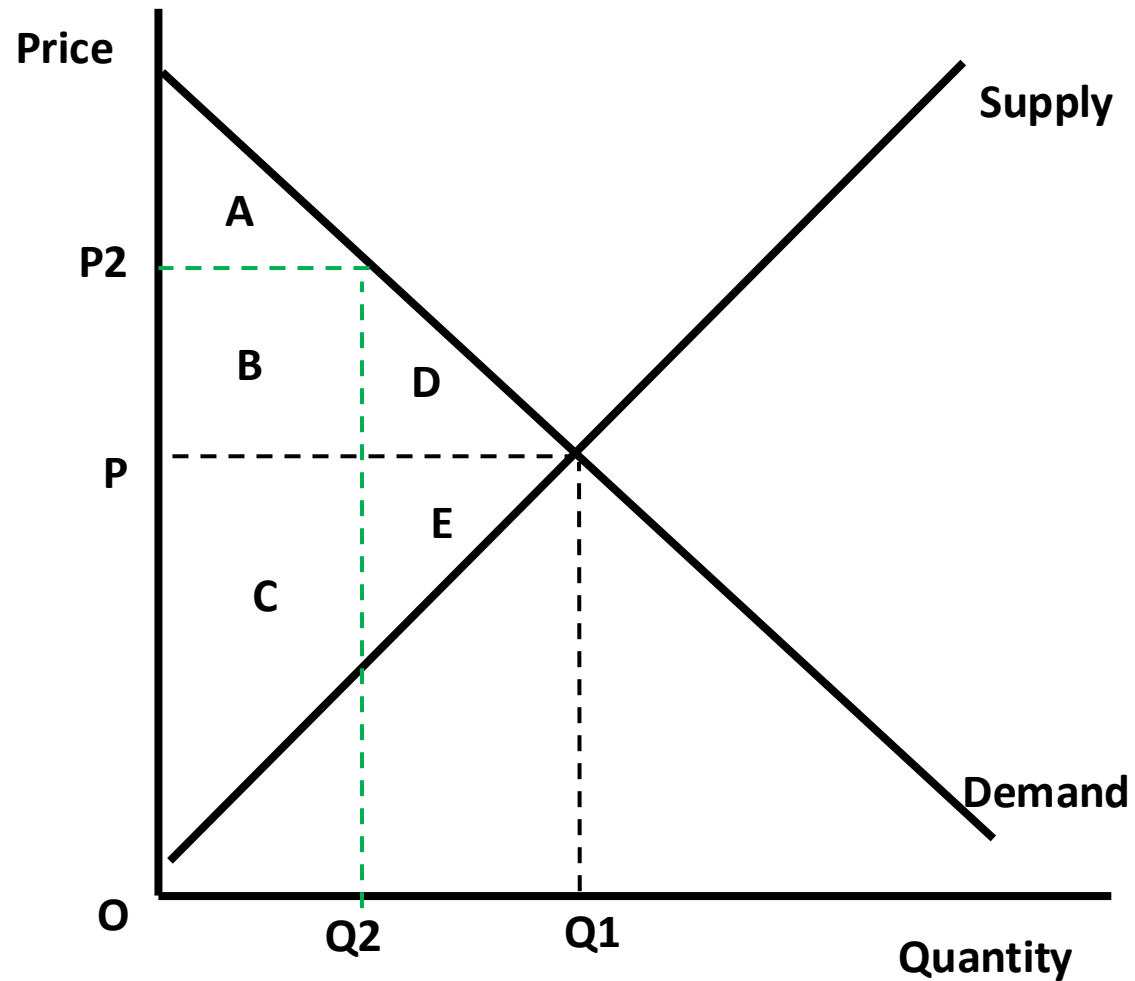


Healthcare market: excess demand (waiting list) when healthcare is provided free at the point of use eg. NHS

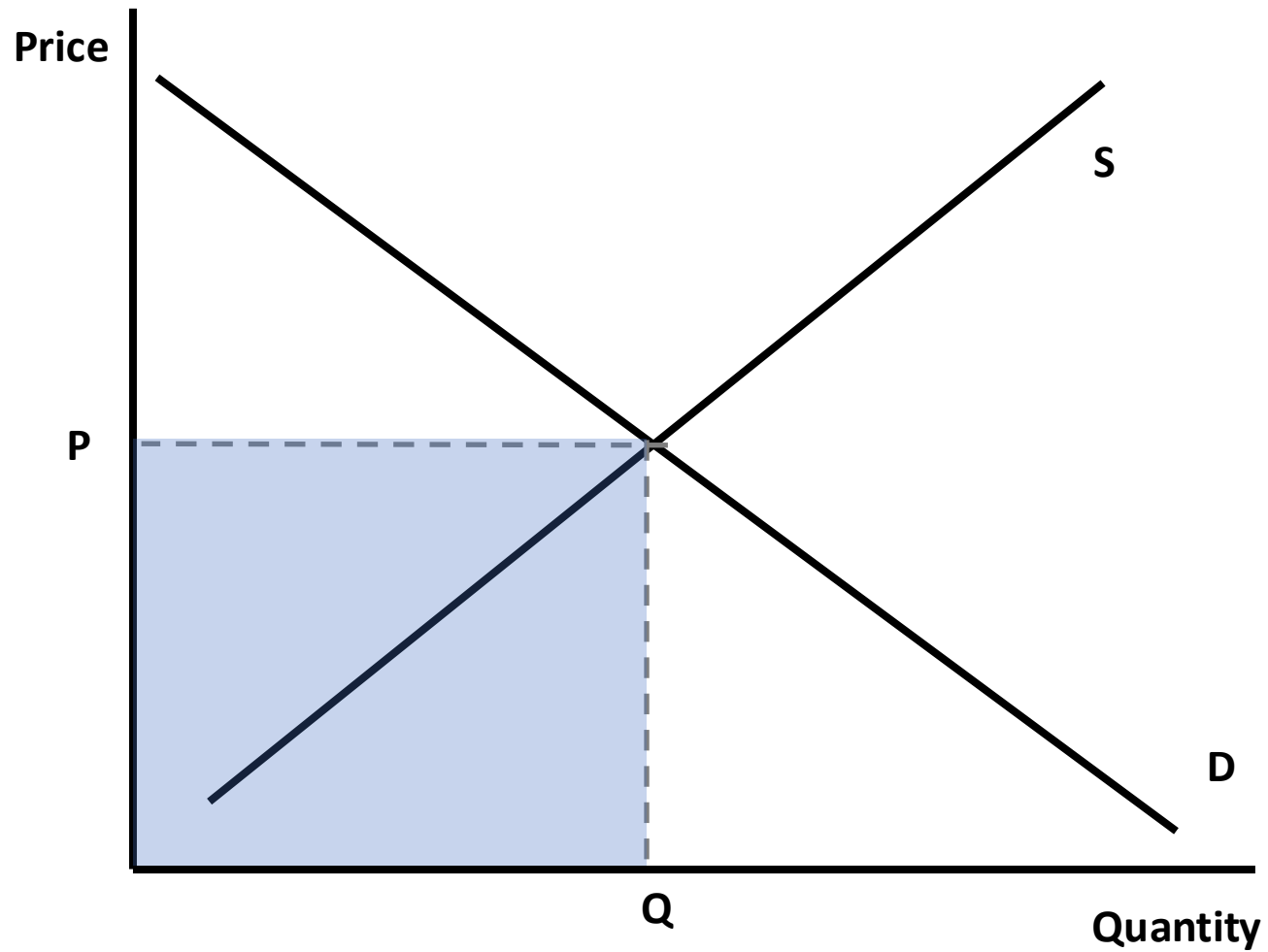
ECONOMICS DIAGRAMS

**CONSUMER AND PRODUCER SURPLUS, AND TOTAL
REVENUE**

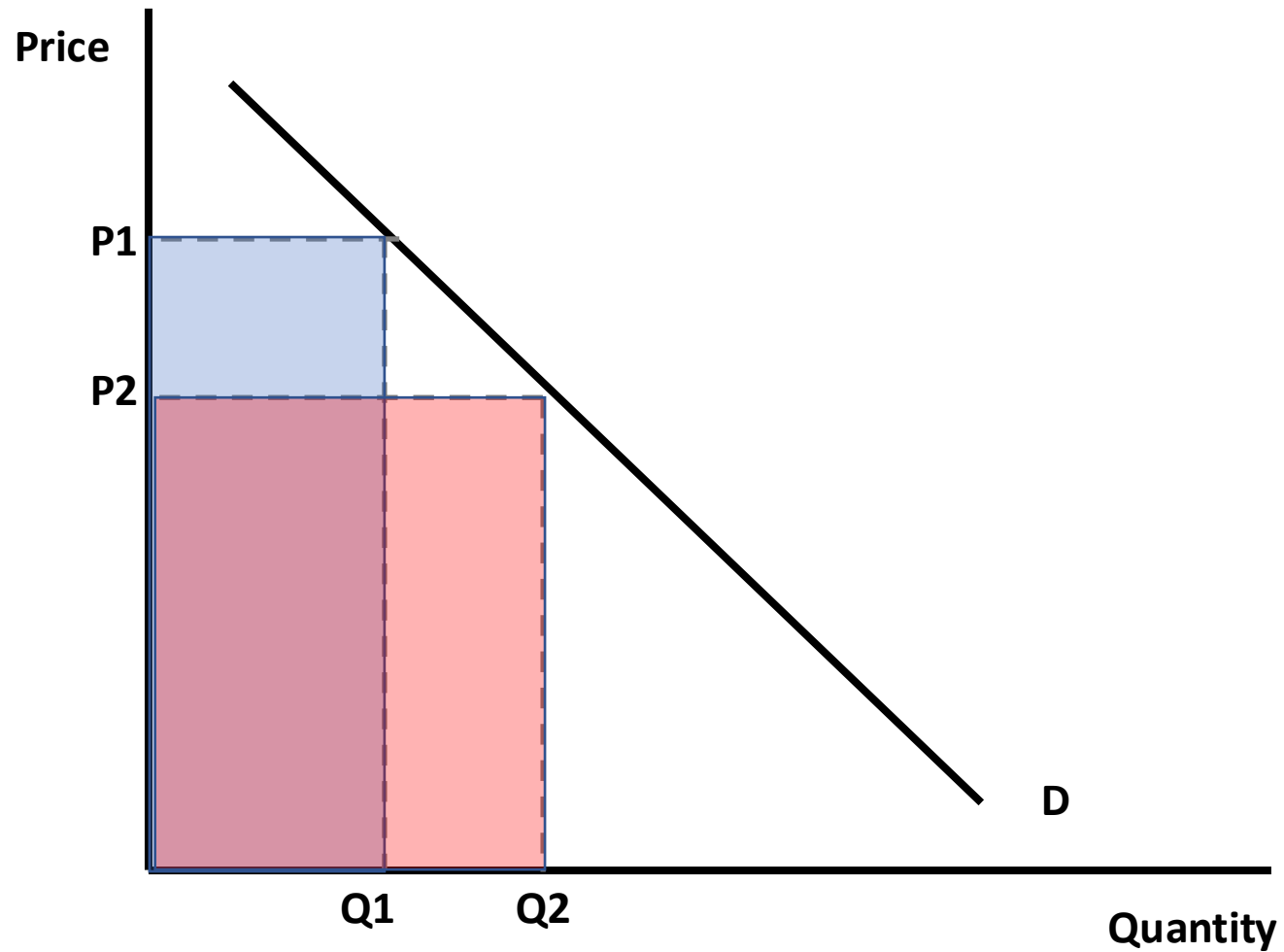




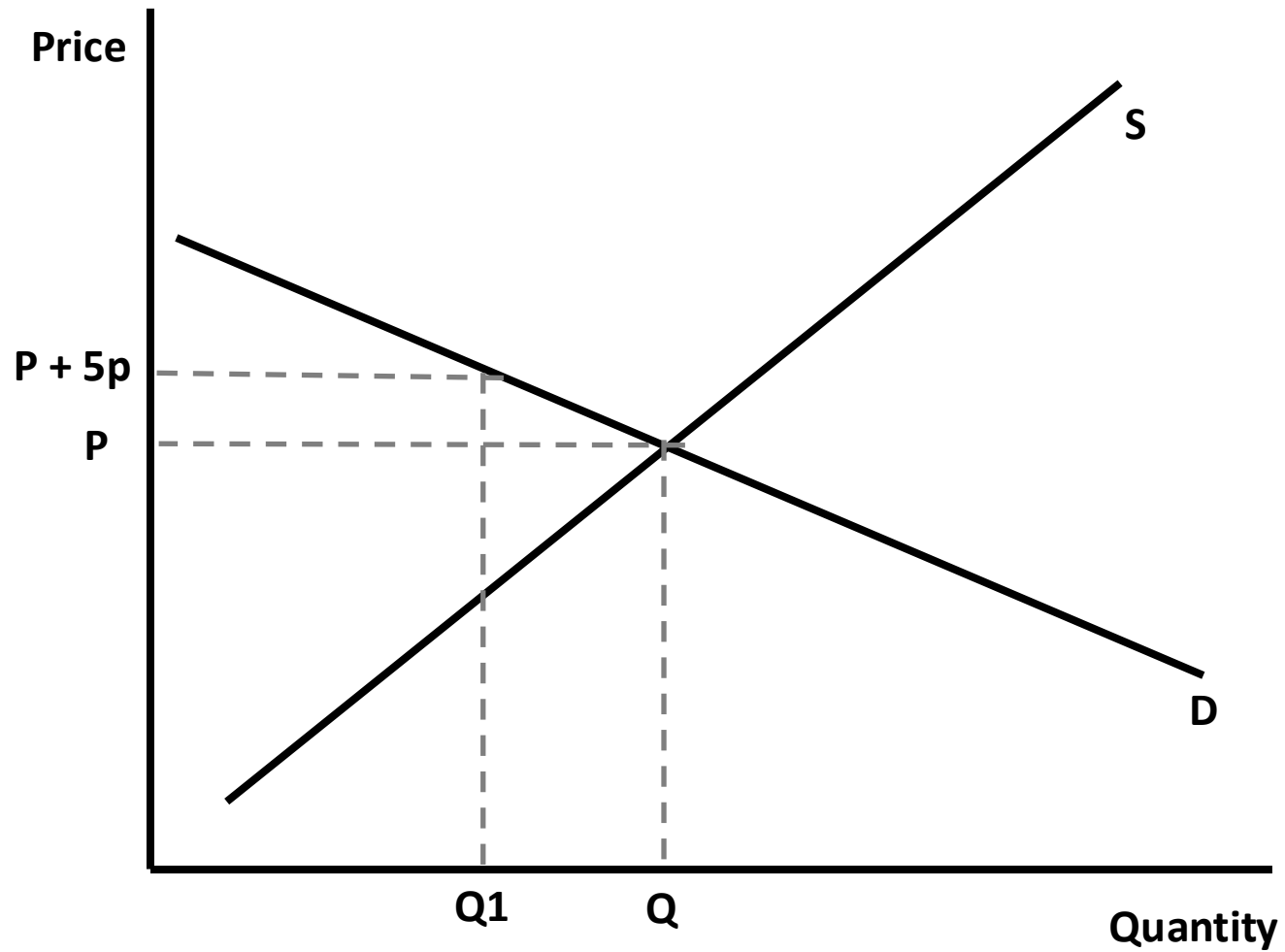
Changes in consumer and producer surplus when price rises from P to P_2
 Consumer surplus decreases from $A+B+D$ to A and producer surplus changes from $C+E$ to $B+C$



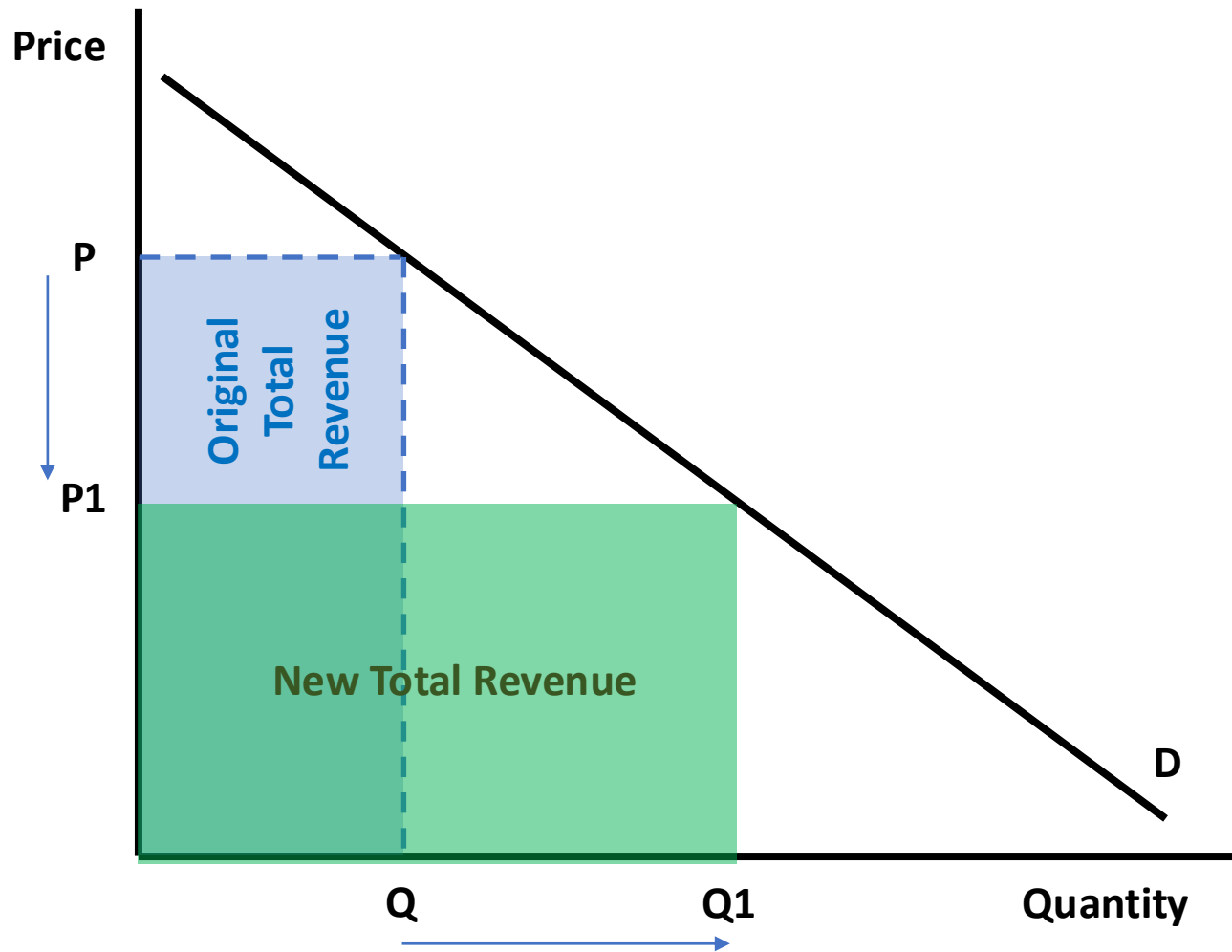
Total revenue at the equilibrium price and quantity ($TR = P \times Q$)



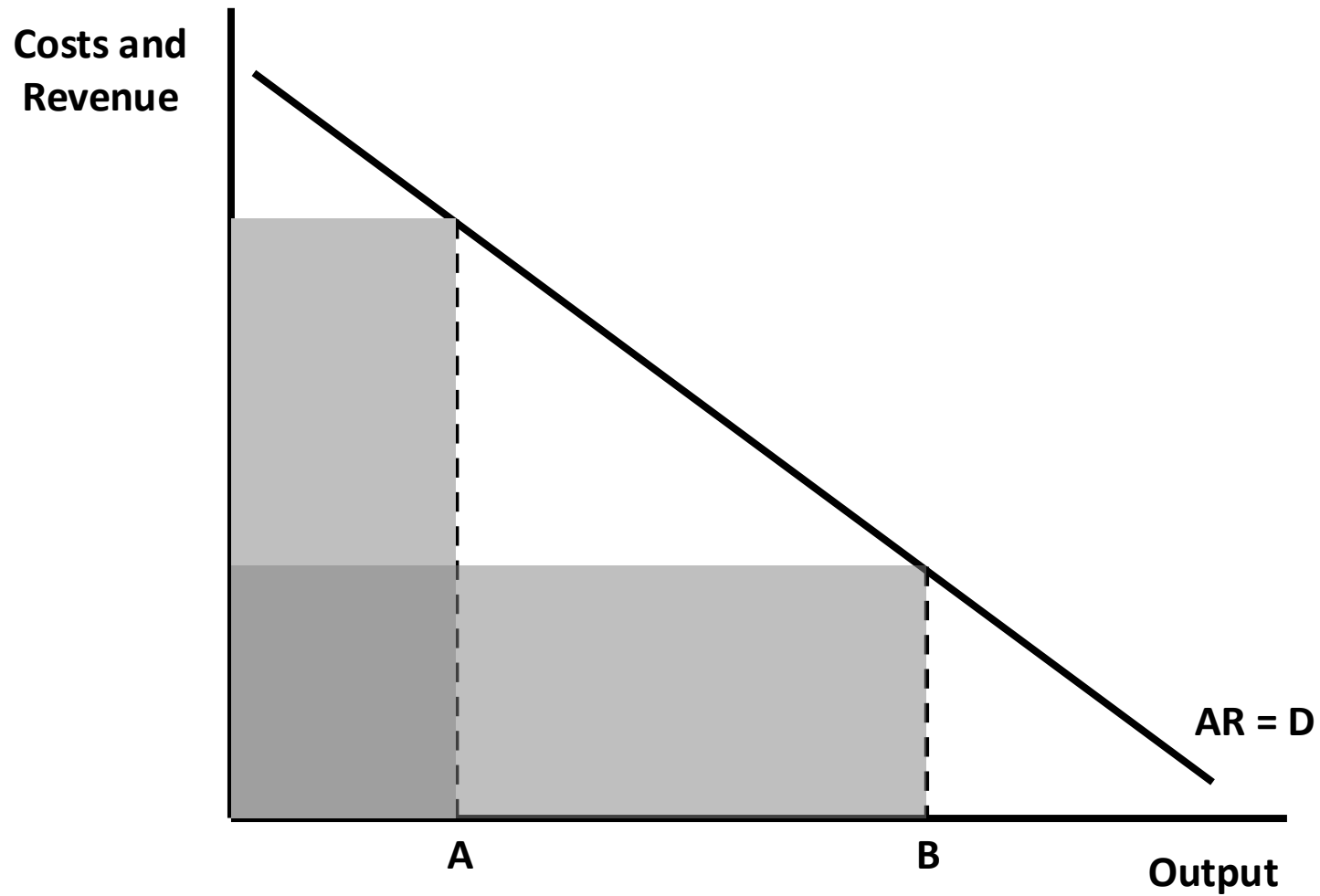
Change in total revenue following a fall in price ($TR=P \times Q$)



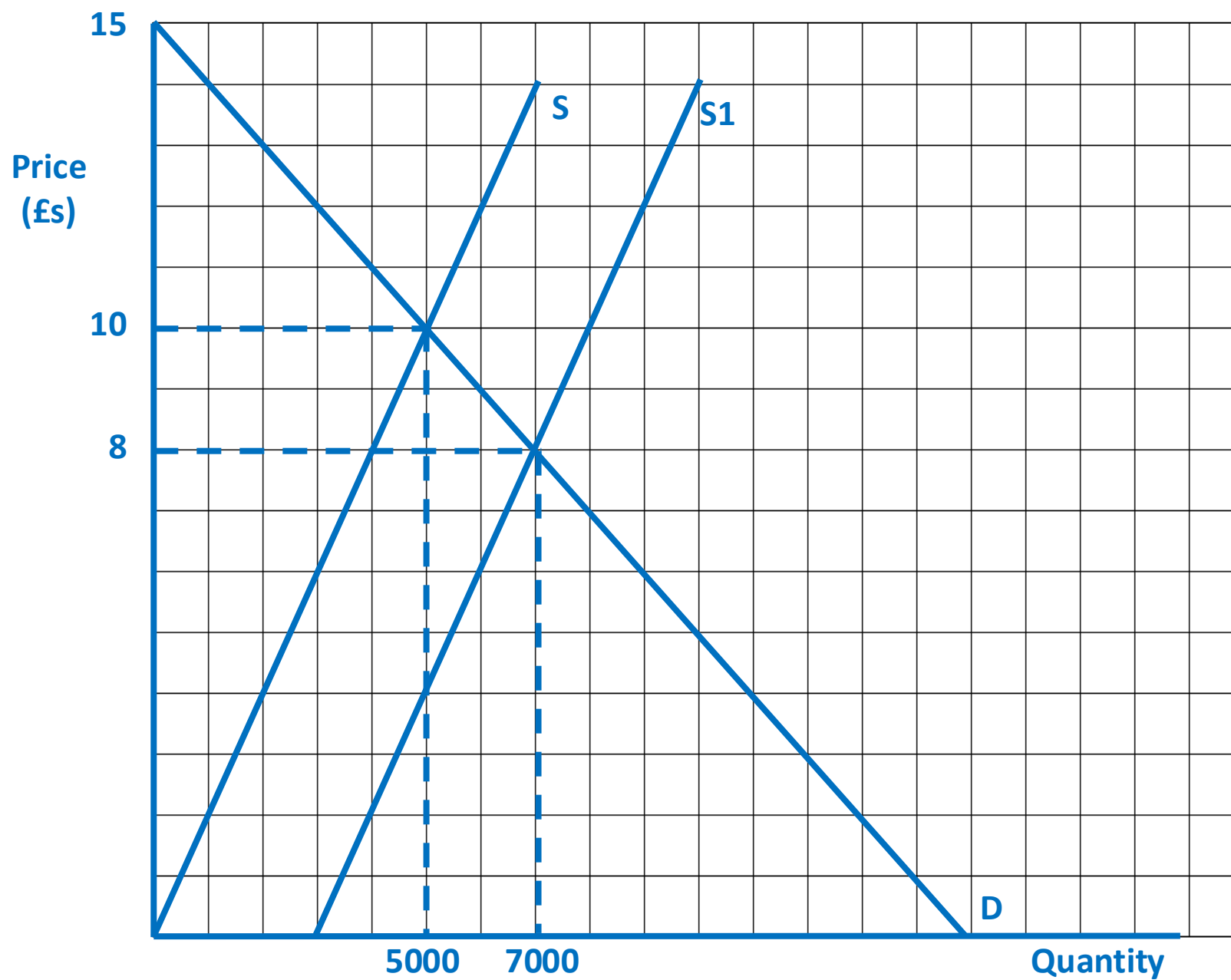
Change in total revenue after a $5p$ increase in price



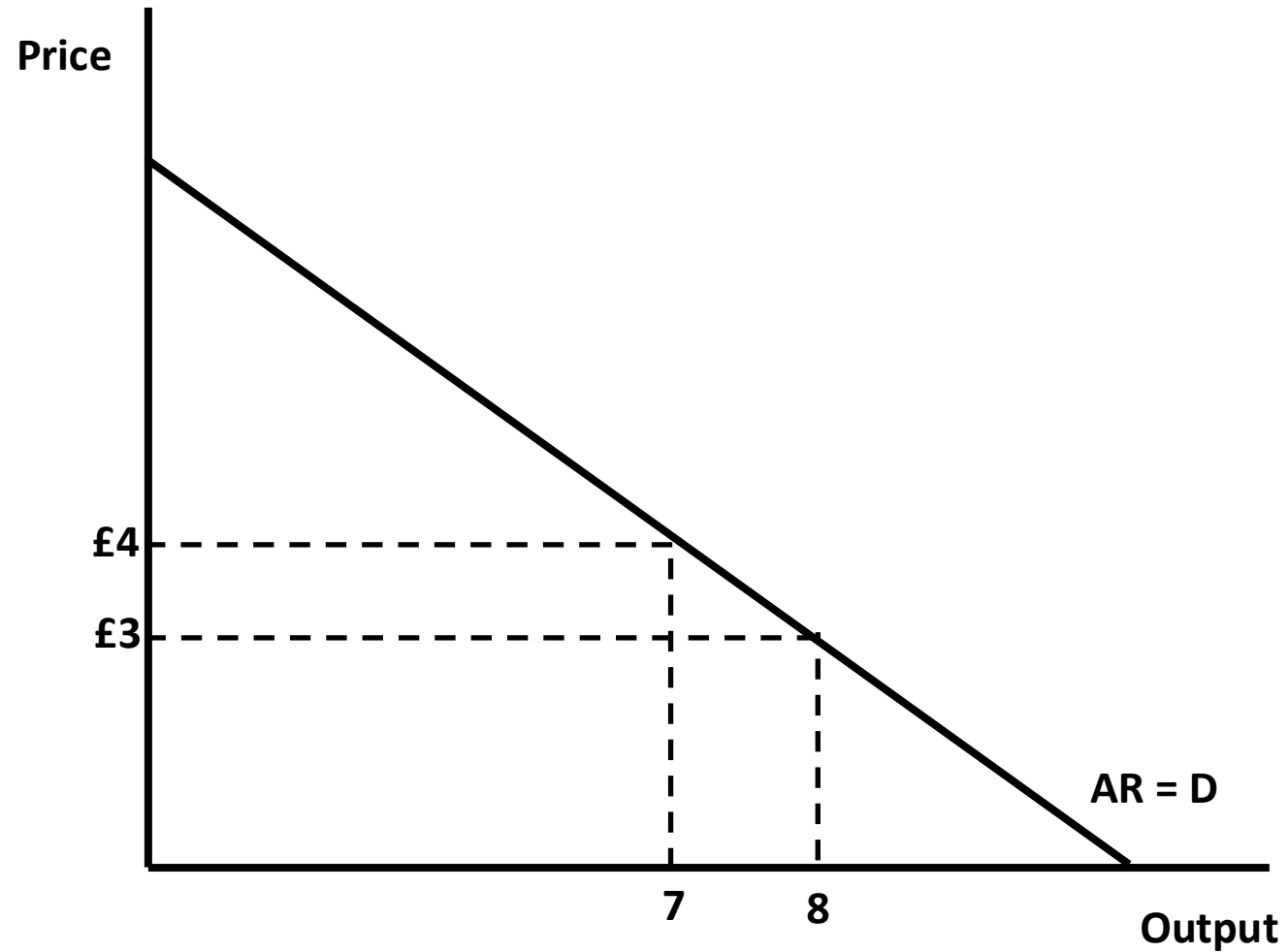
Impact of a fall in price on total revenue ($P \times Q$ changes to $P1 \times Q1$)



Total revenue = price x quantity, using AR rather than D



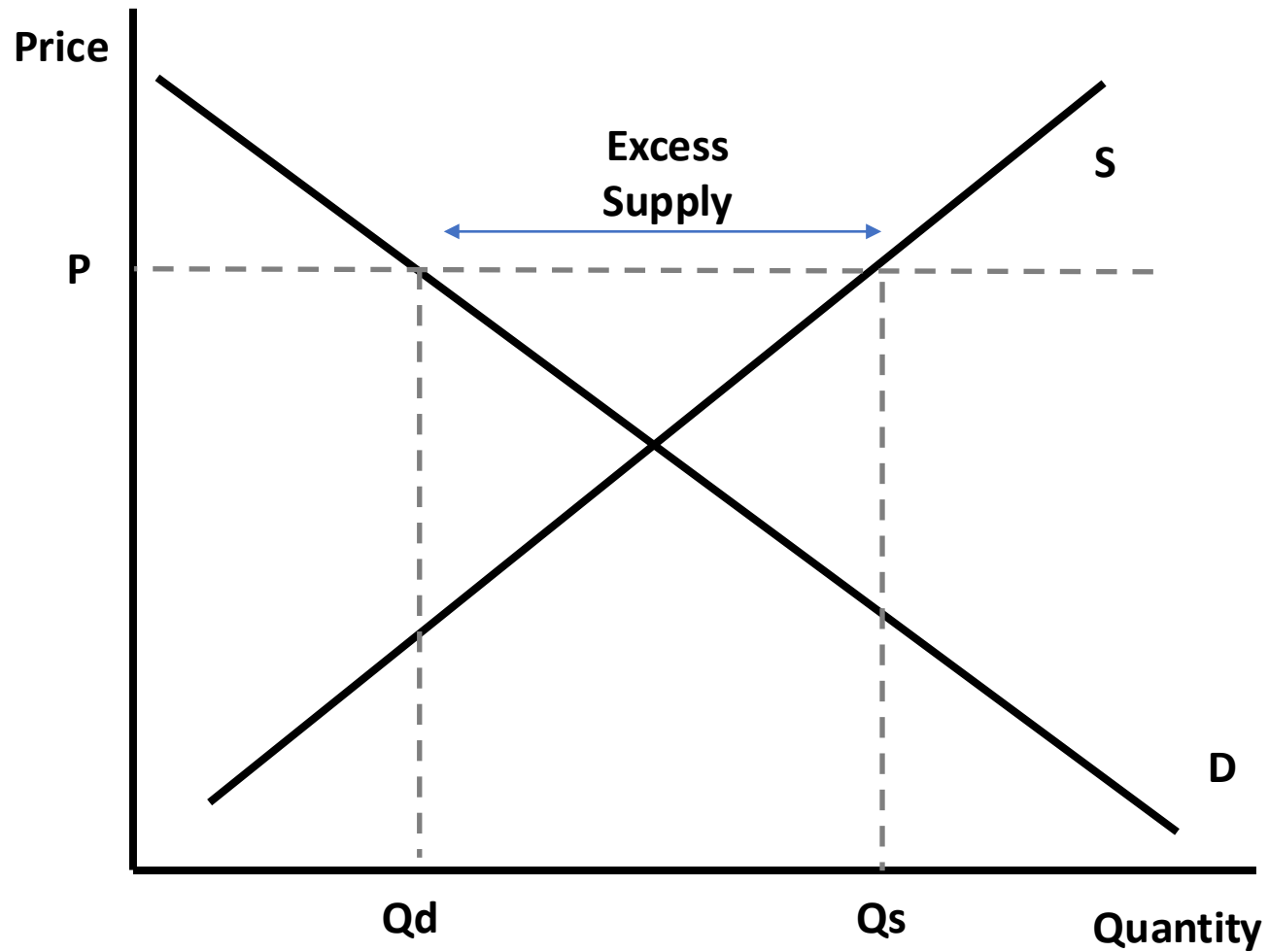
Increase in supply changes total revenue from $\pounds 10 \times 5000$ to $\pounds 8 \times 7000$



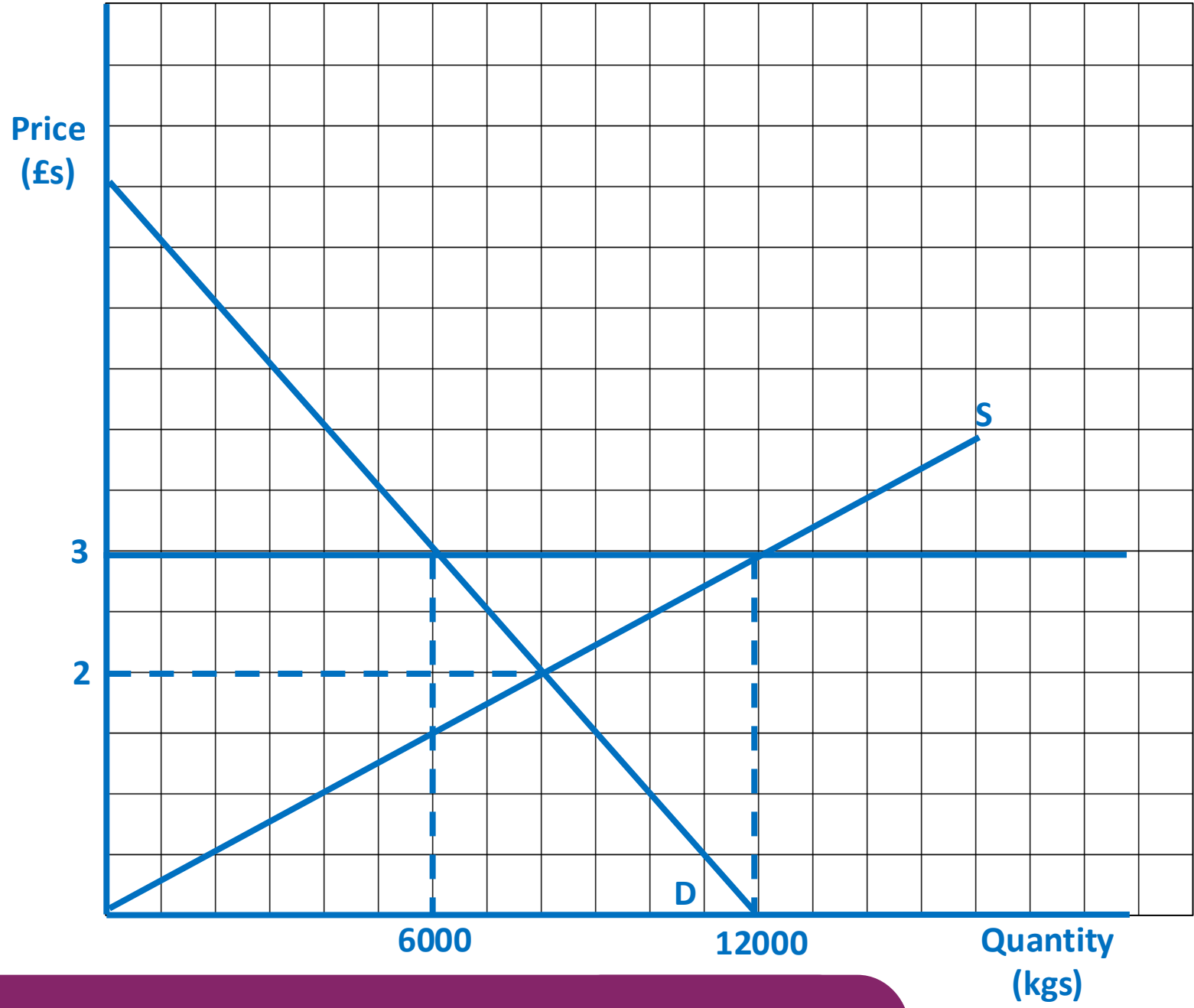
Change in total revenue when price changes. At price = £3, total revenue = $£3 \times 8$; at price = £4, total revenue = $£4 \times 7$

ECONOMICS DIAGRAMS

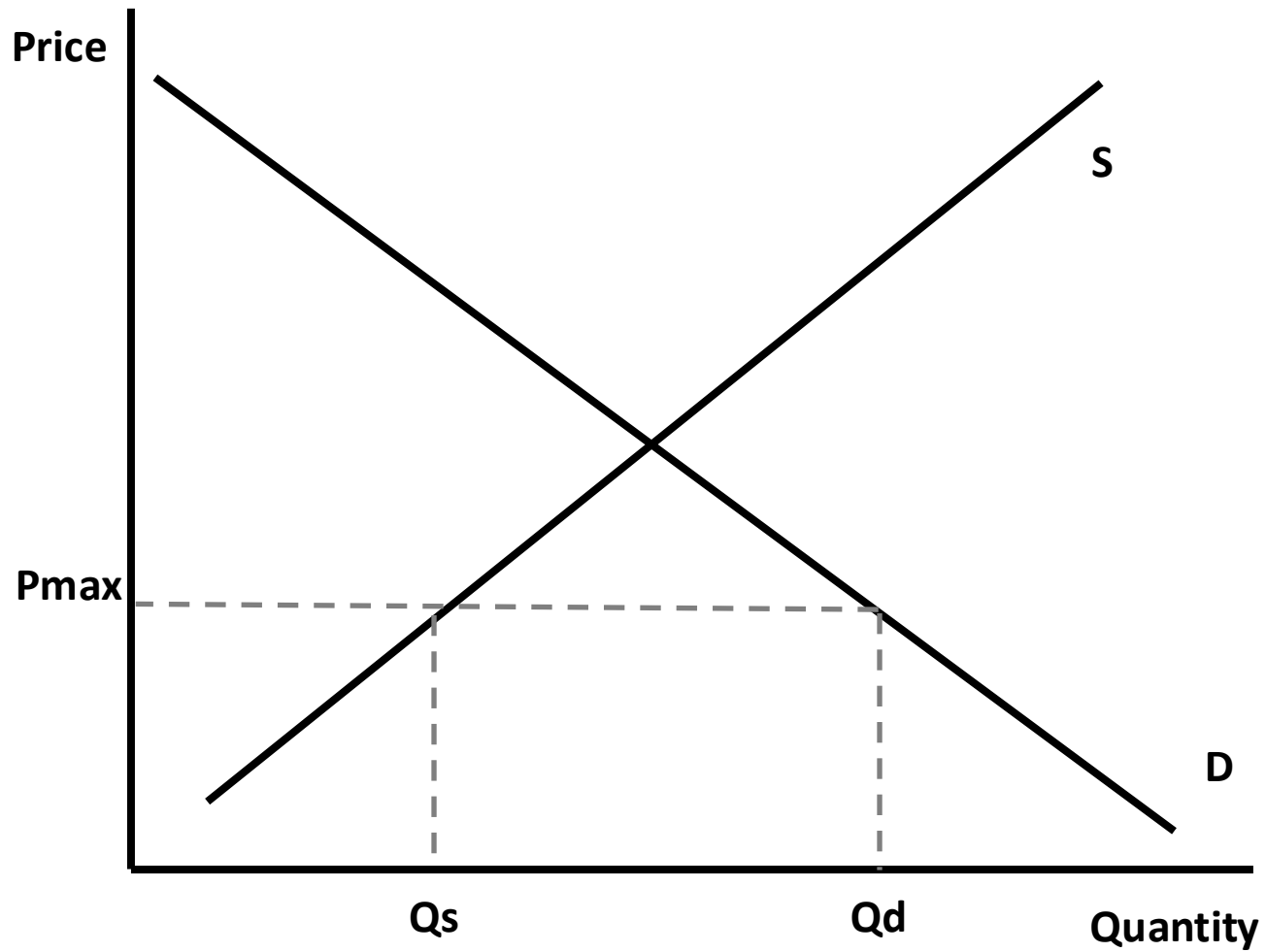
MARKET INTERVENTIONS



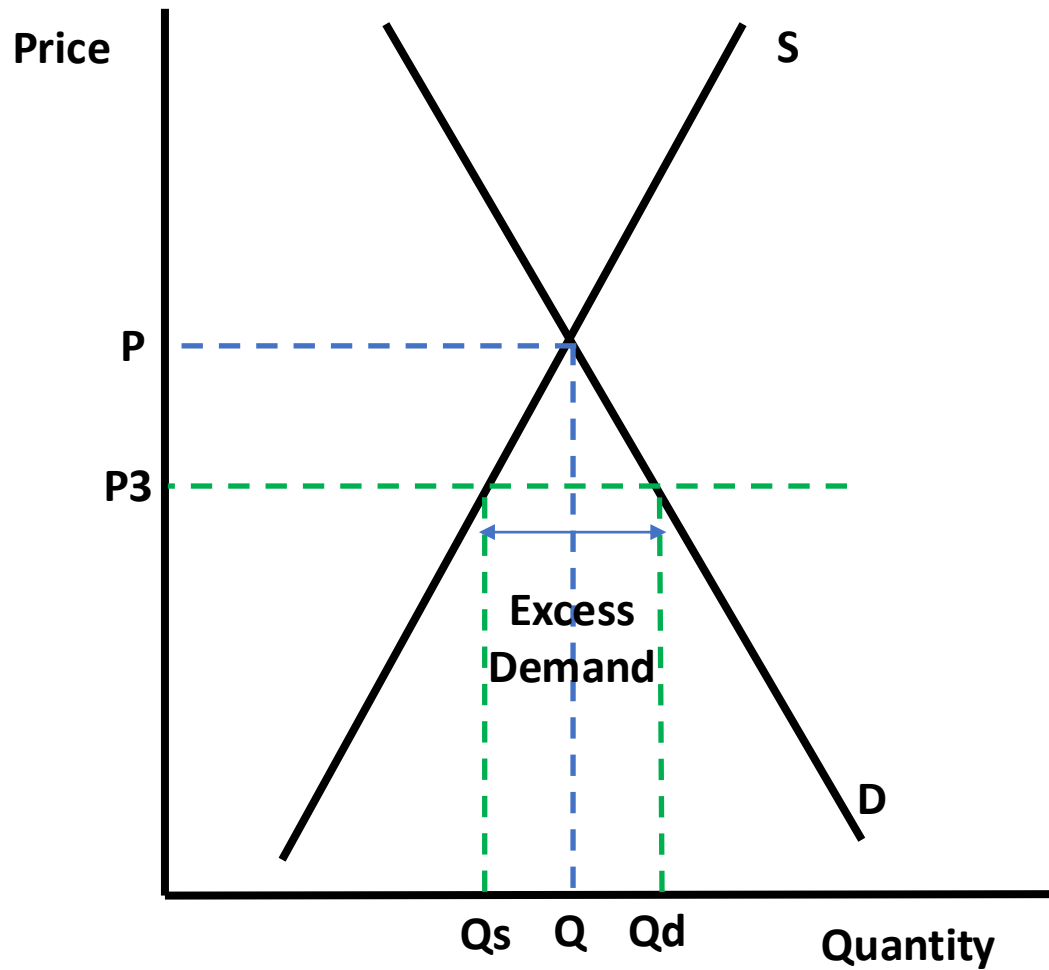
Market diagram showing an excess supply



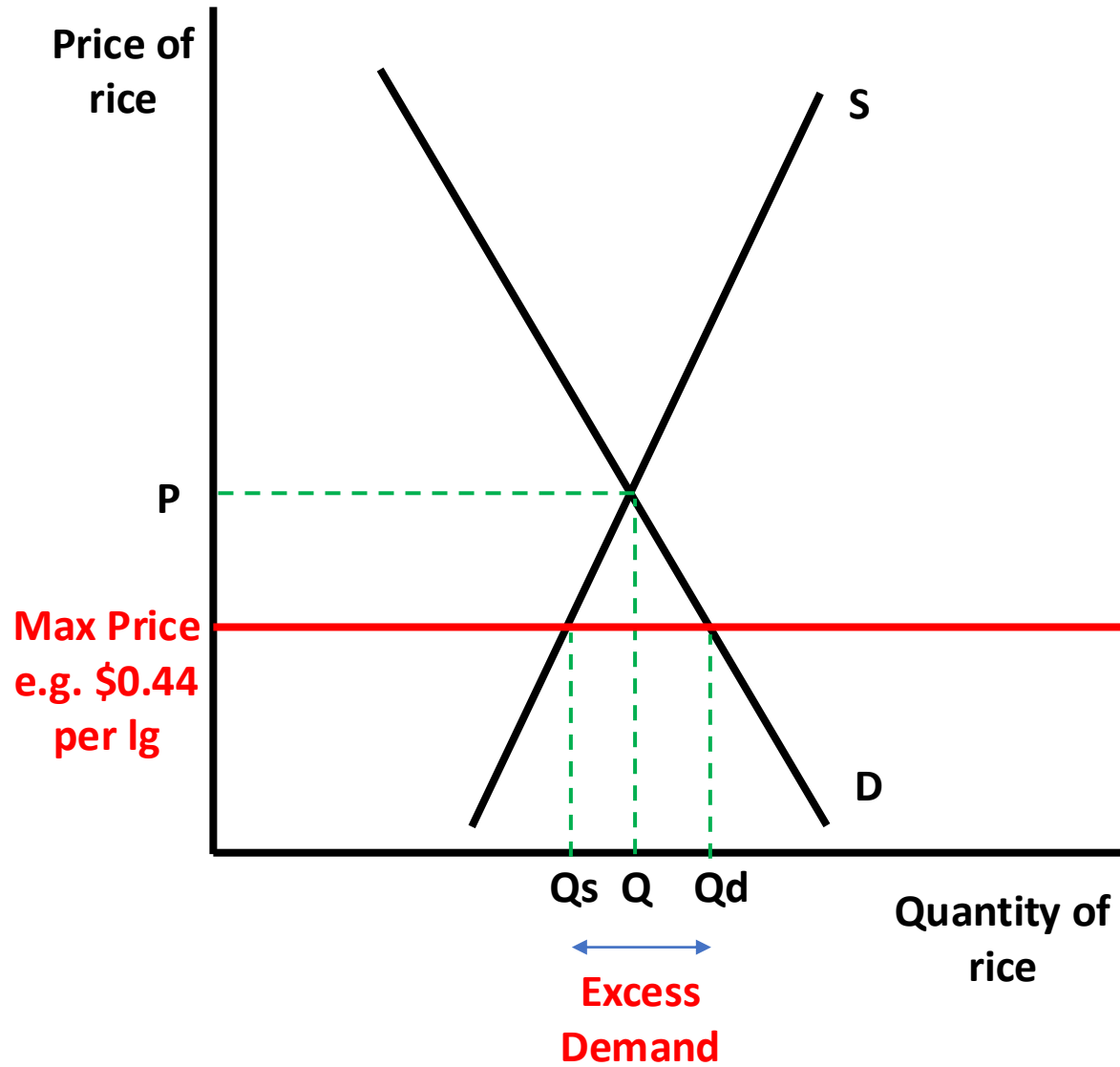
Excess supply at £3 is $(12000-6000)$ kgs



Excess demand in market with maximum price



Excess demand at price below market equilibrium price



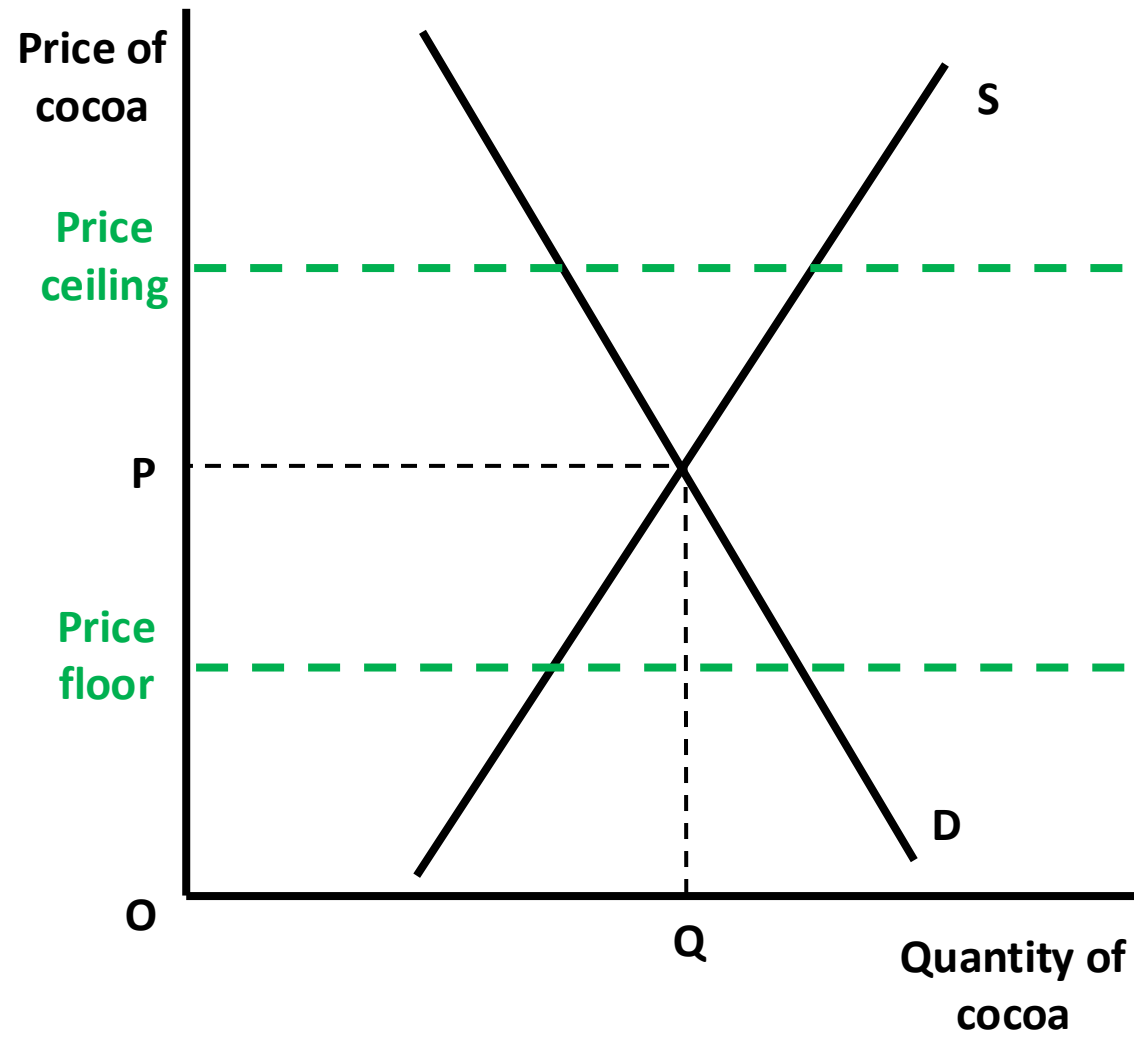
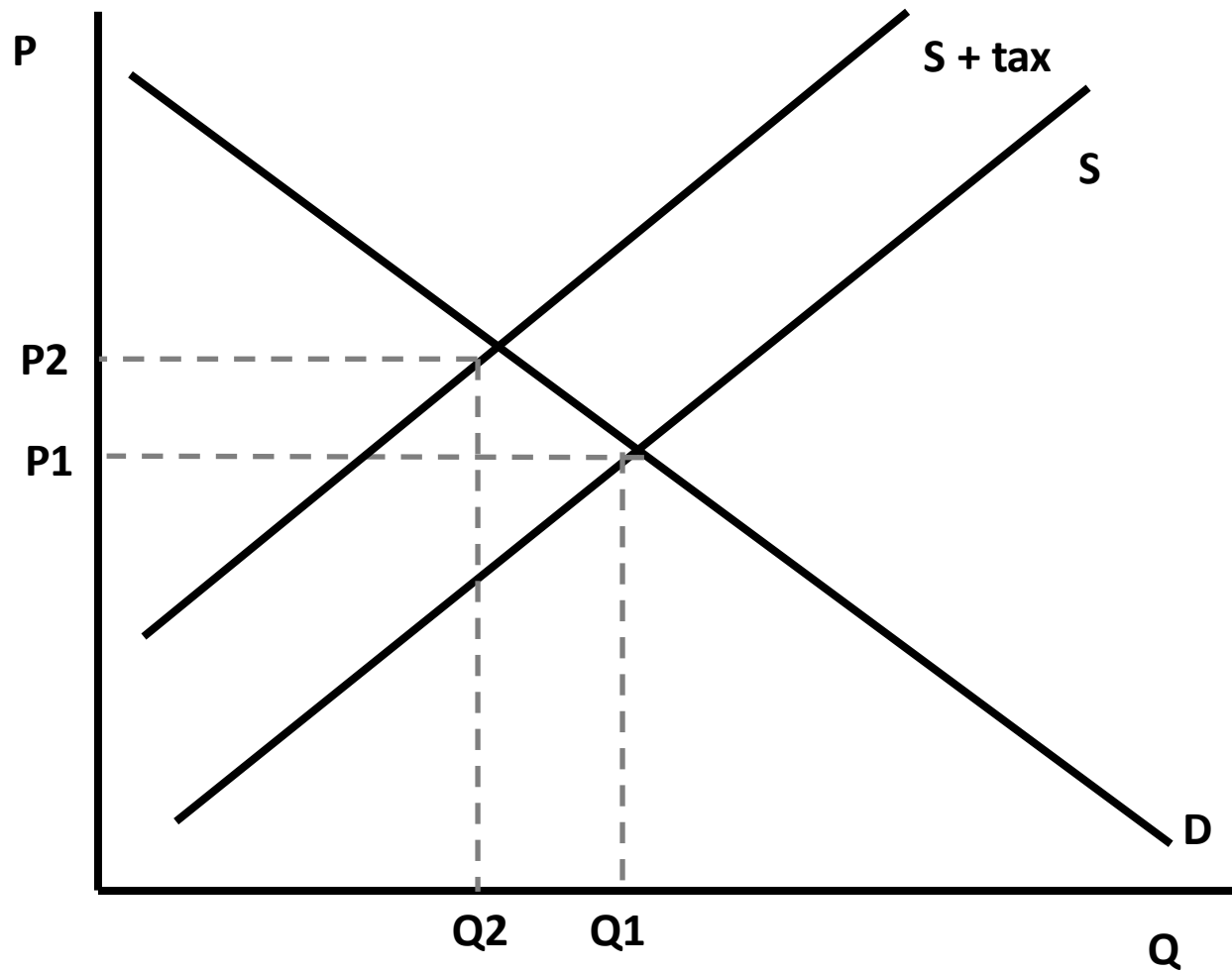
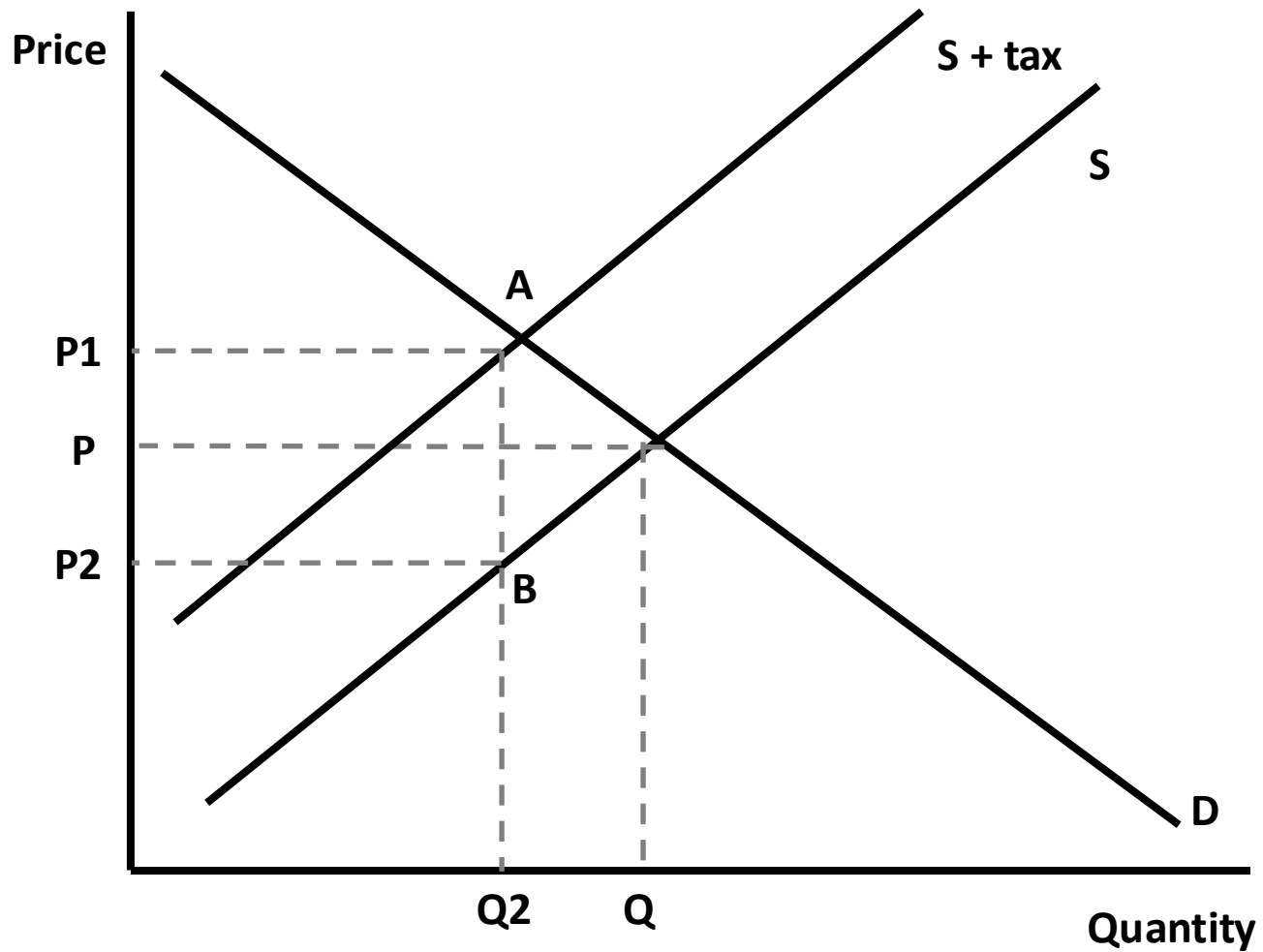
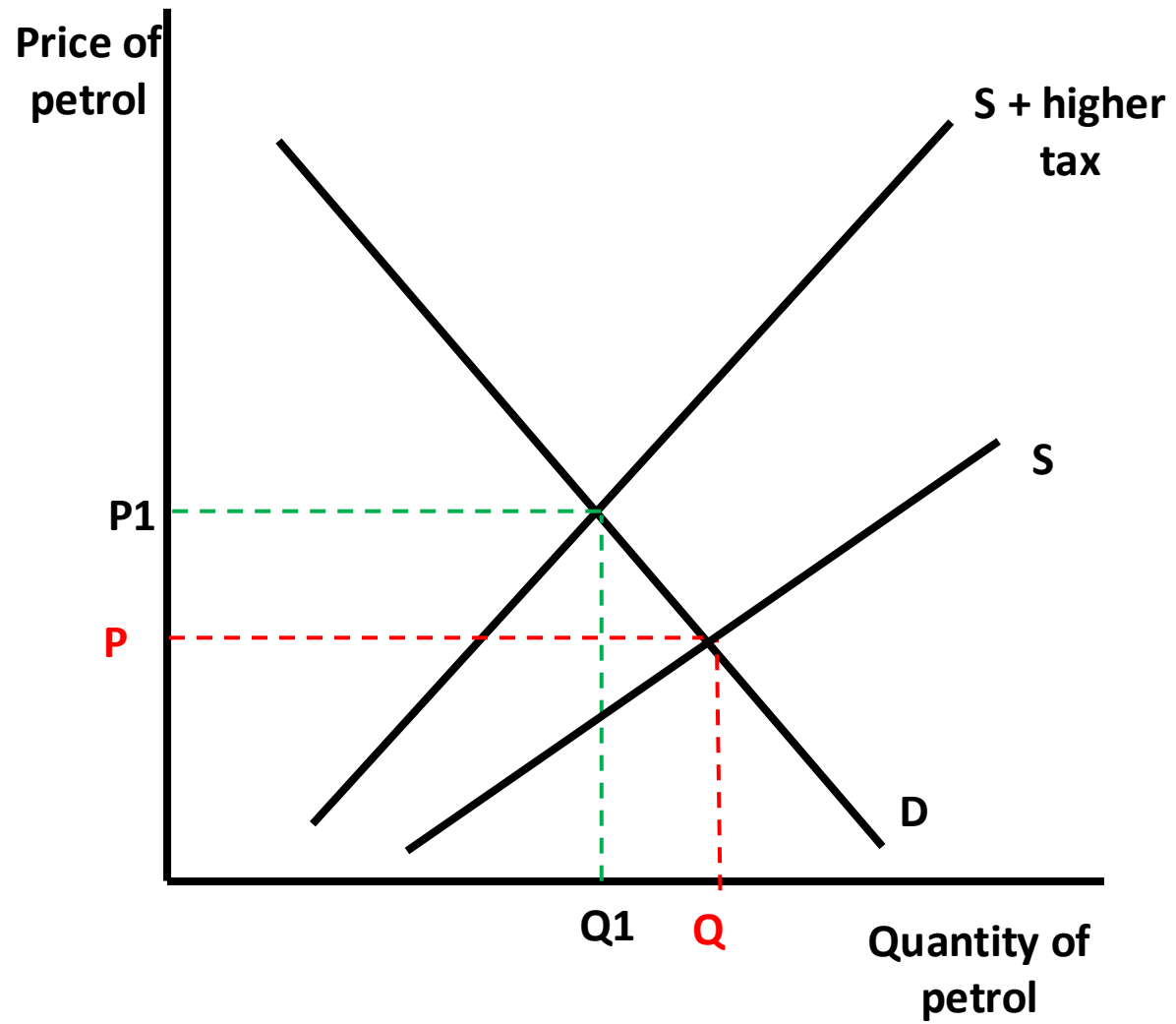


Diagram showing a price ceiling (maximum price) and price floor (minimum price) in the cocoa market

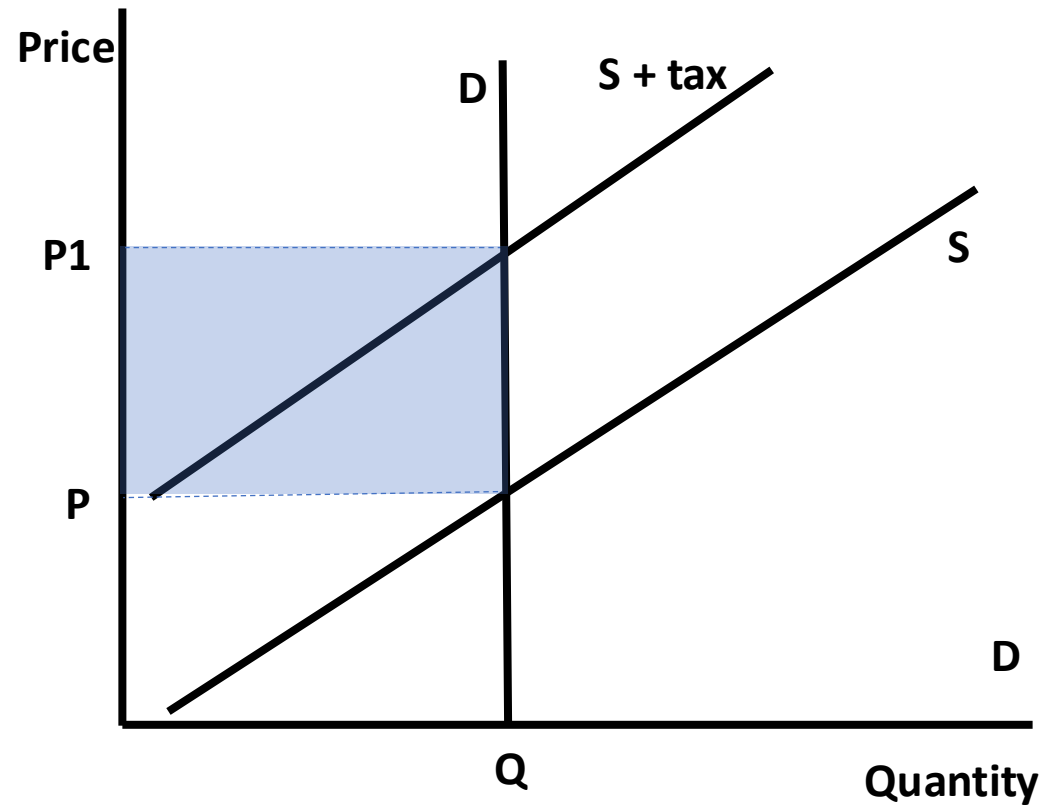
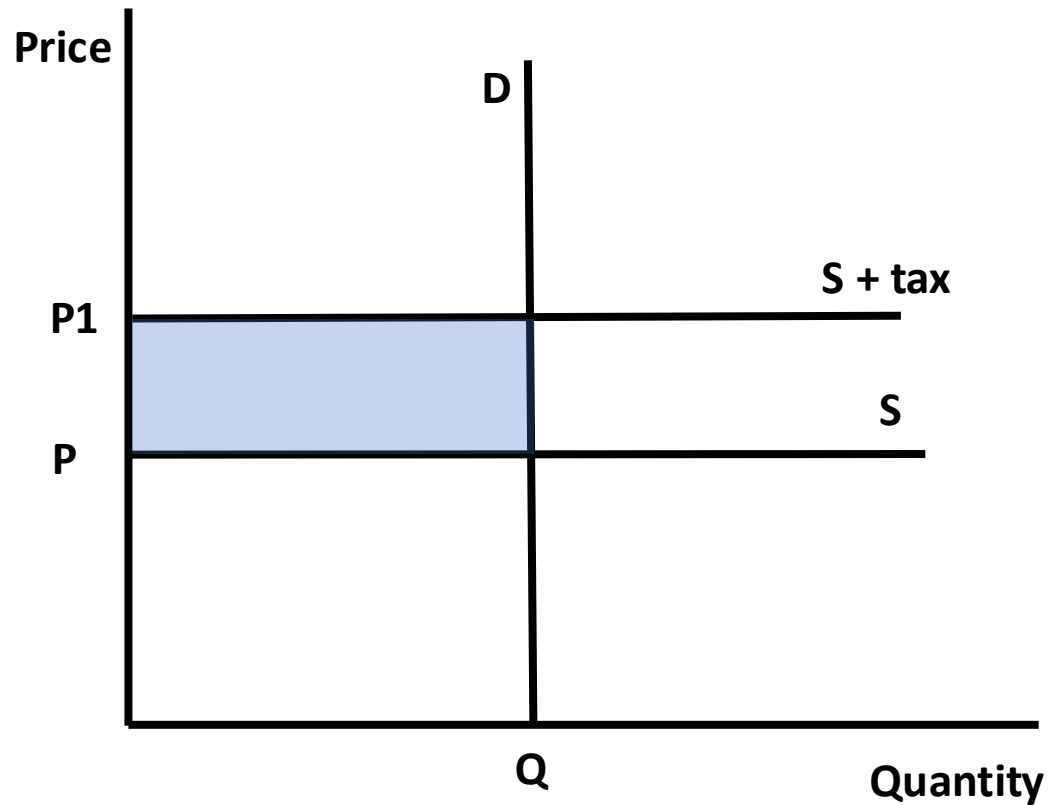




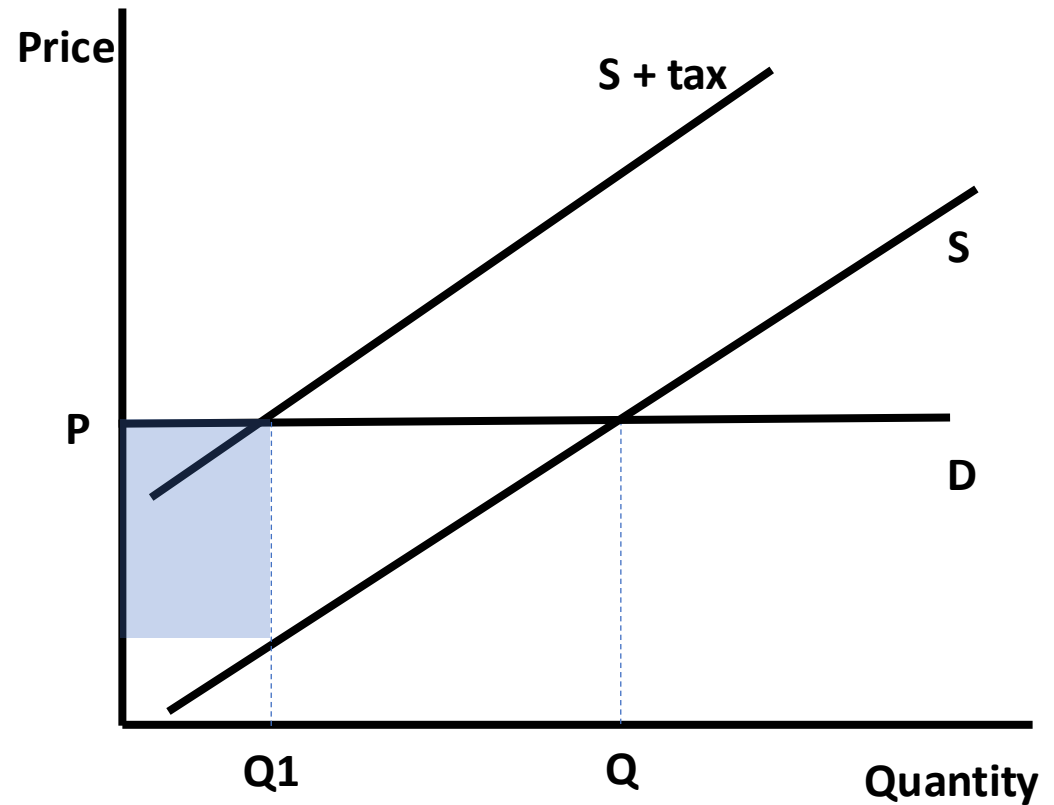
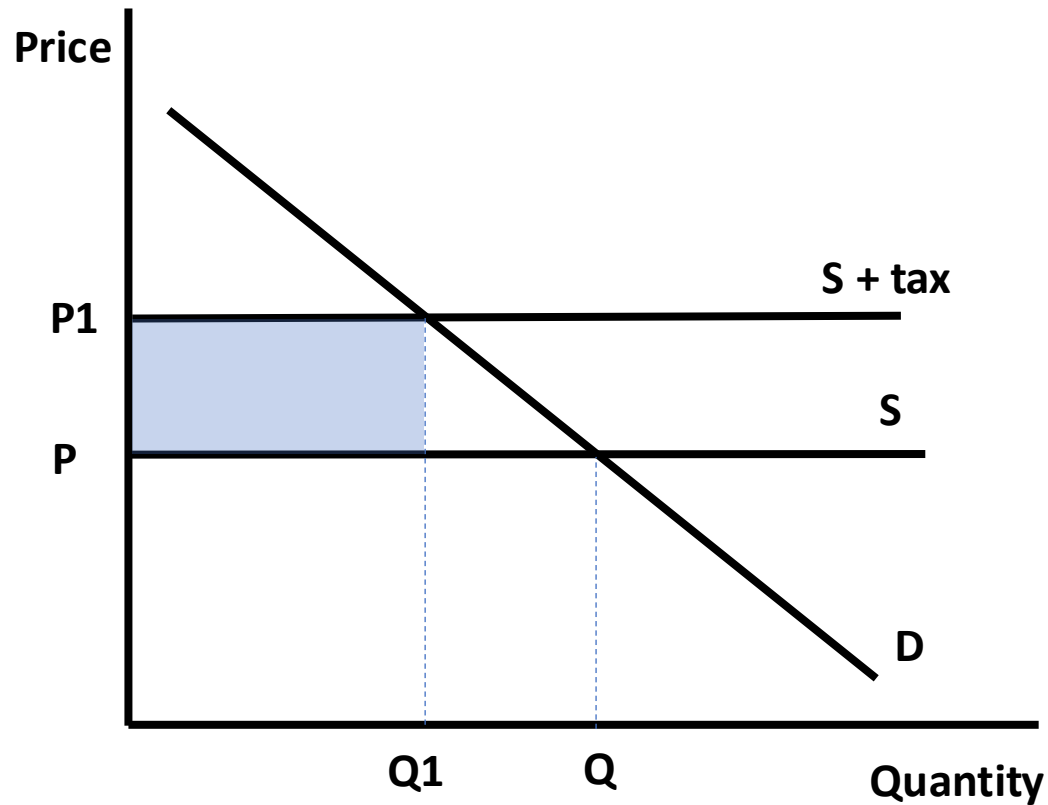
Tax revenue from an indirect tax = P_1ABP_2



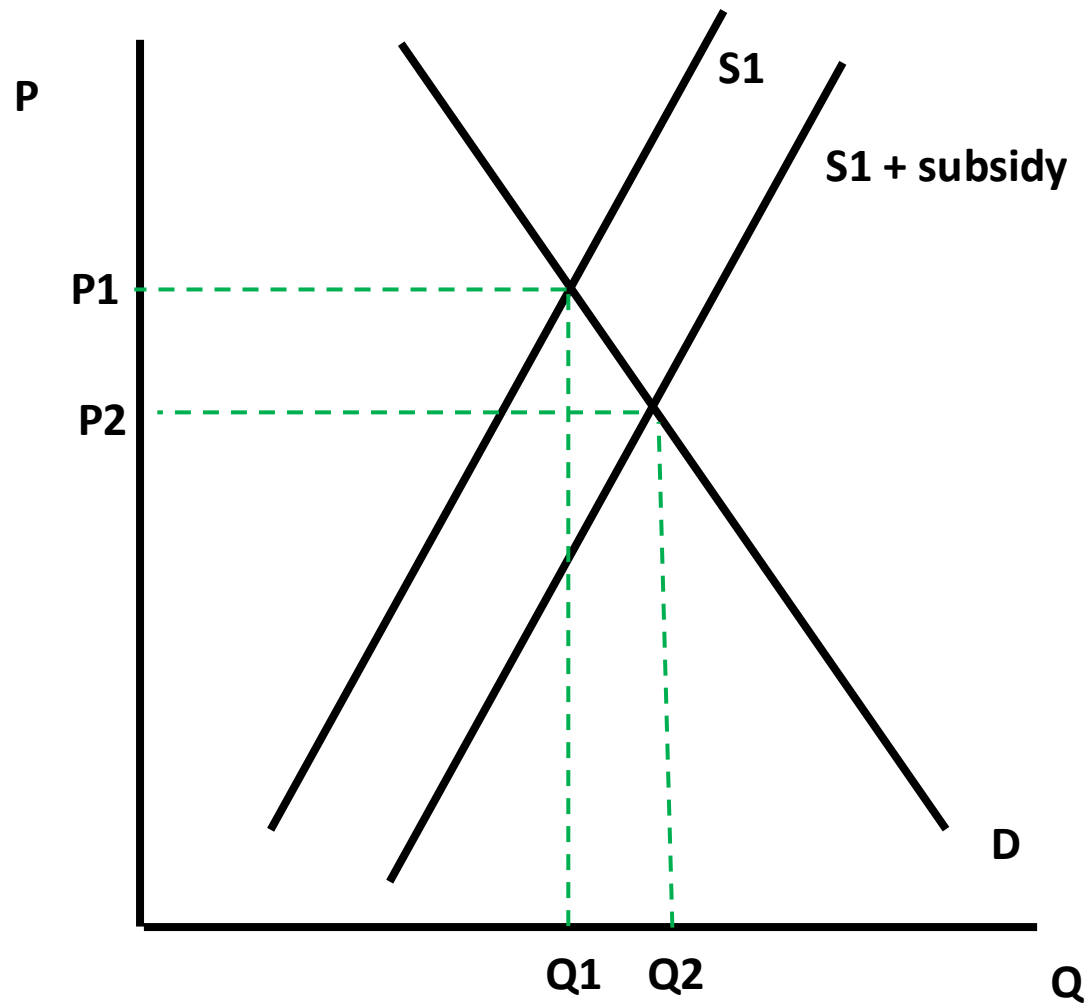
Impact of an increase in an ad valorem tax on petrol on the market price and quantity of petrol



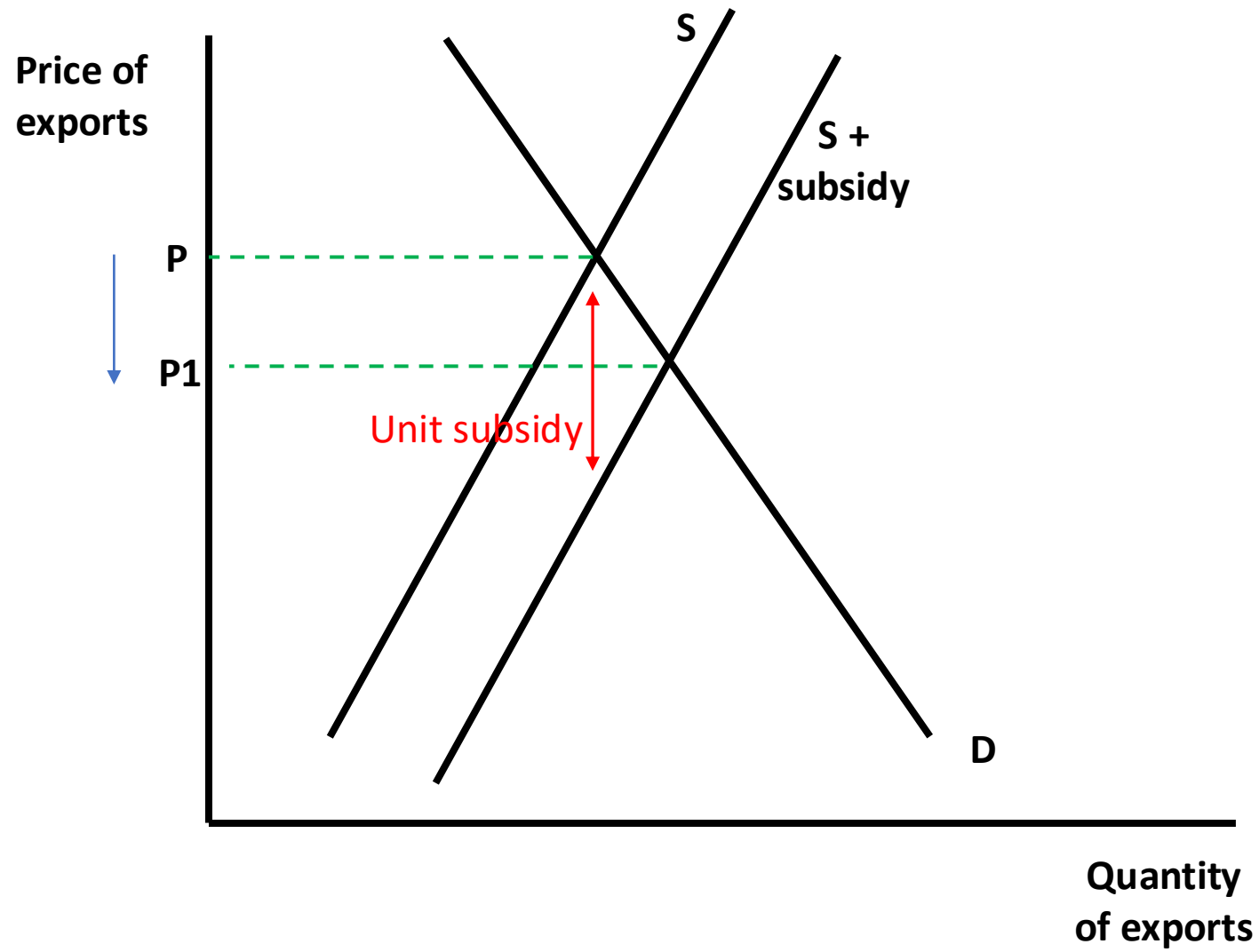
Impact of an indirect tax on market equilibrium price and quantity when demand is perfectly price inelastic and (i) Supply is perfectly elastic and (ii) supply is upward sloping. Blue areas indicate tax revenue raised from the tax.



Impact of an indirect tax on market equilibrium price and quantity when (i) Supply is perfectly elastic and (ii) demand is perfectly price inelastic. Blue areas indicate tax revenue raised from the tax.



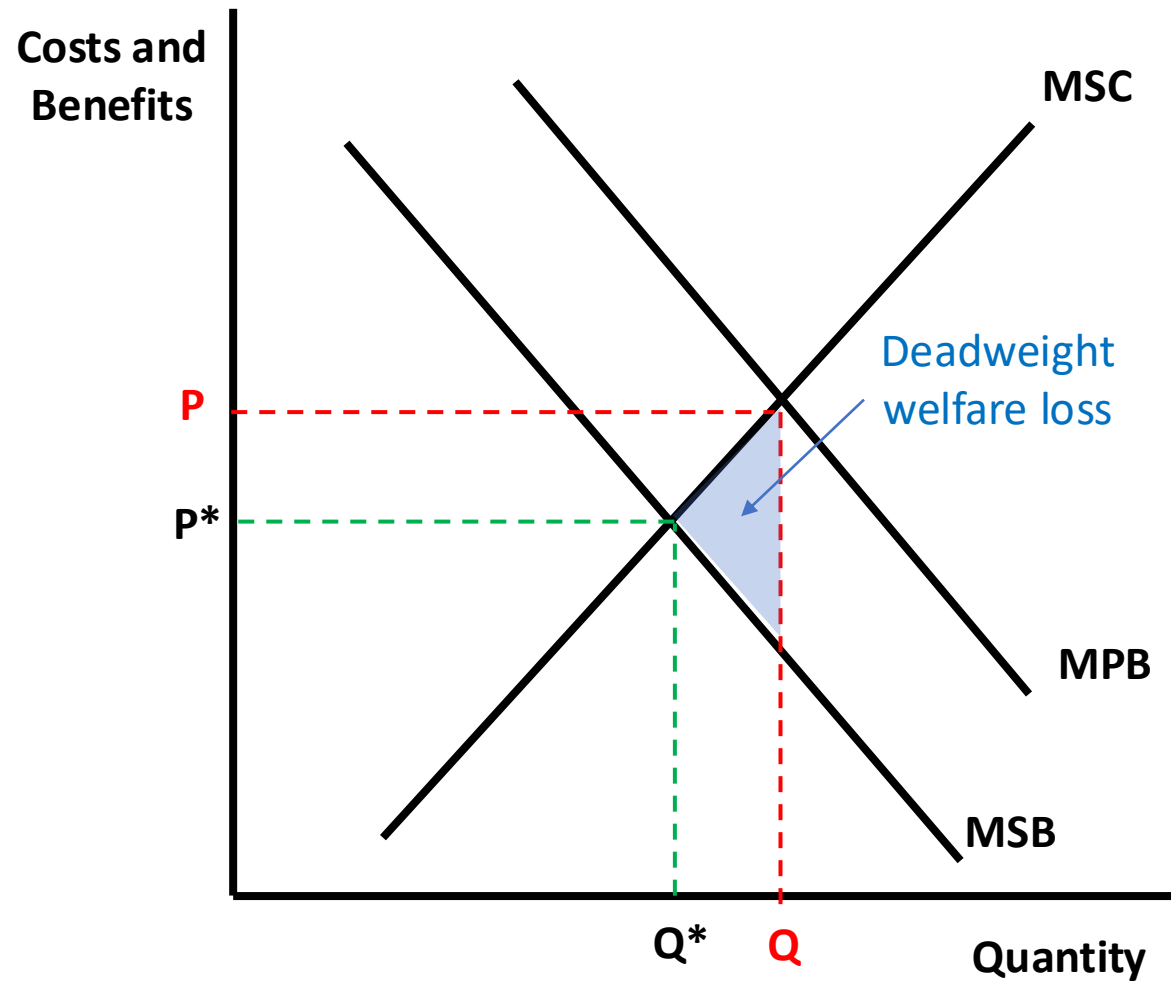
Impact of a per unit producer subsidy on market equilibrium price and quantity



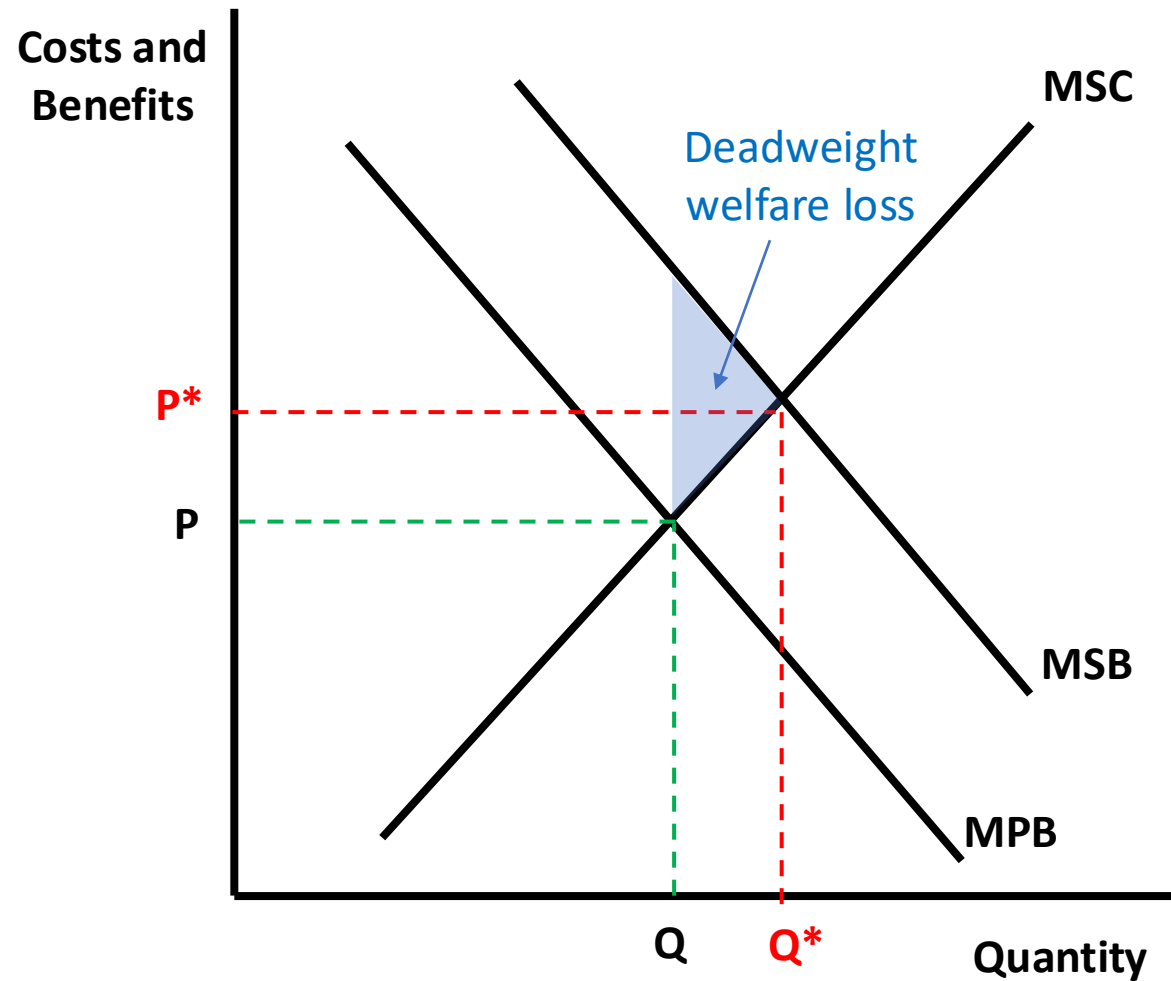
Impact of export subsidy on price of exports (vertical distance = subsidy per unit)

ECONOMICS DIAGRAMS

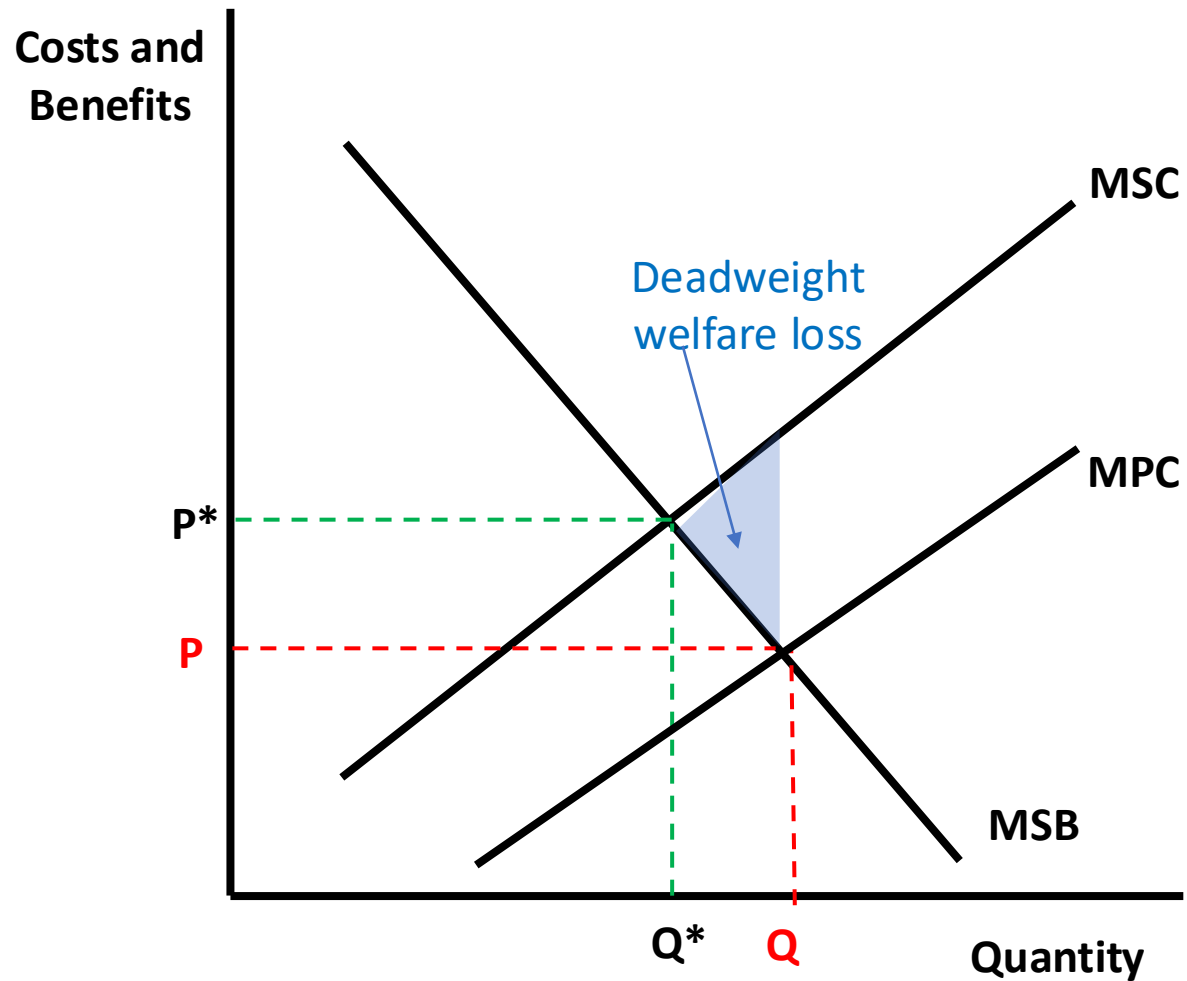
EXTERNALITY DIAGRAMS



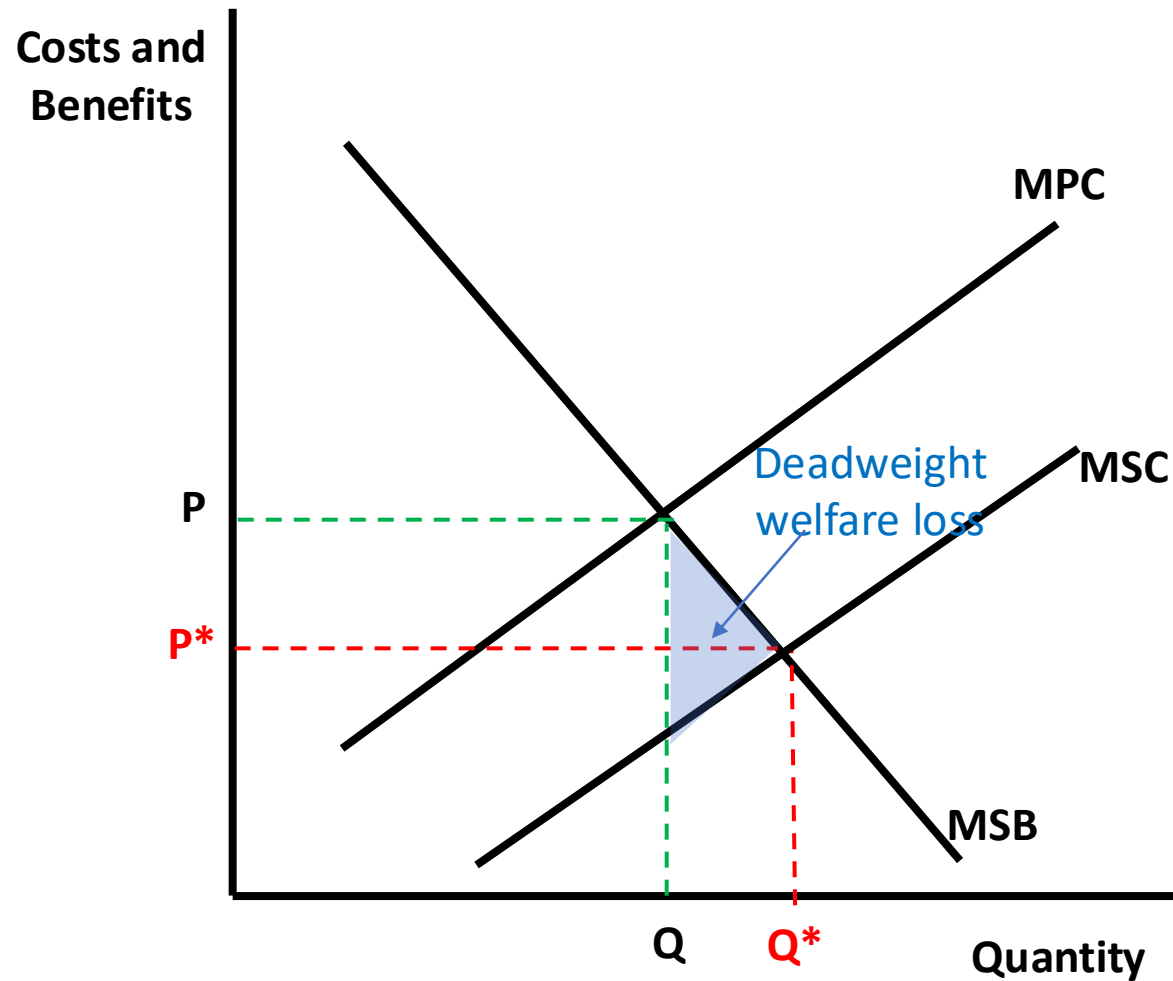
Welfare loss in the market when there is a negative consumption externality ($MSB < MPB$)



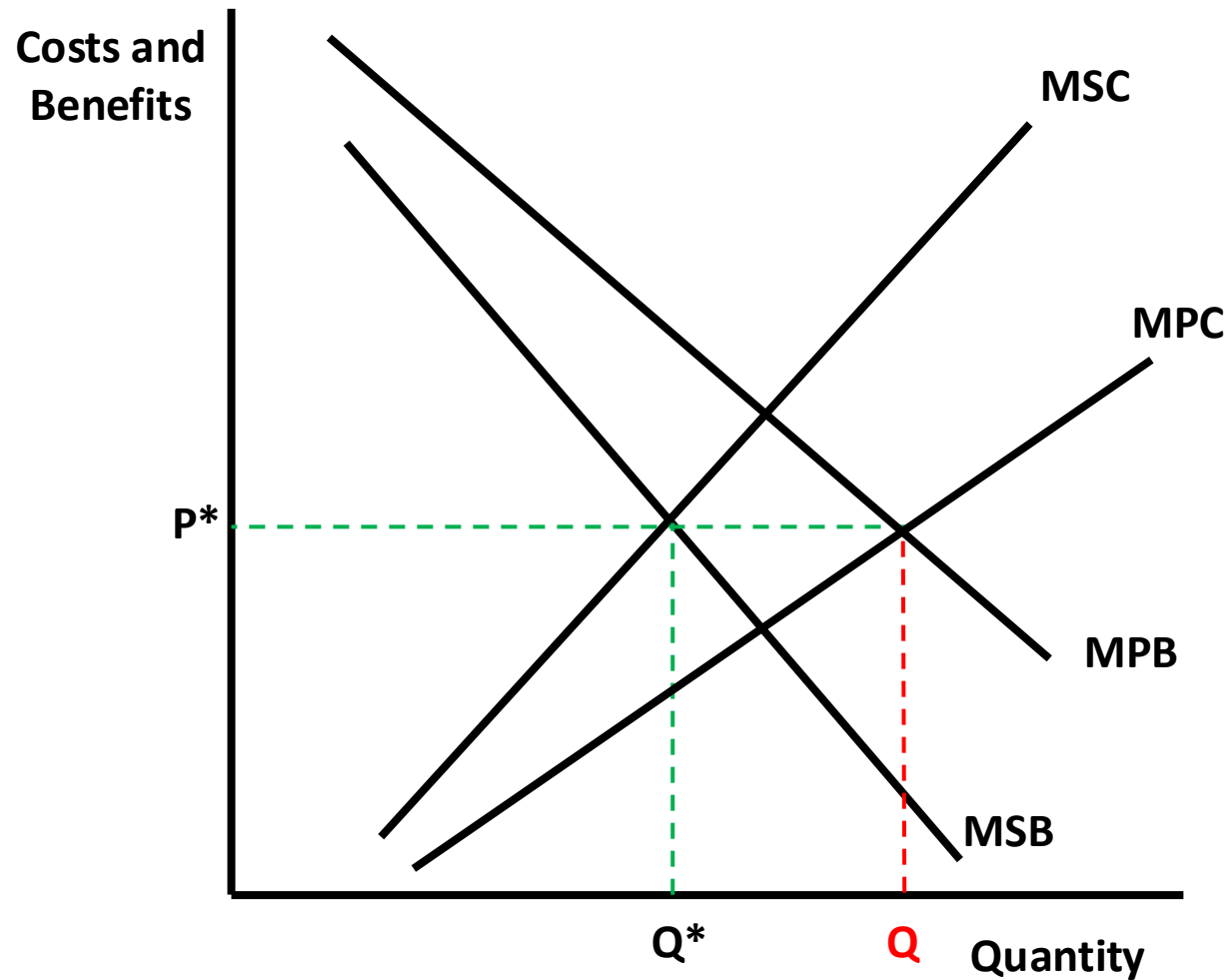
Welfare loss in the market when there is a positive consumption externality ($MSB > MPB$)



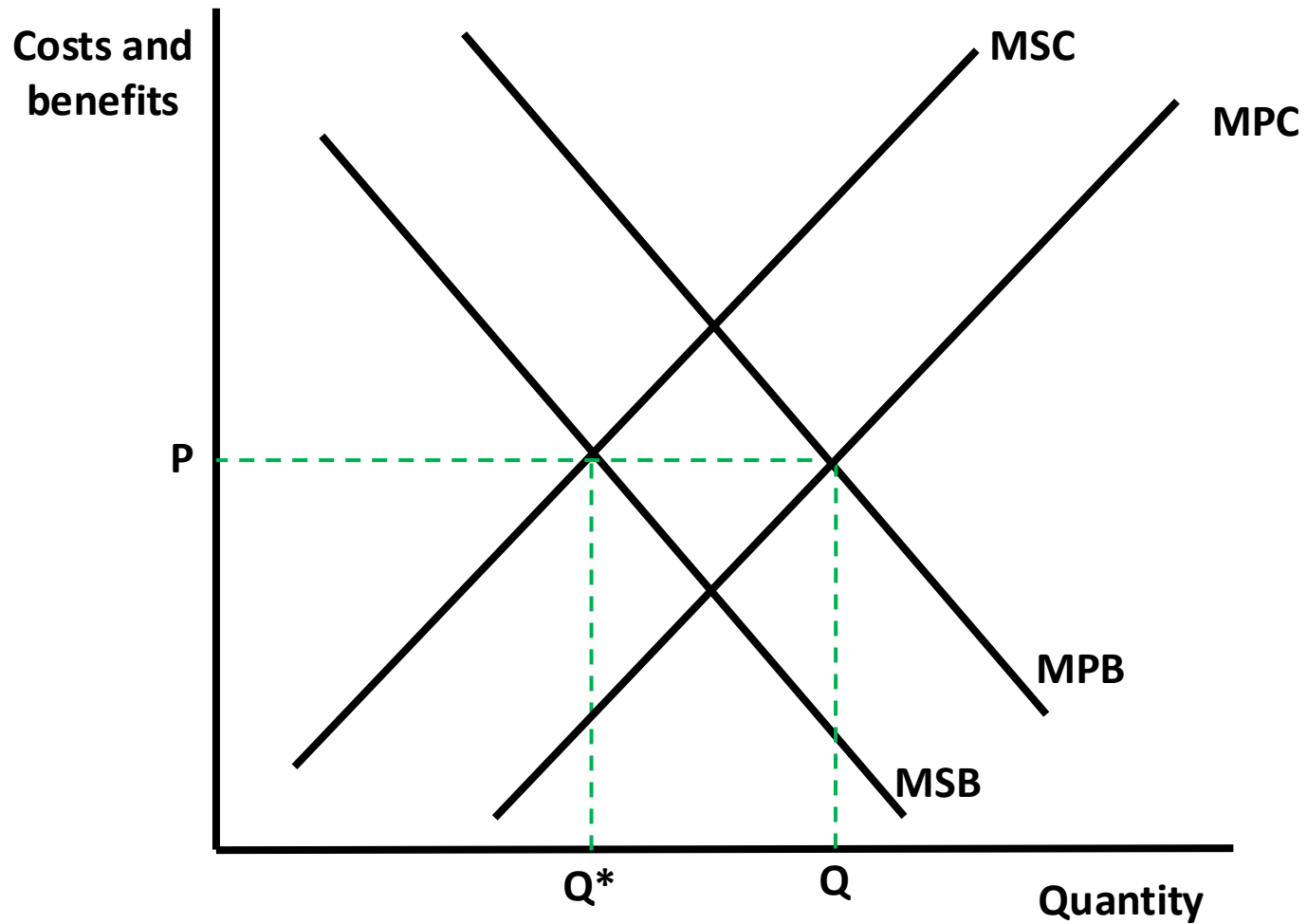
Welfare loss in the market when there is a negative production externality
($MSC > MPC$)



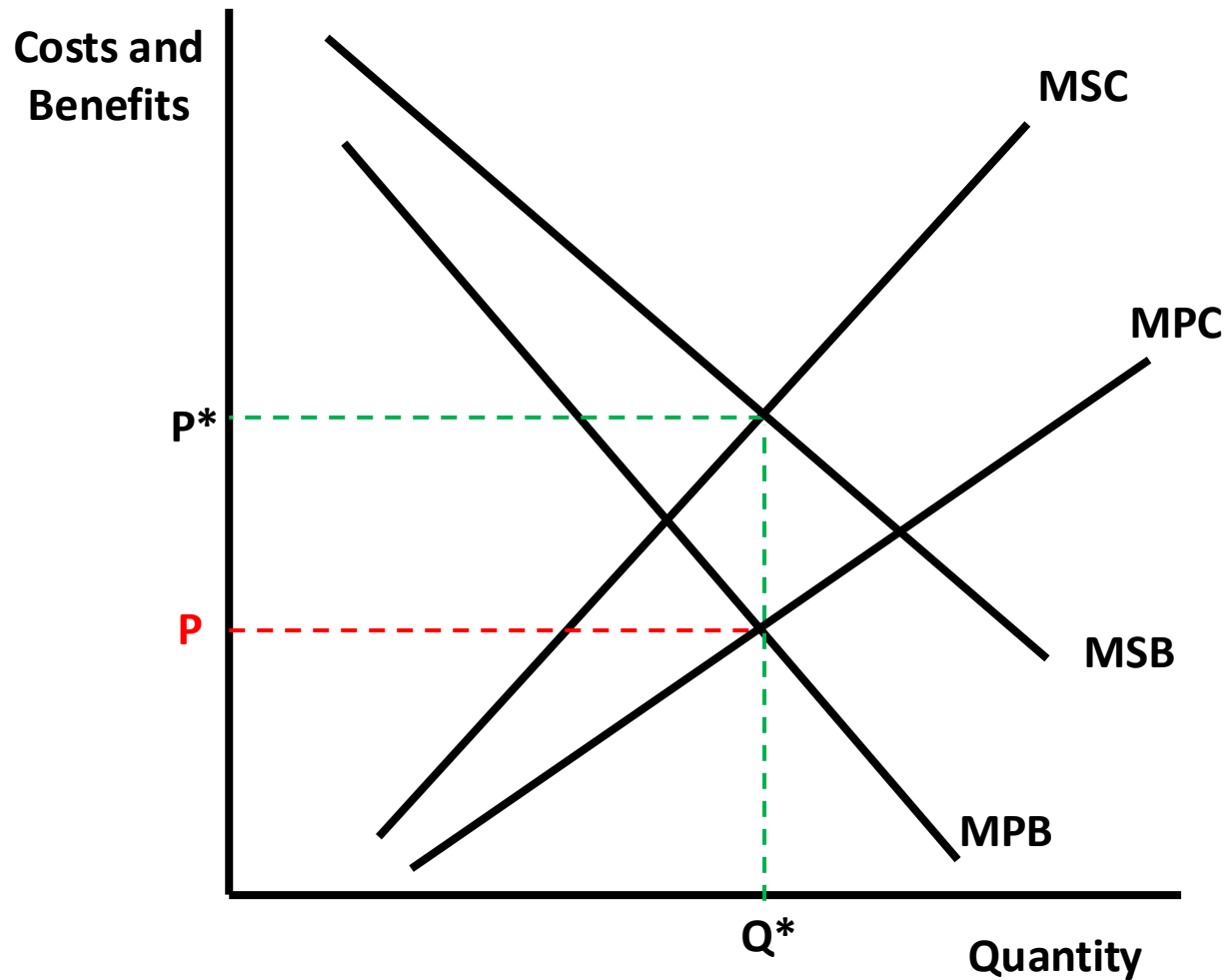
Welfare loss in the market when there is a positive production externality ($MSC < MPC$)



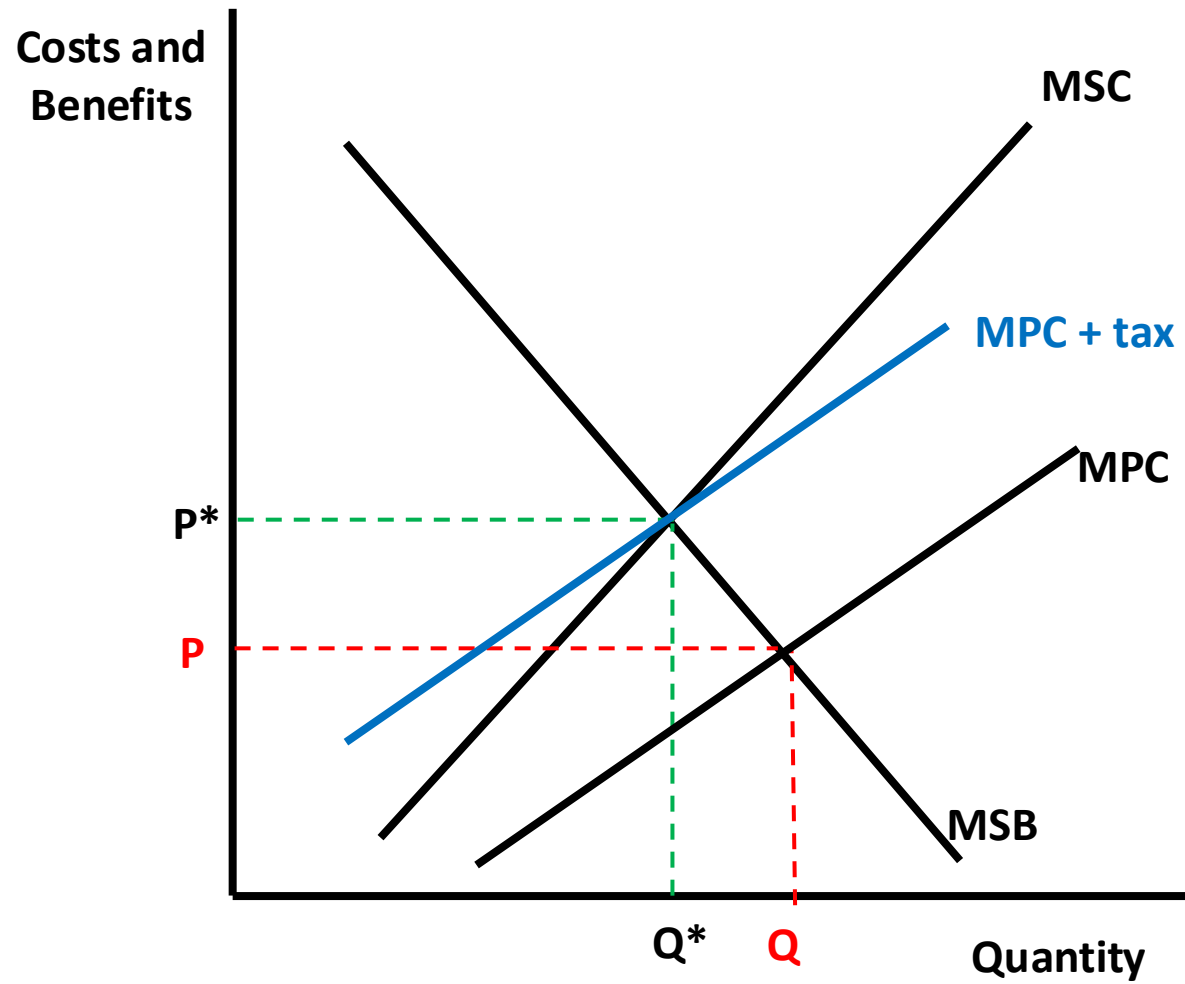
Market equilibrium compared to social optimum equilibrium a market with both negative production externality ($MSC > MPC$) and negative consumption externality ($MSB < MPB$)



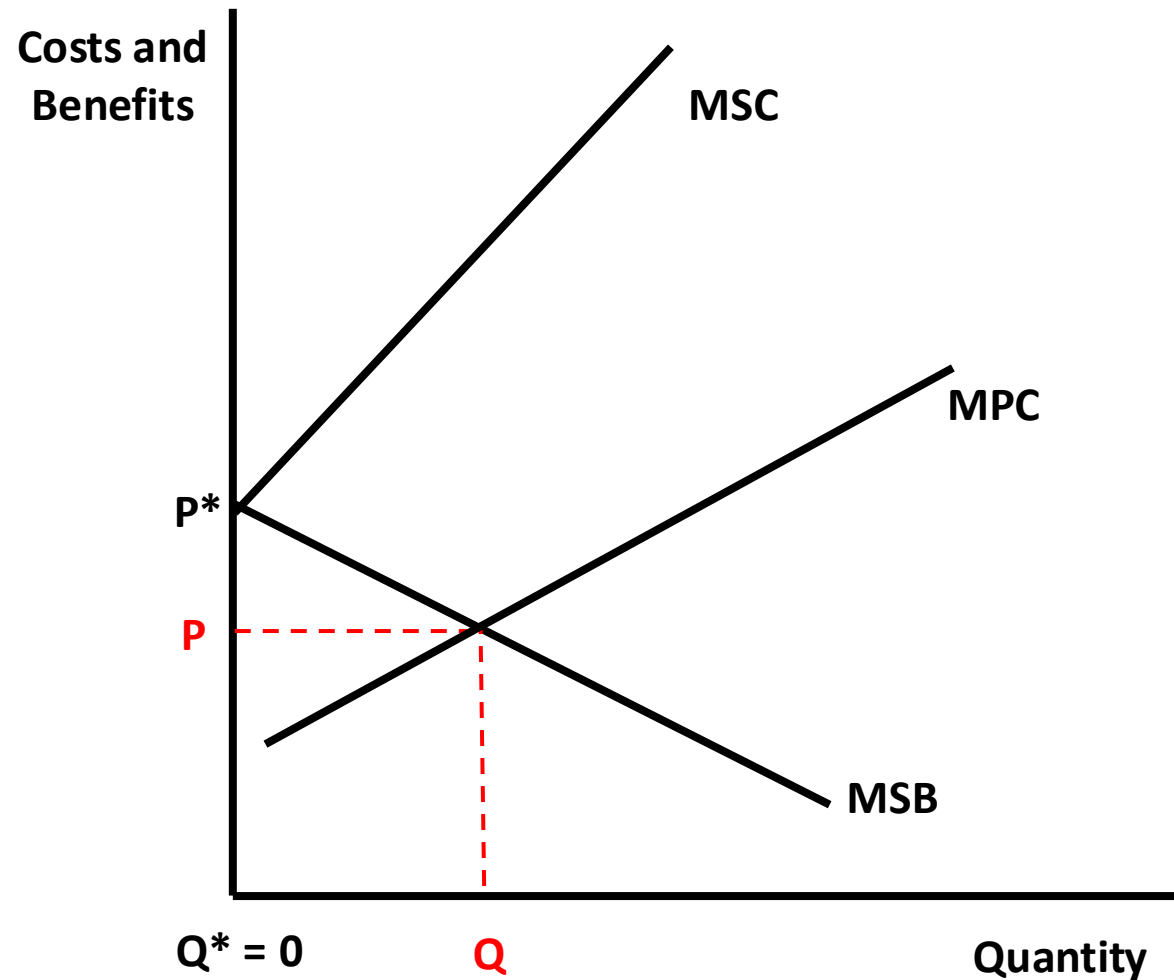
Market with negative consumption externality ($MSB < MPB$) and negative production externality ($MSC > MPC$)



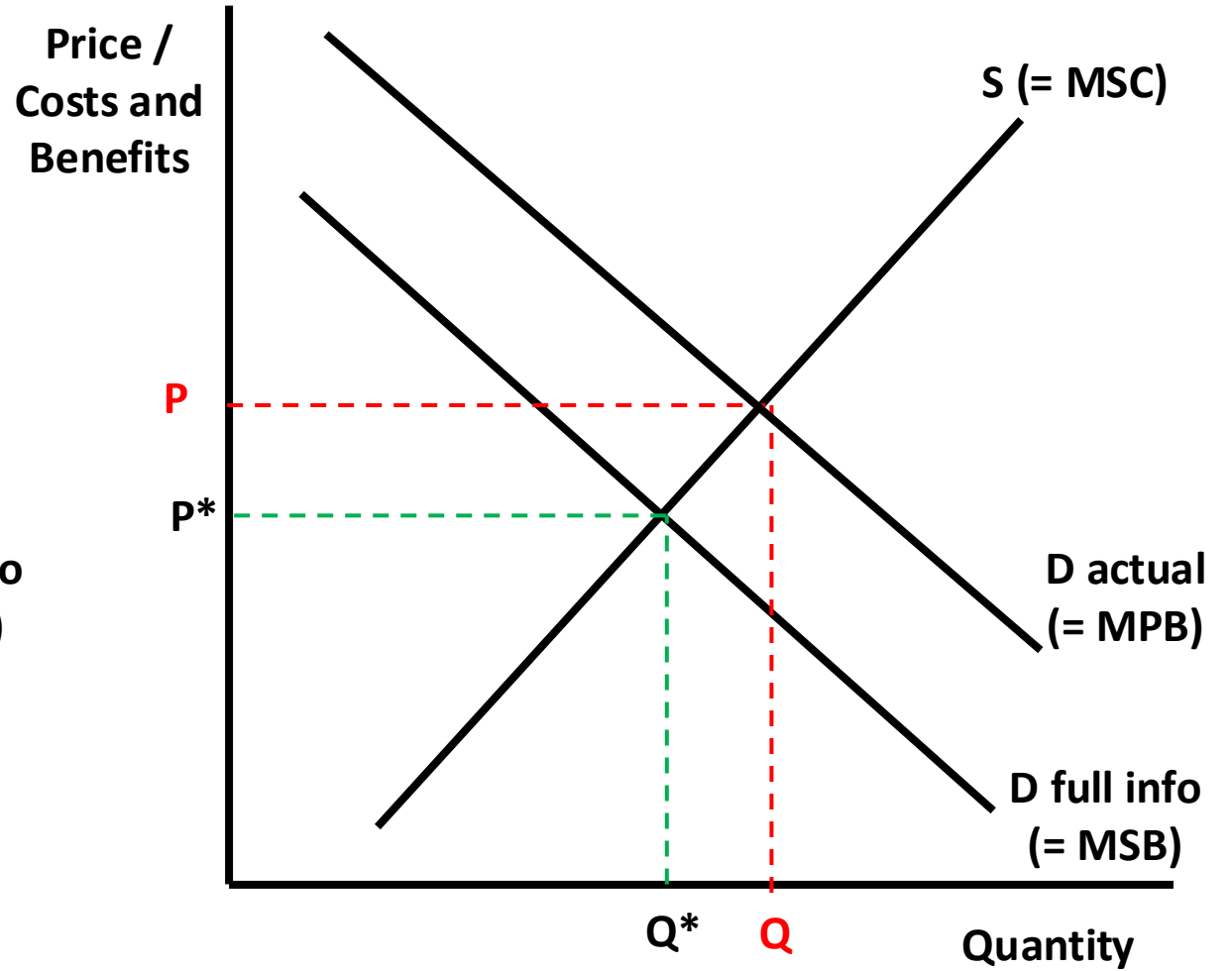
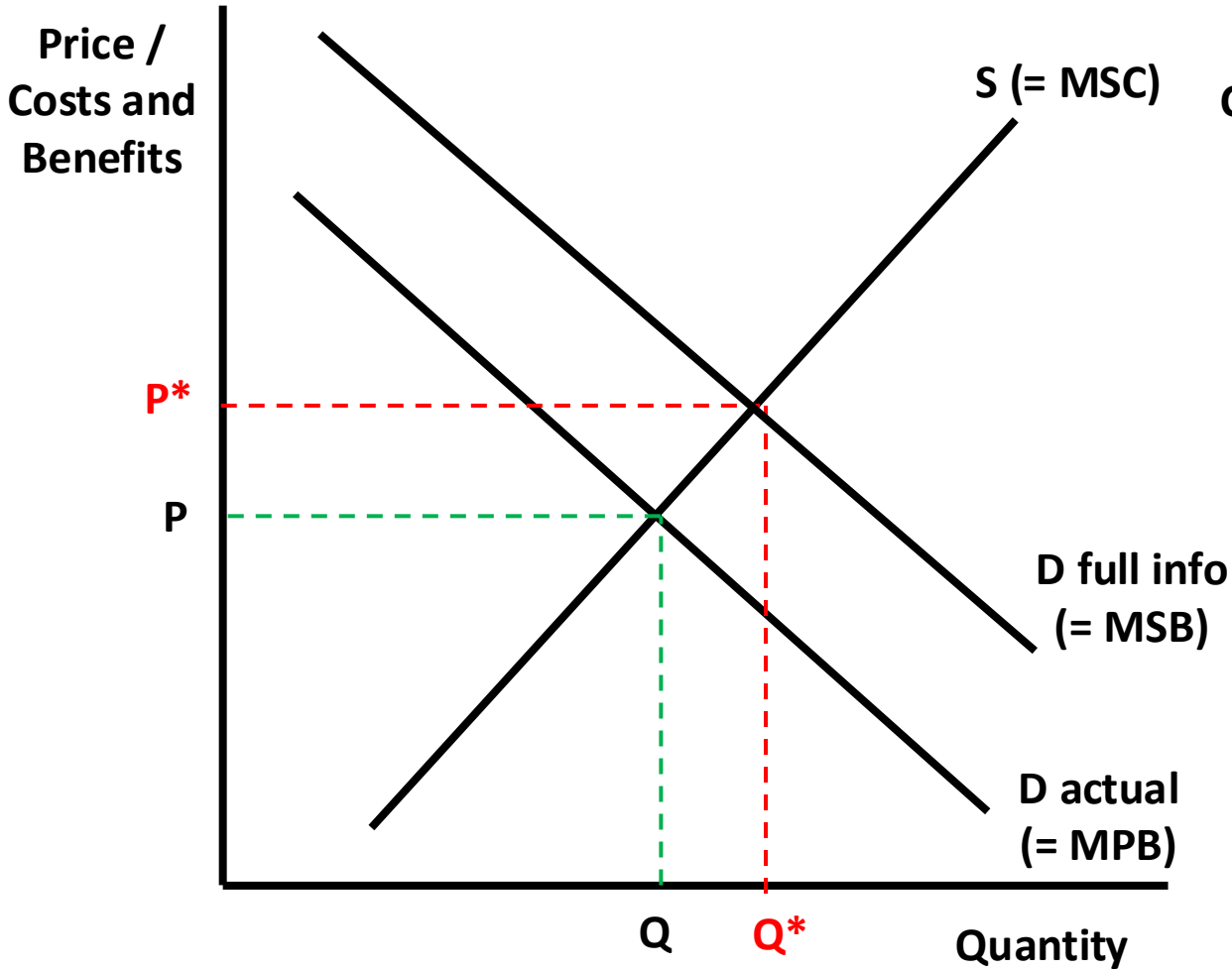
Market equilibrium compared to social optimum equilibrium a market with both a negative production externality ($MSC > MPC$) and a positive consumption externality ($MSB > MPB$)



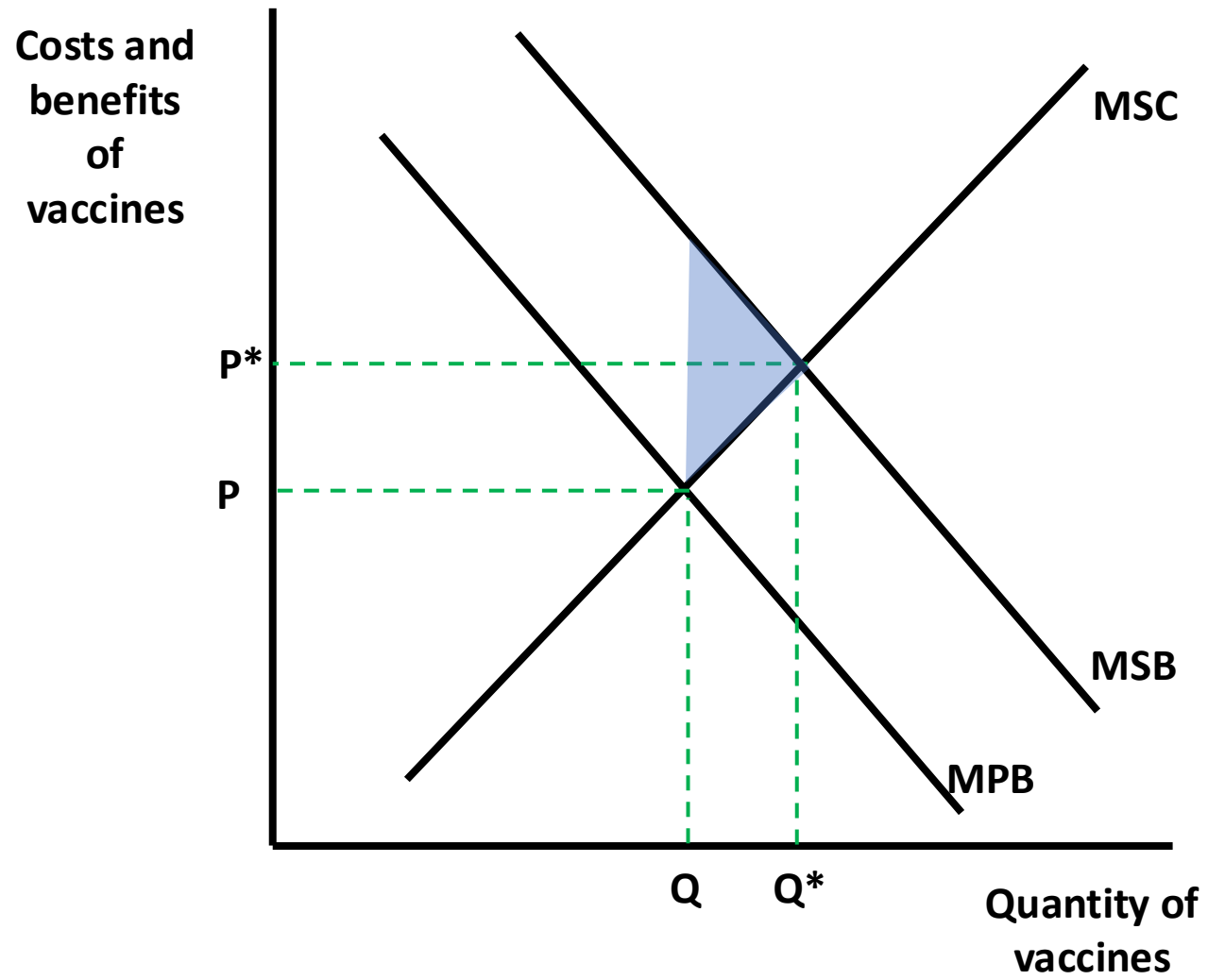
Using a specific/unit indirect tax to internalise a negative production externality

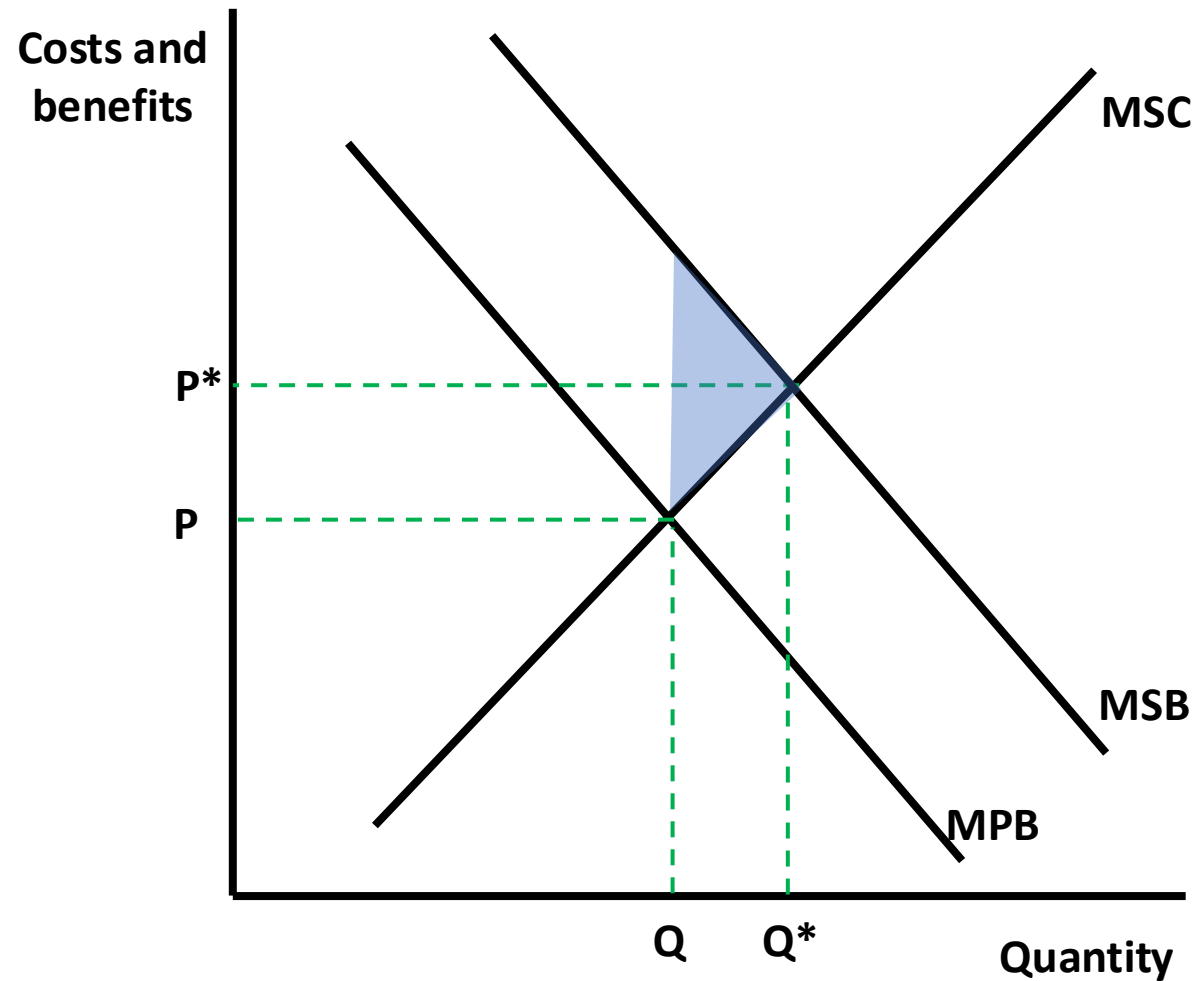


Market where the best government intervention option is to ban the good/service; social optimum at zero output

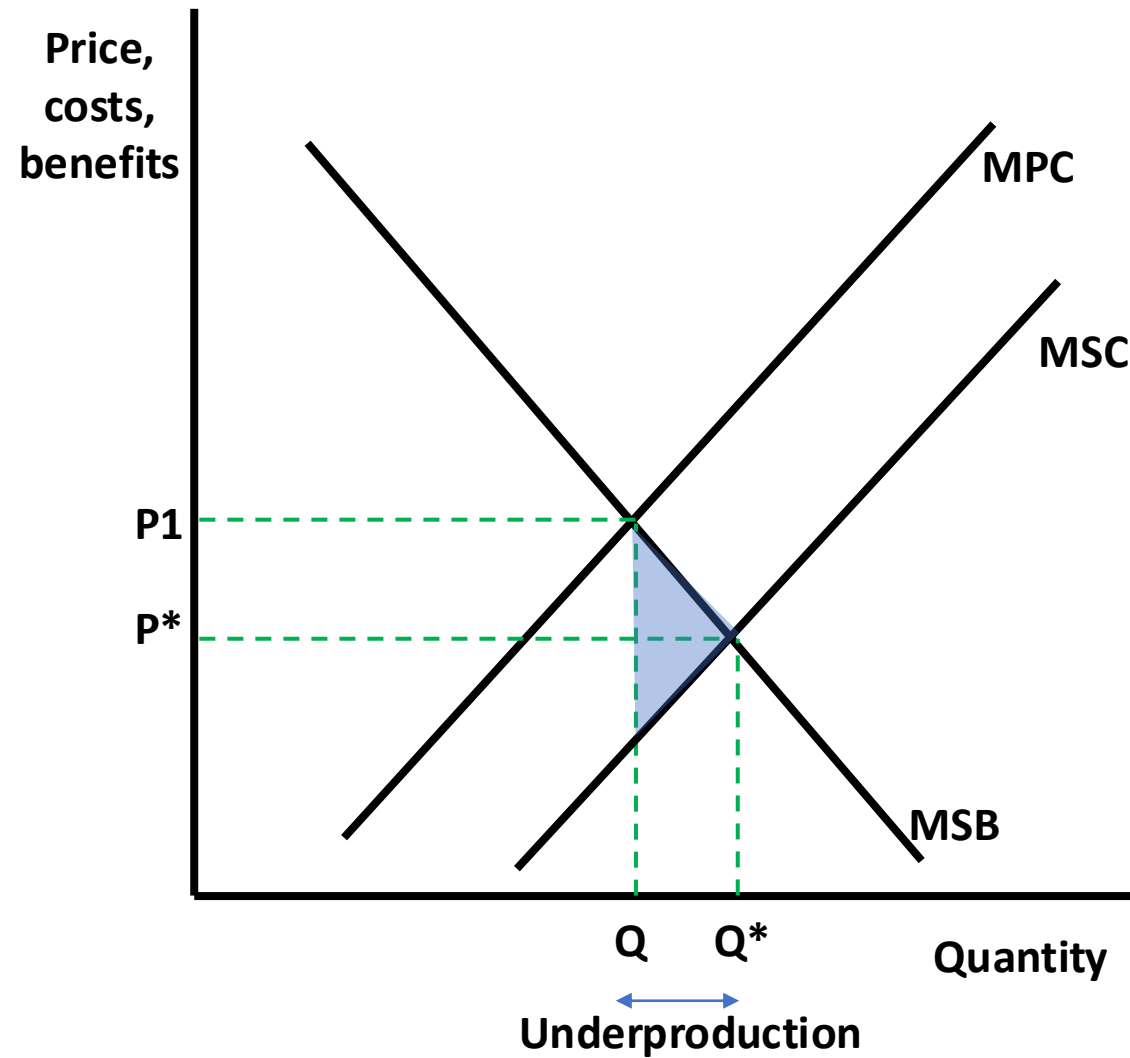


Information failure (i) Demand increases when consumer have full information (merit good) and (ii) demand decreases when consumers have full information (demerit good)

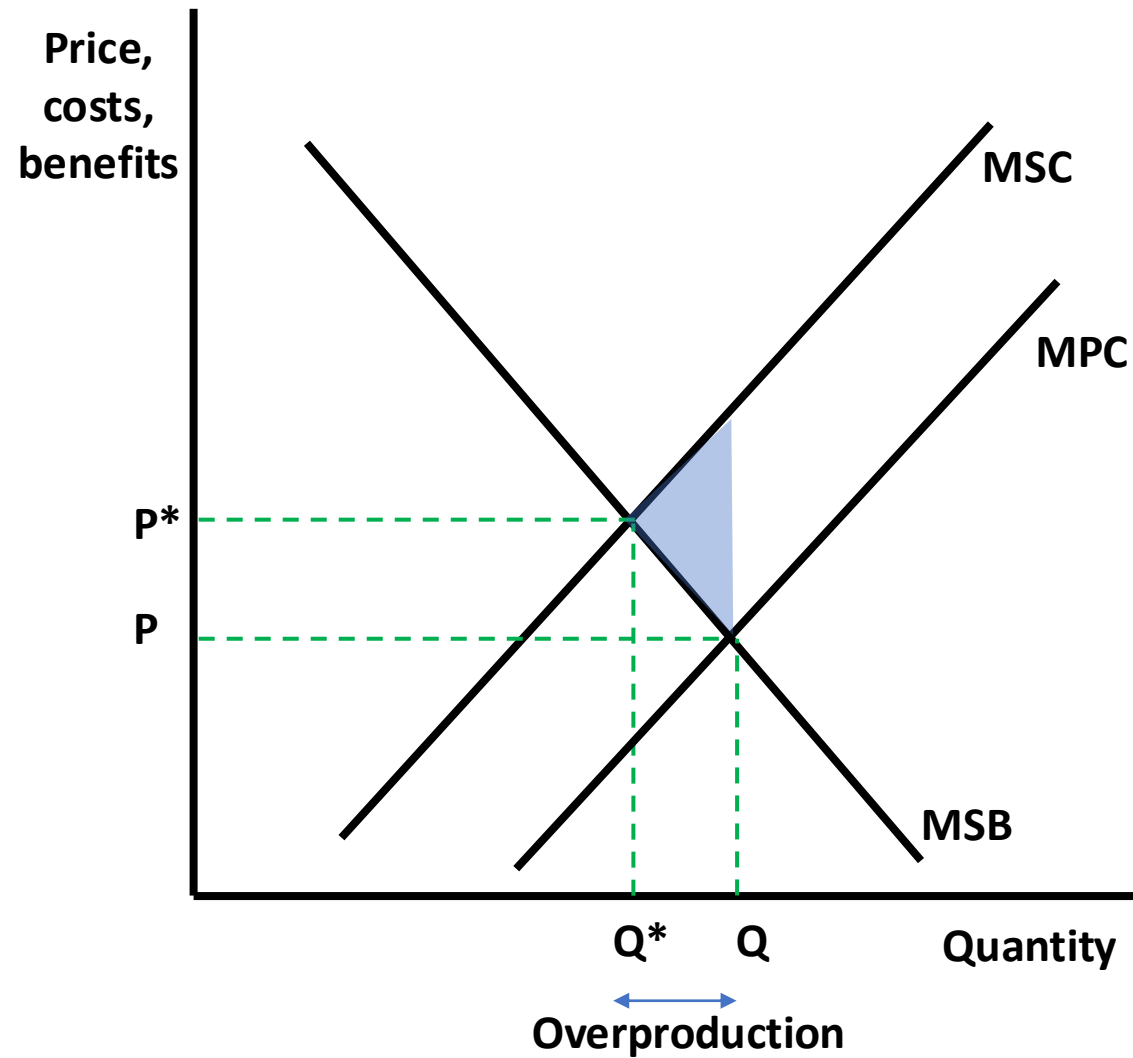




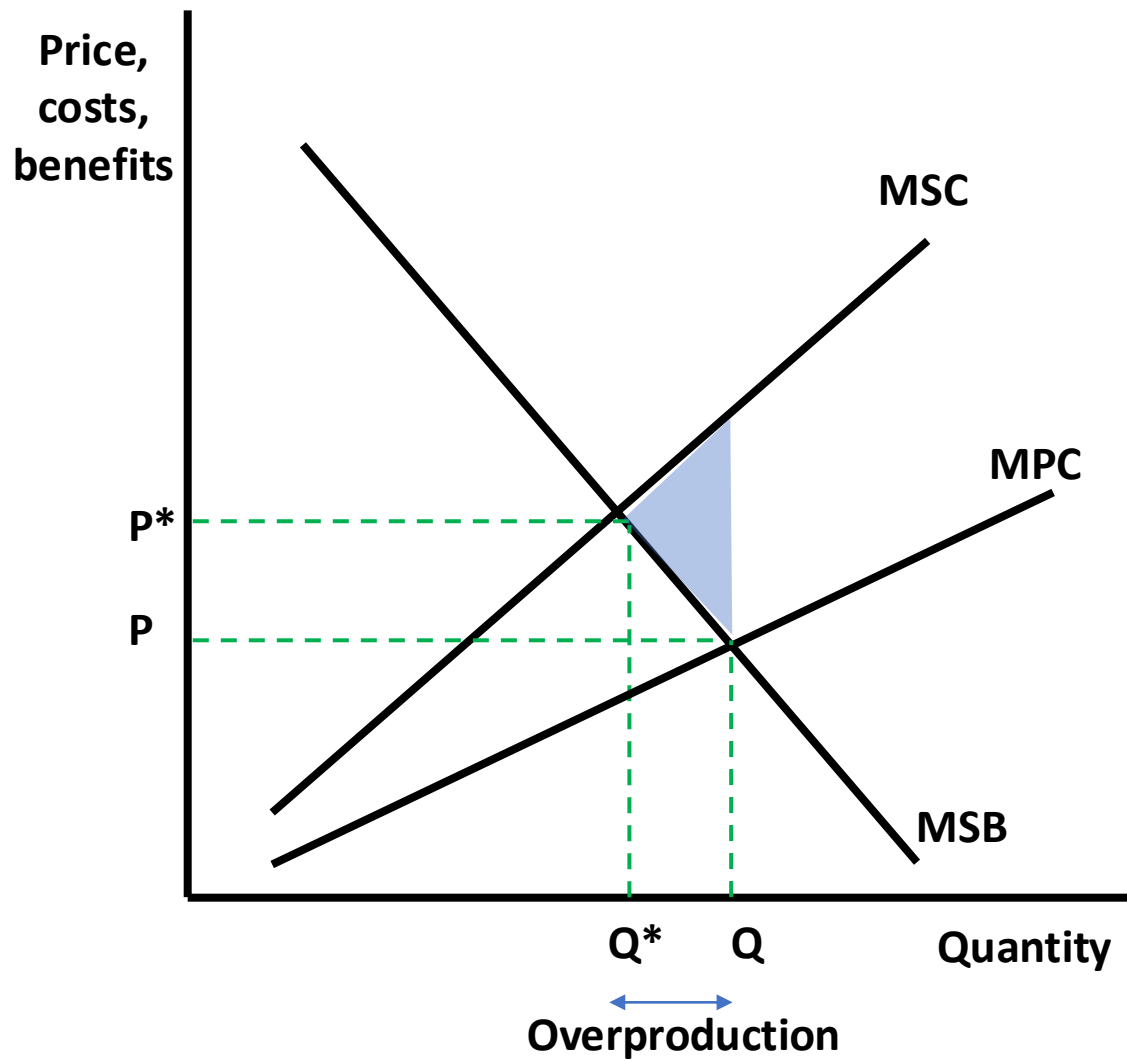
Positive consumption externality showing welfare loss area at market equilibrium



Underproduction in market with a positive production externality ($MSC < MPC$), with constant externalities



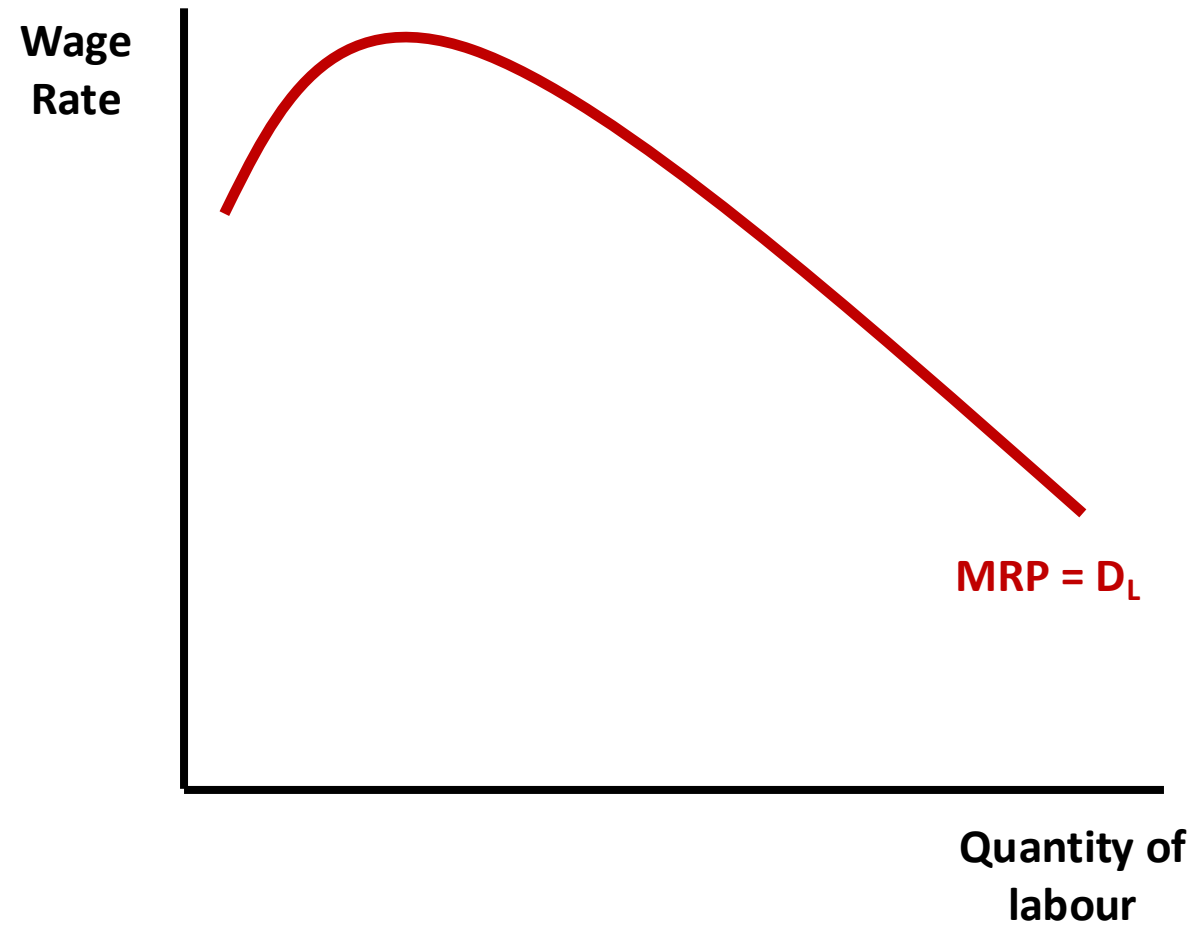
Overproduction in market with a negative production externality ($MSC > MPC$), with constant marginal external cost

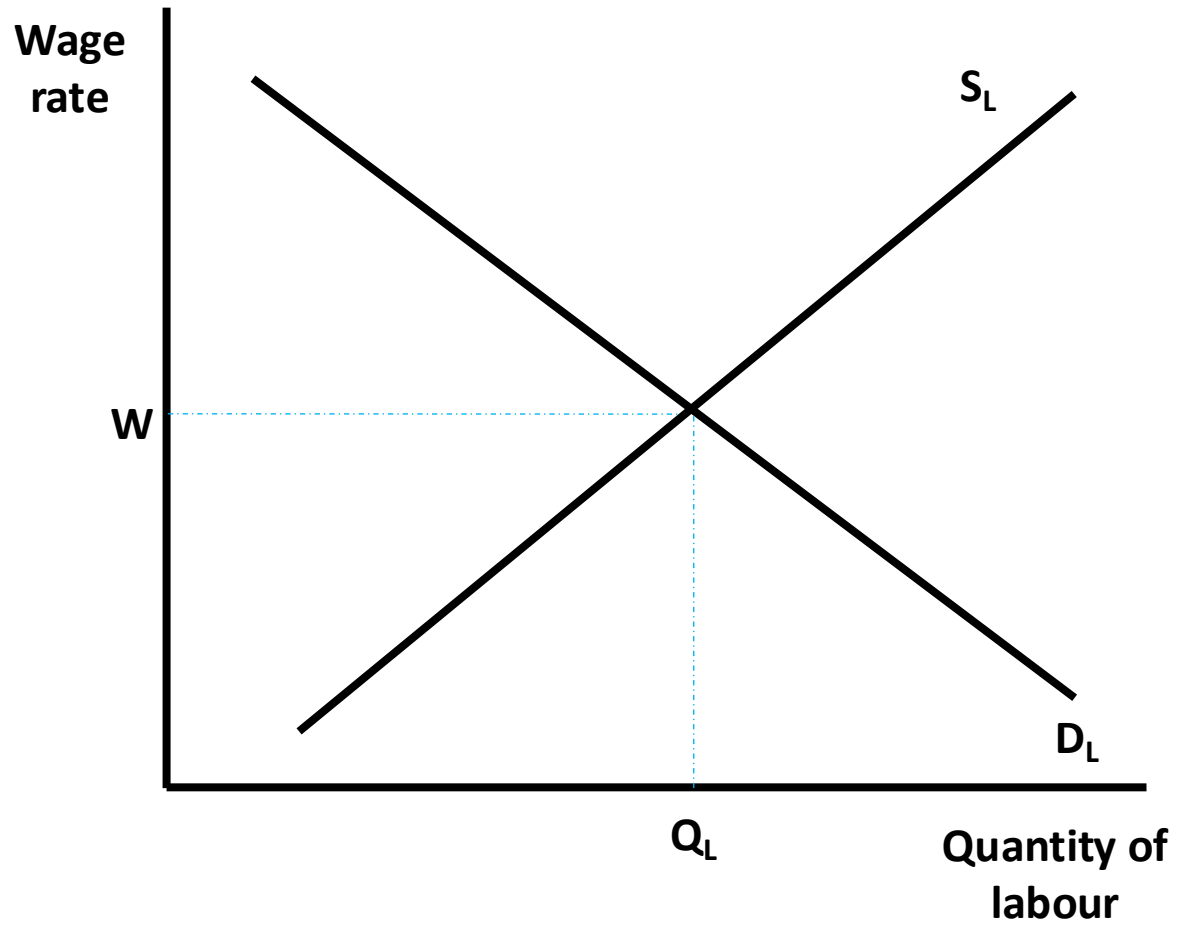


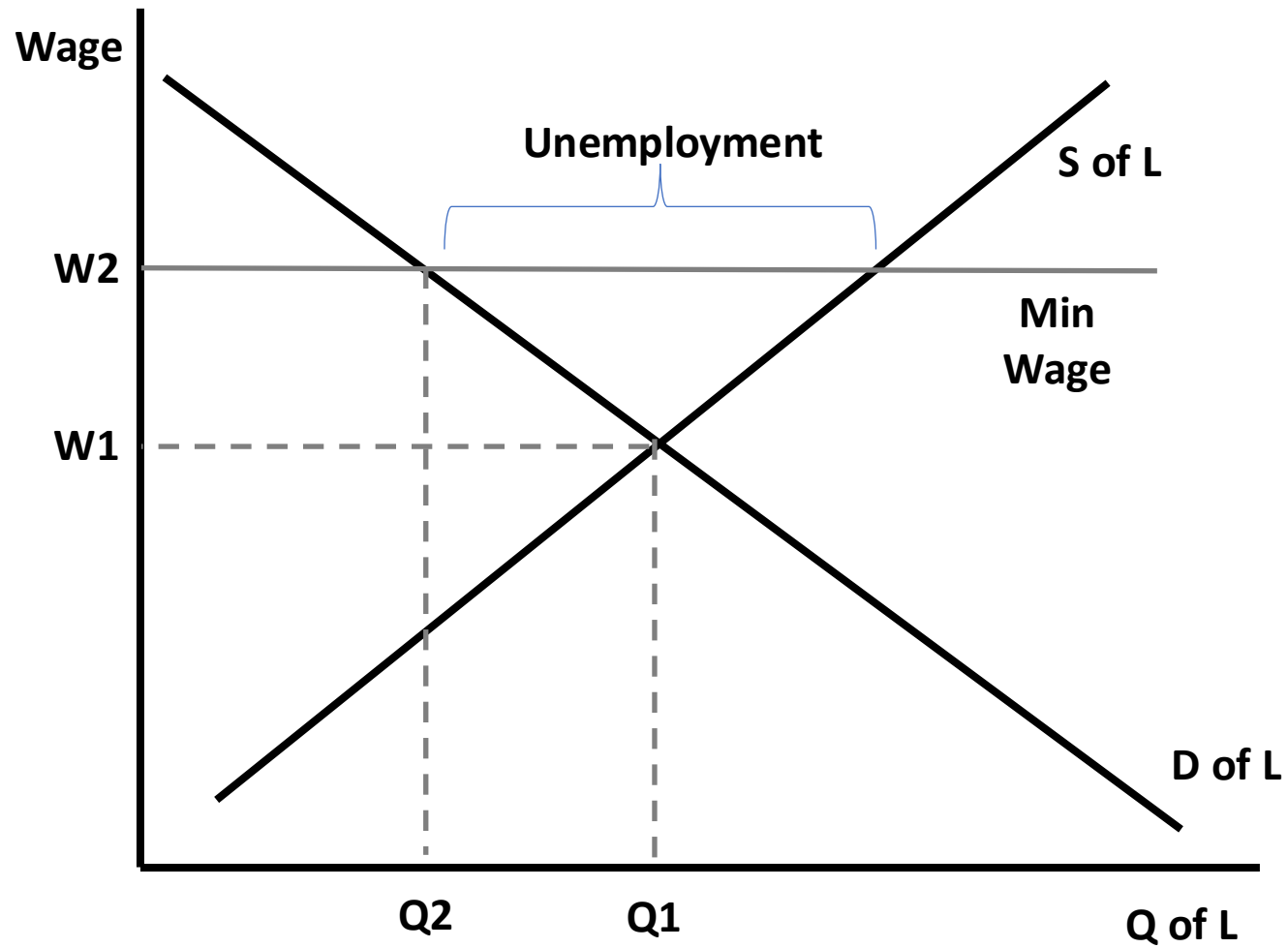
Overproduction in market with a negative production externality ($MSC > MPC$), with increasing marginal external costs

ECONOMICS DIAGRAMS

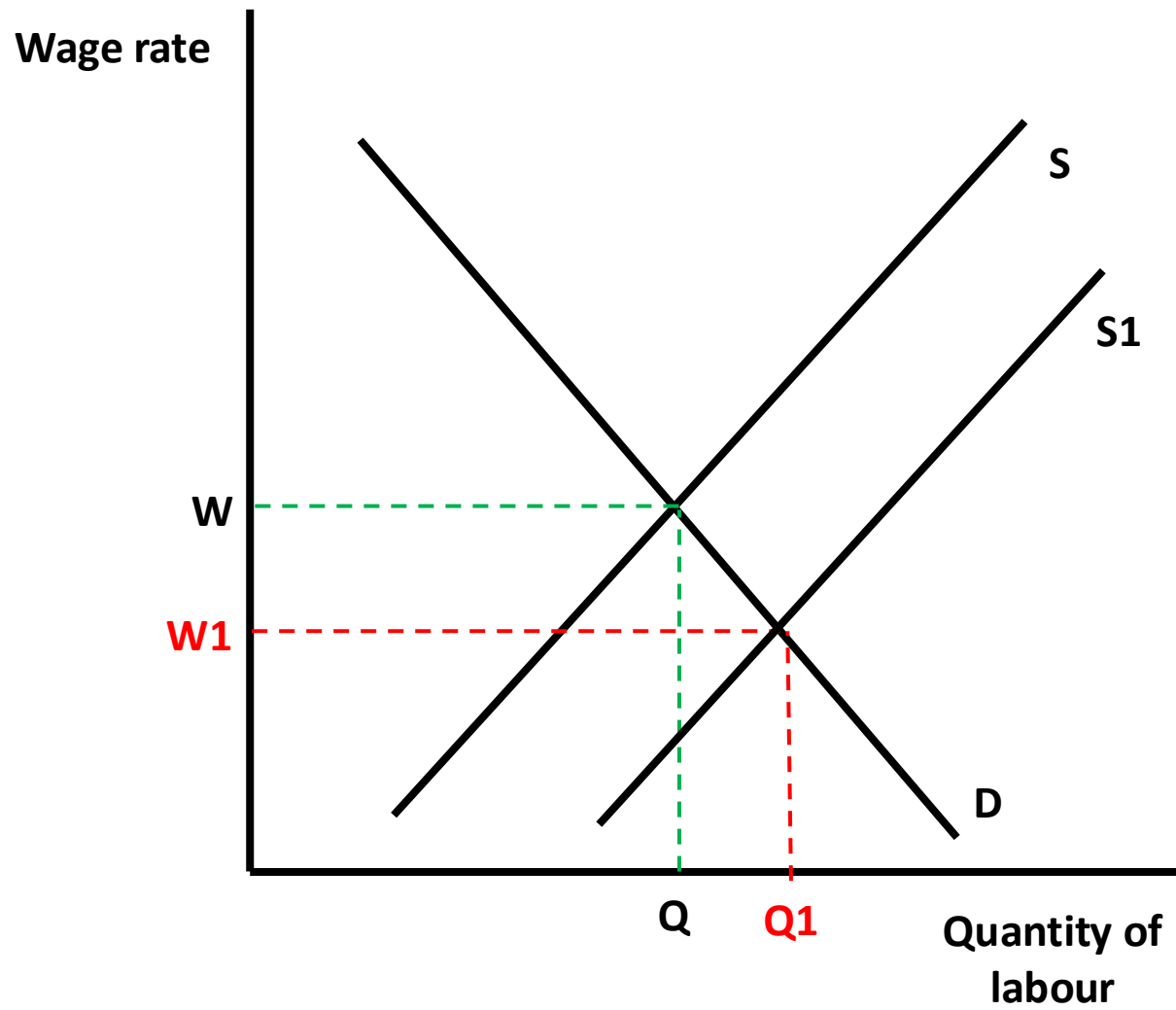
LABOUR MARKETS



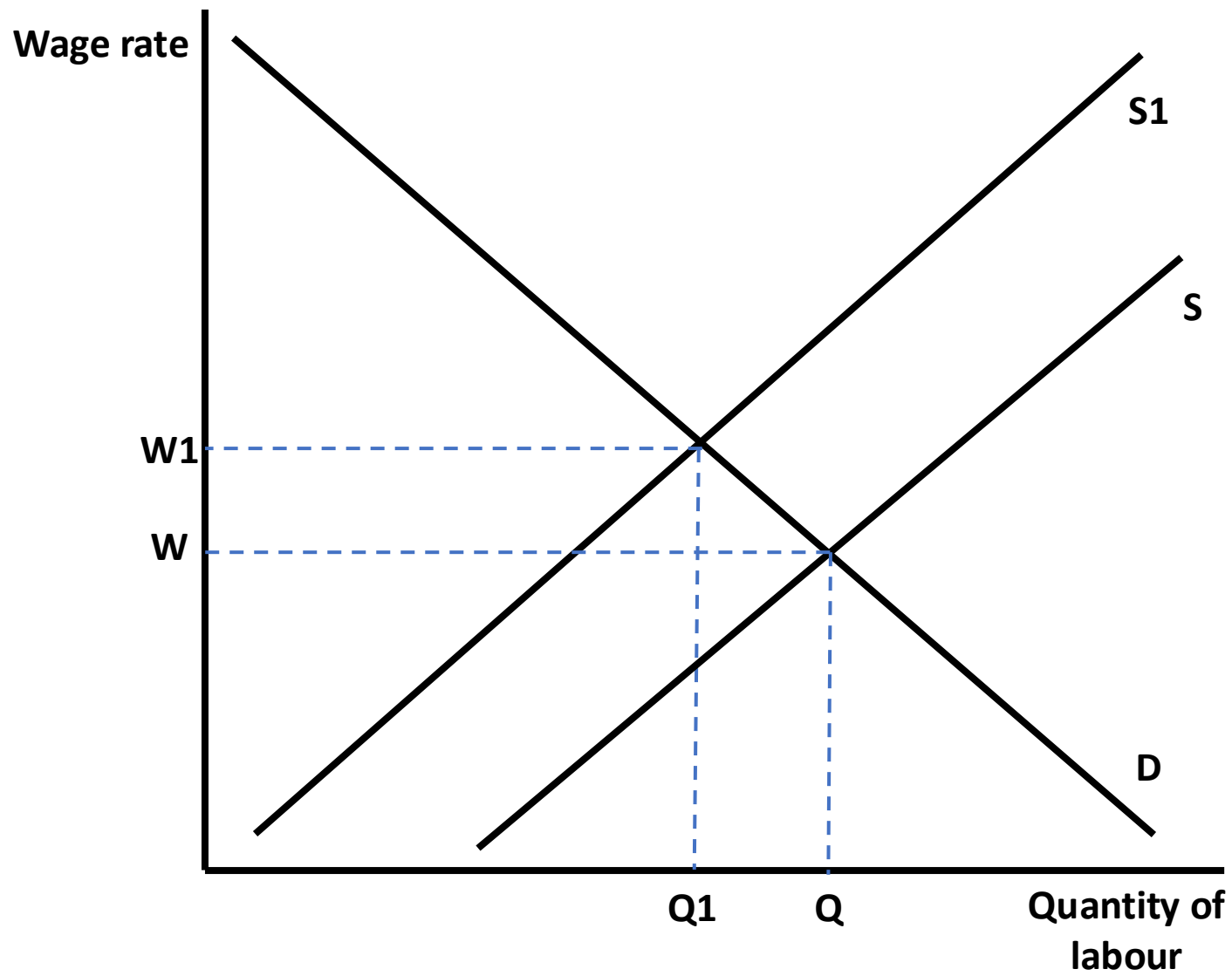


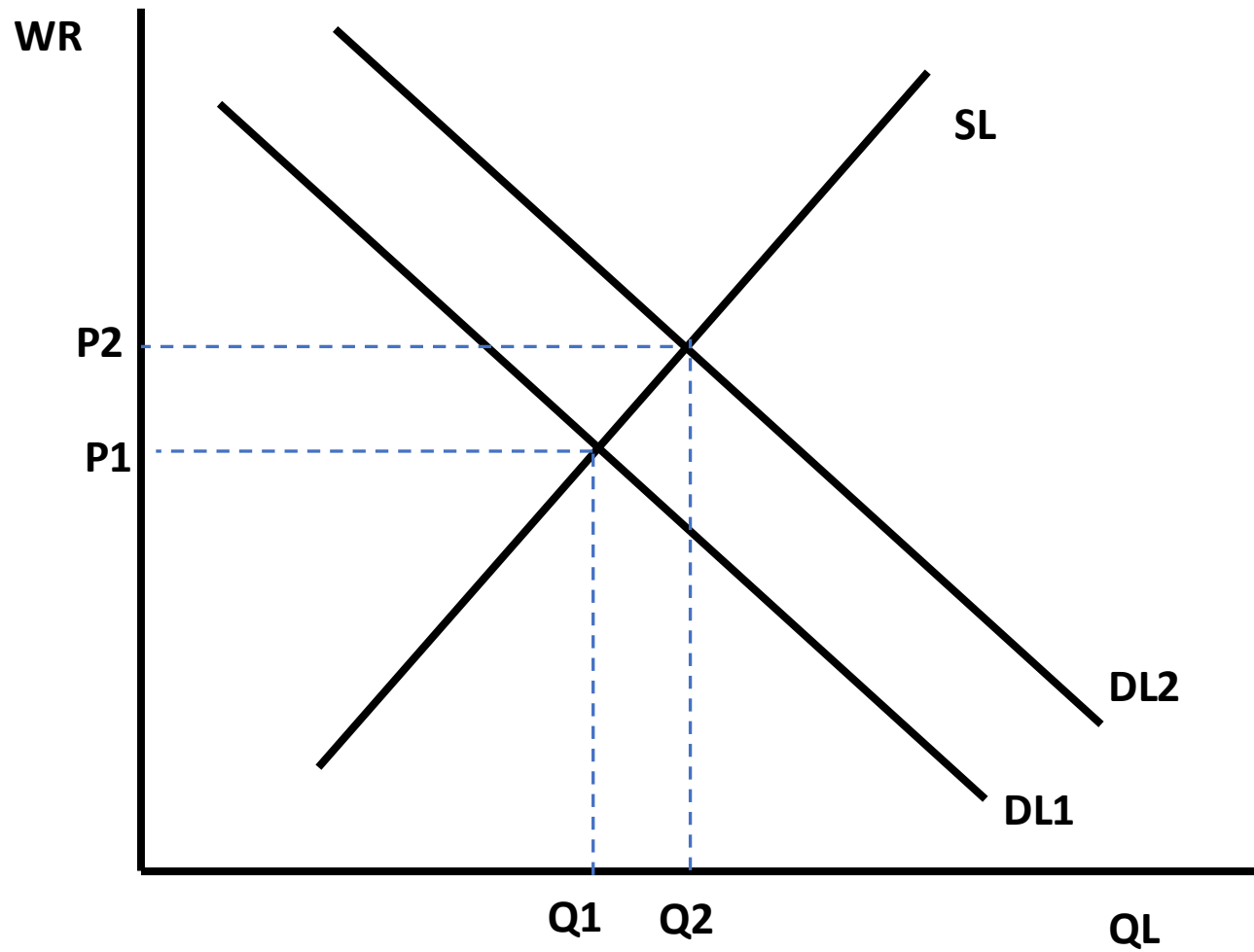


Unemployment as a result of a minimum wage in a competitive labour market

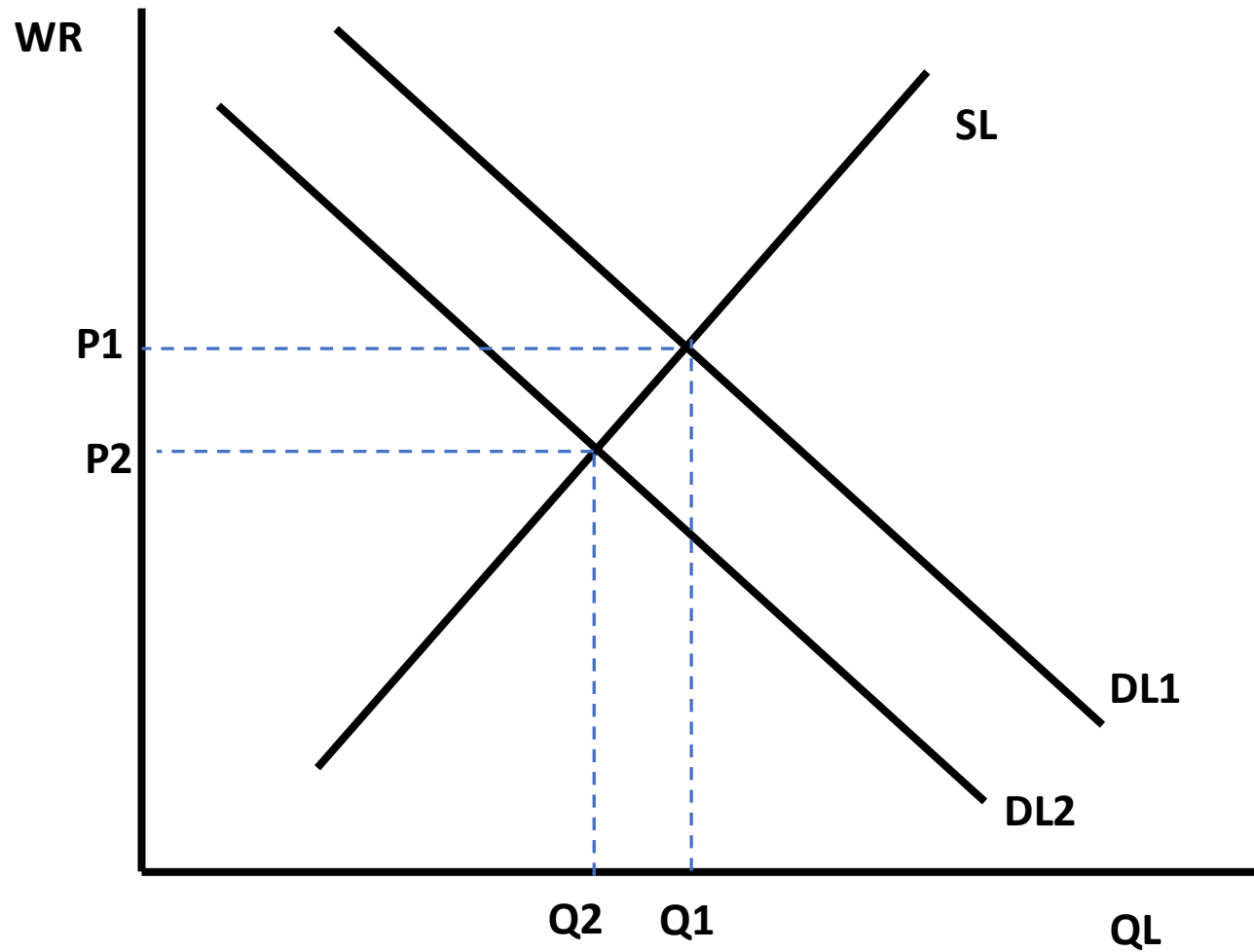


Labour market: Increase in the labour supply and the impact on equilibrium

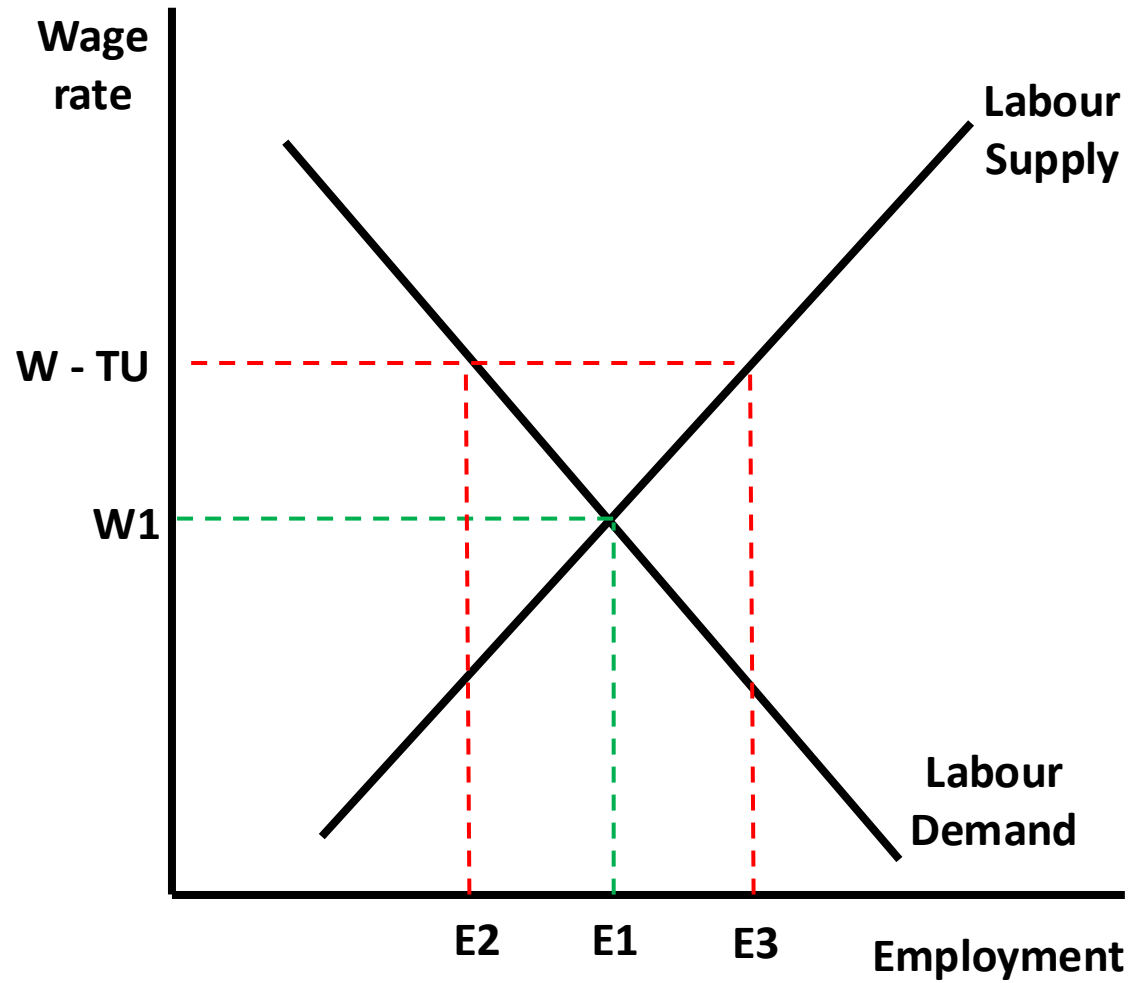




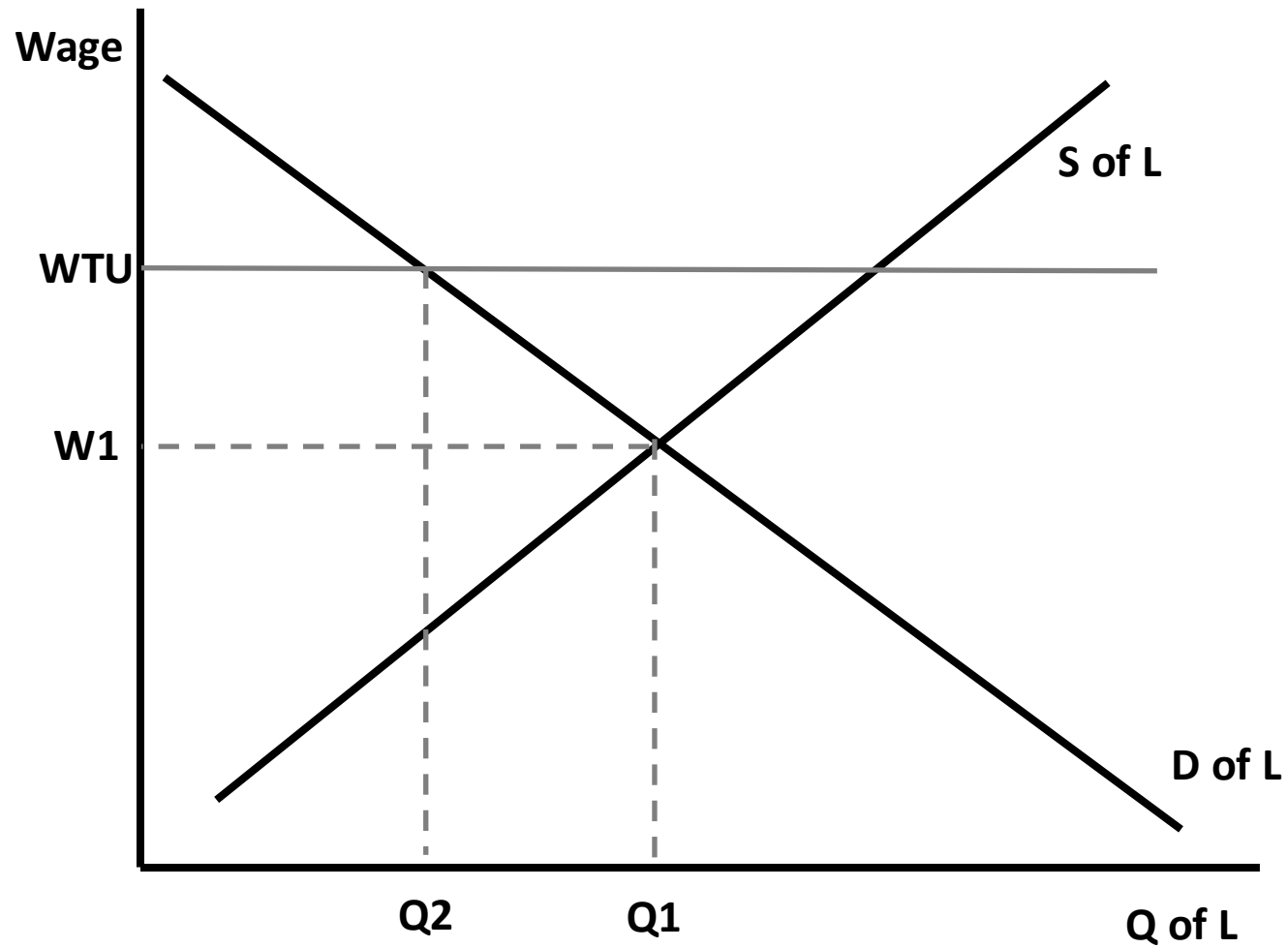
Labour market: increase in labour demand



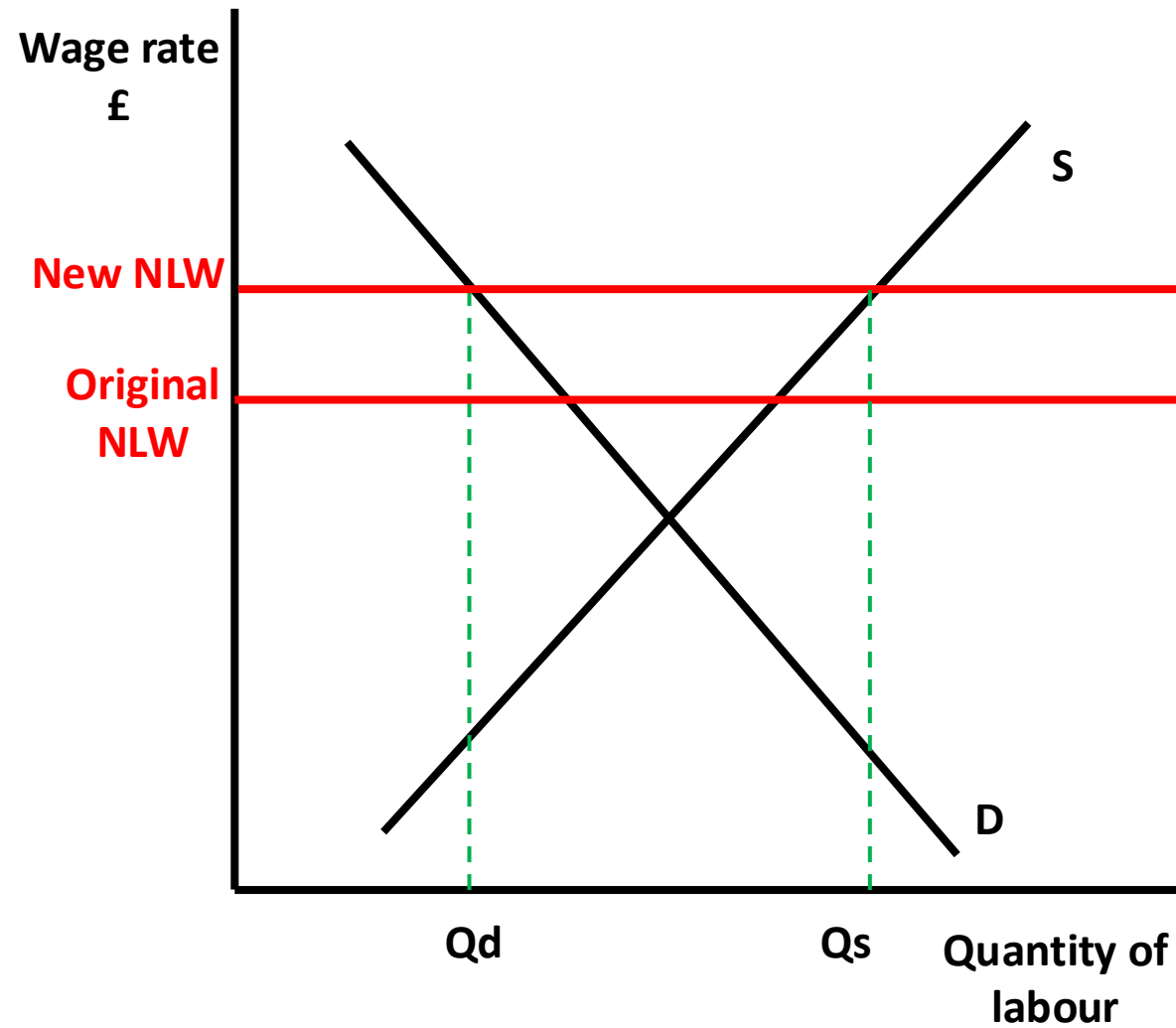
Labour market: decrease in labour demand and the impact on equilibrium



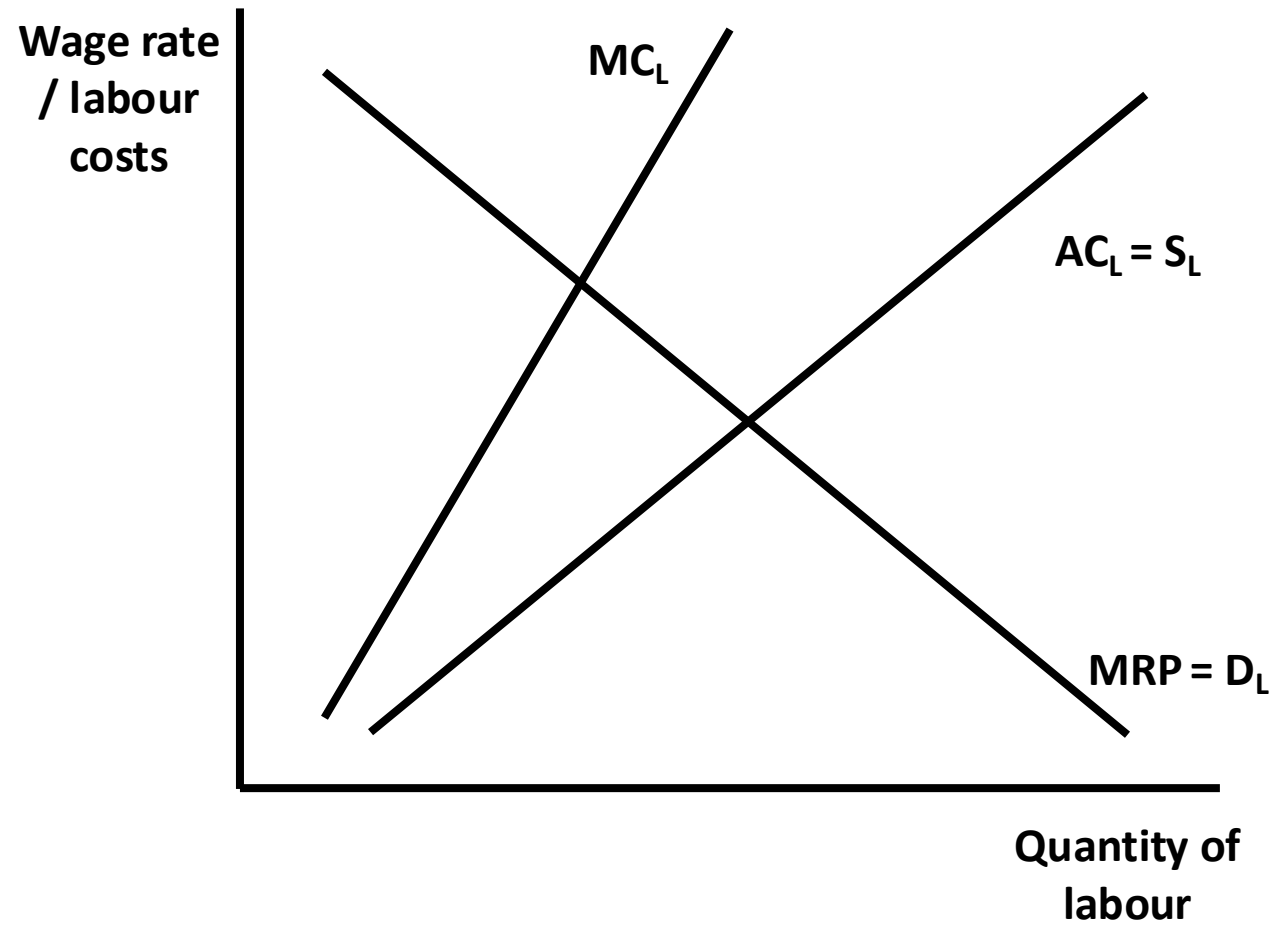
Impact on employment and unemployment of a trade union gaining a wage increase



Labour market: impact of trade union wage causing a fall in employment ($Q1$ to $Q2$)

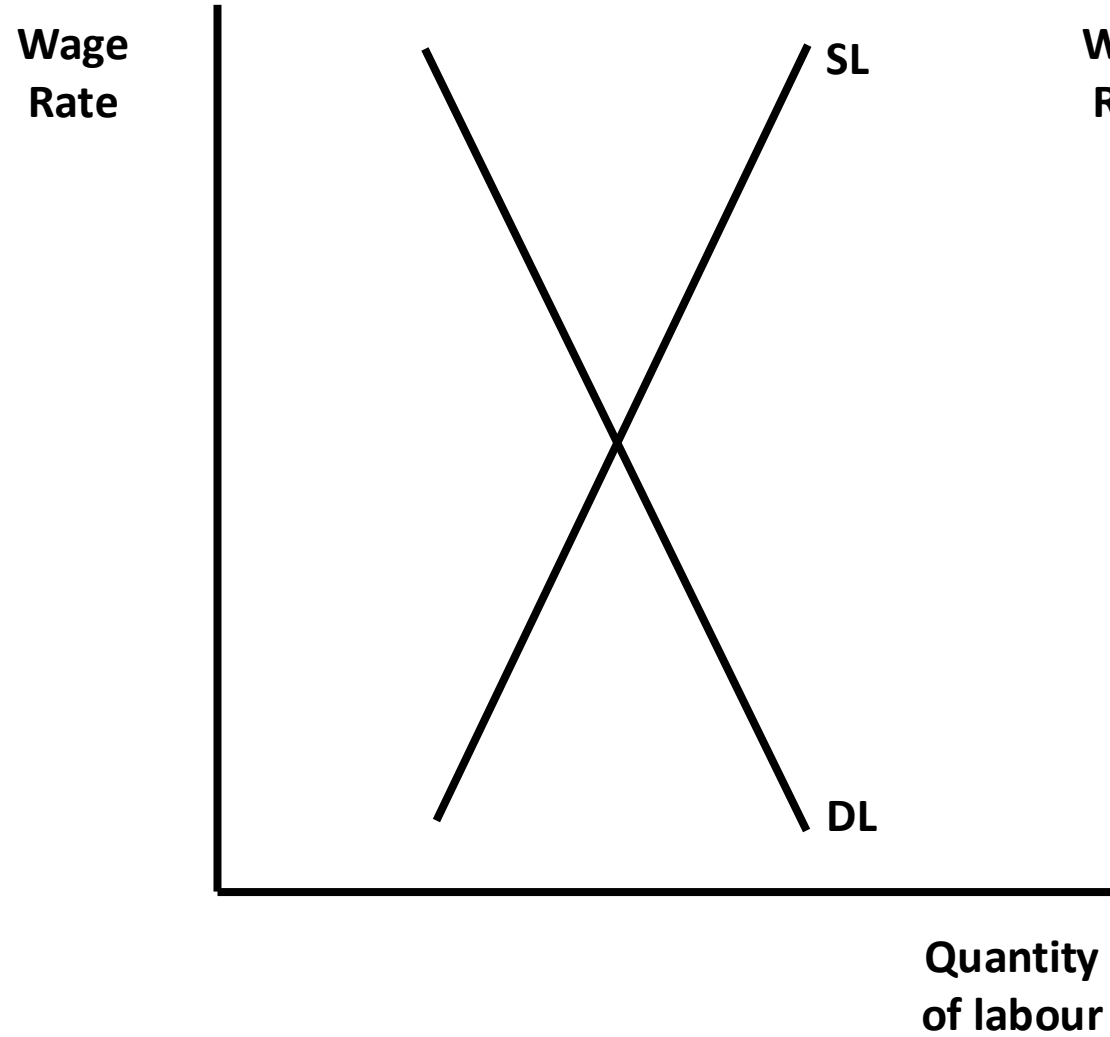


Labour market: Impact of an increase in the National Living Wage (new excess supply of labour = $Q_d - Q_s$ = real wage unemployment)

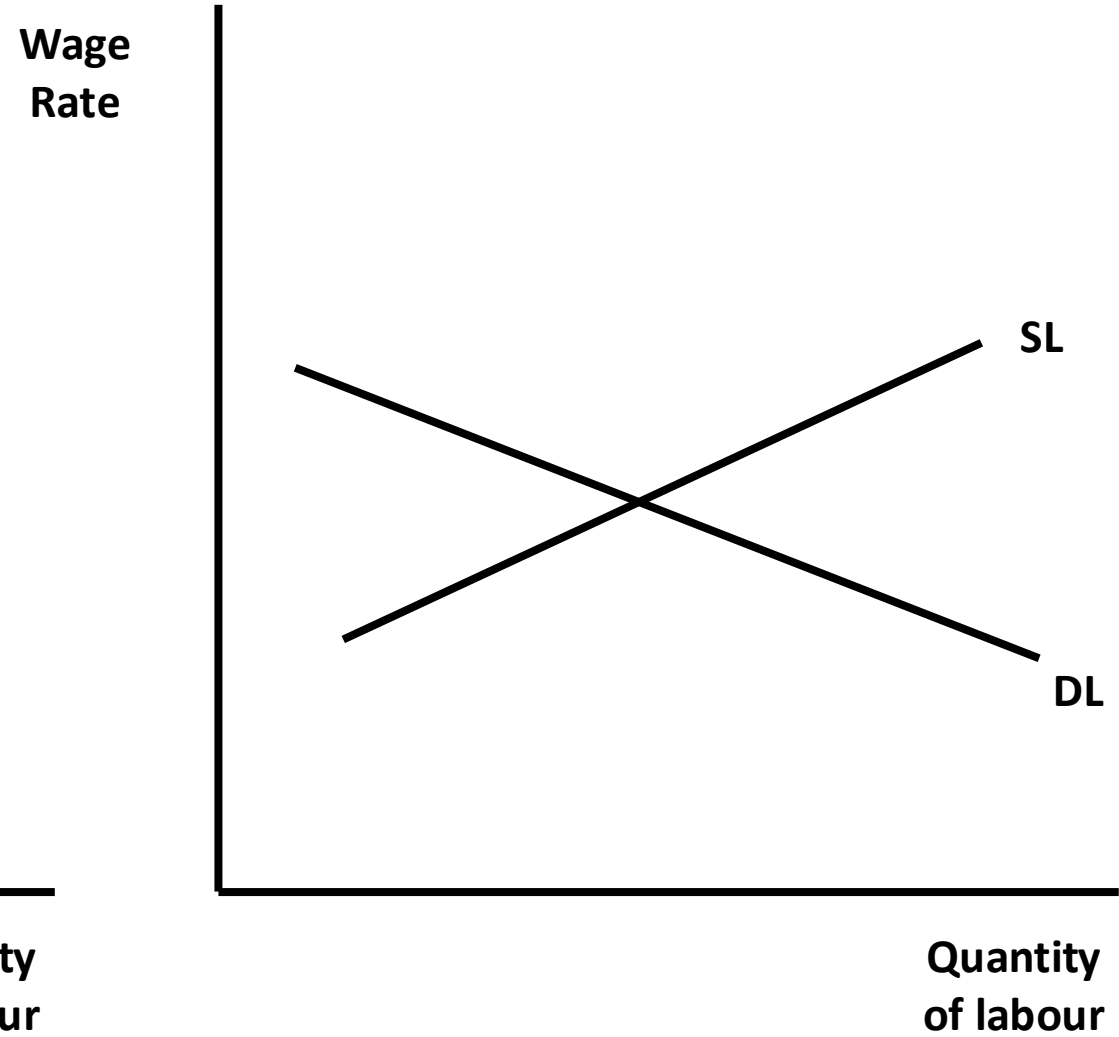


Monopsony labour market, without equilibrium indicated

Inelastic labour demand and supply

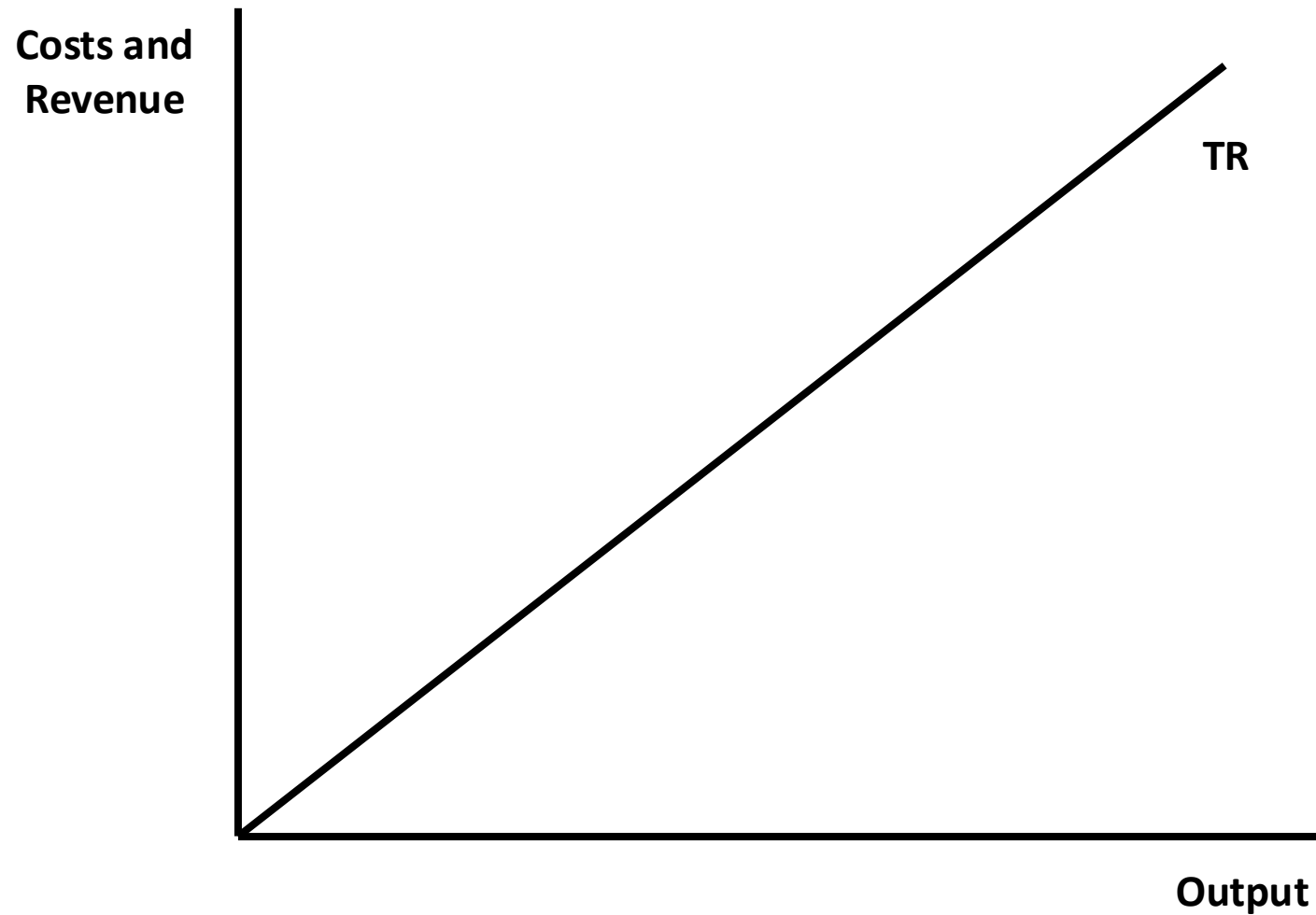


Elastic labour demand and supply

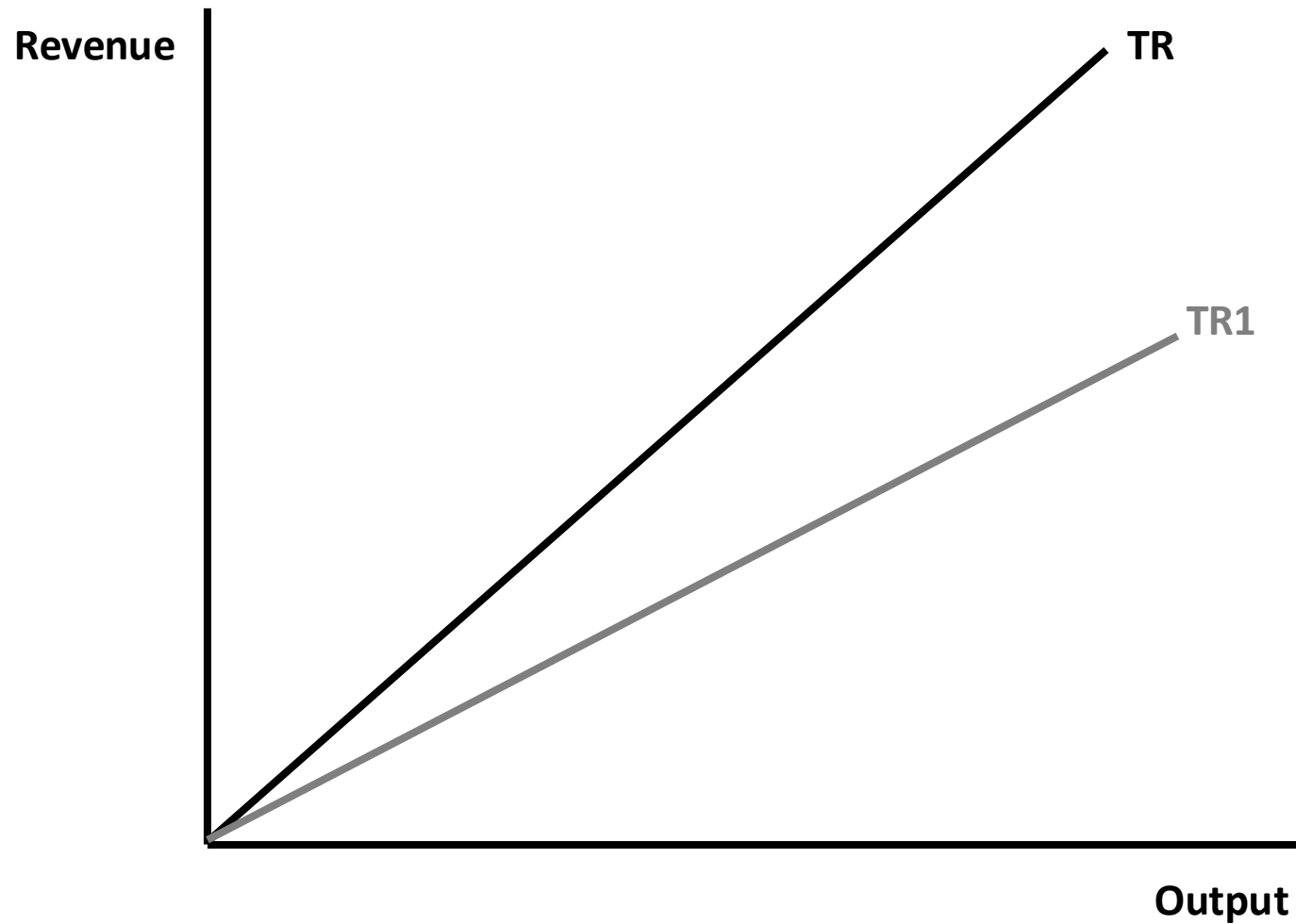


ECONOMICS DIAGRAMS

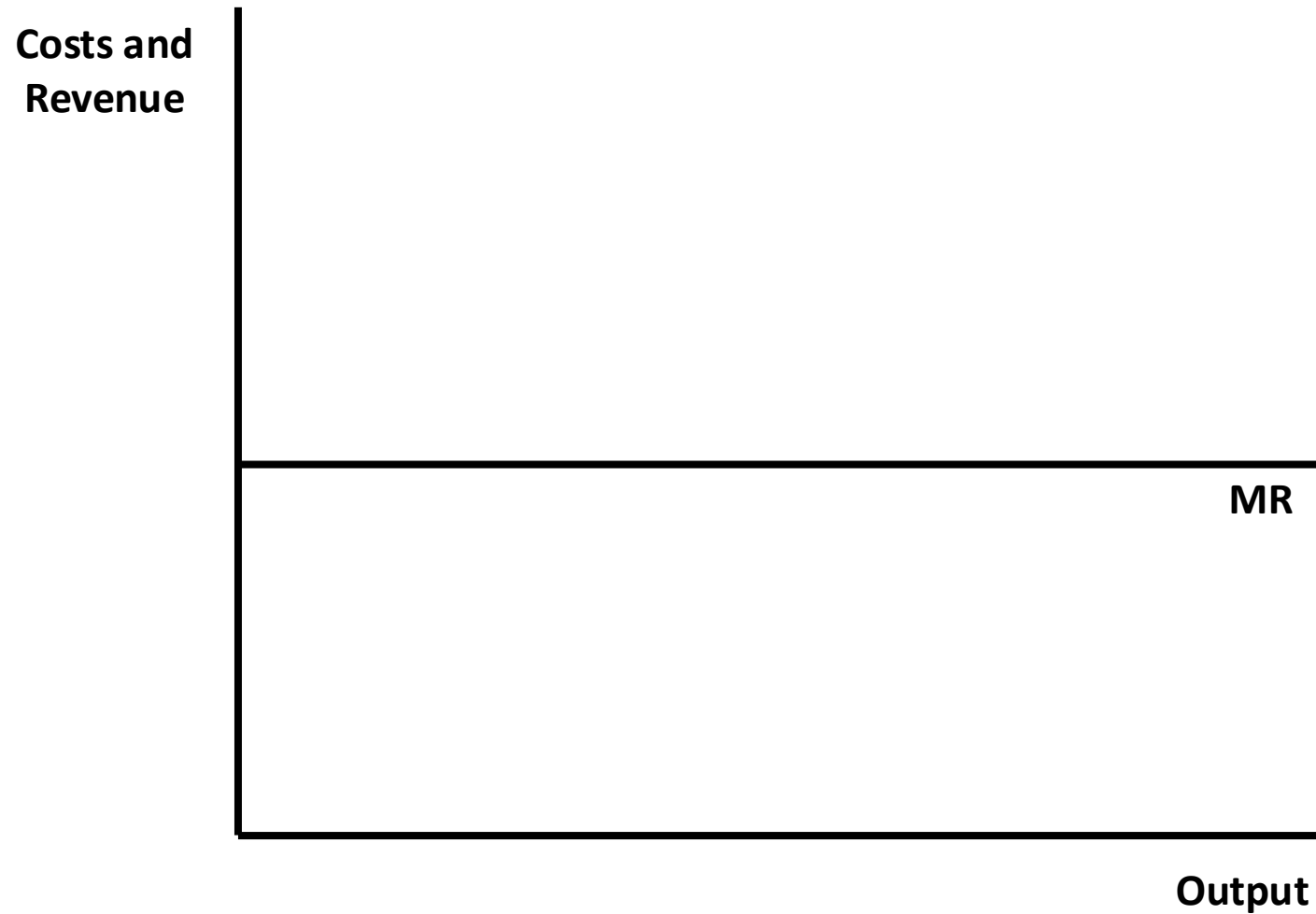
COST AND REVENUE DIAGRAMS



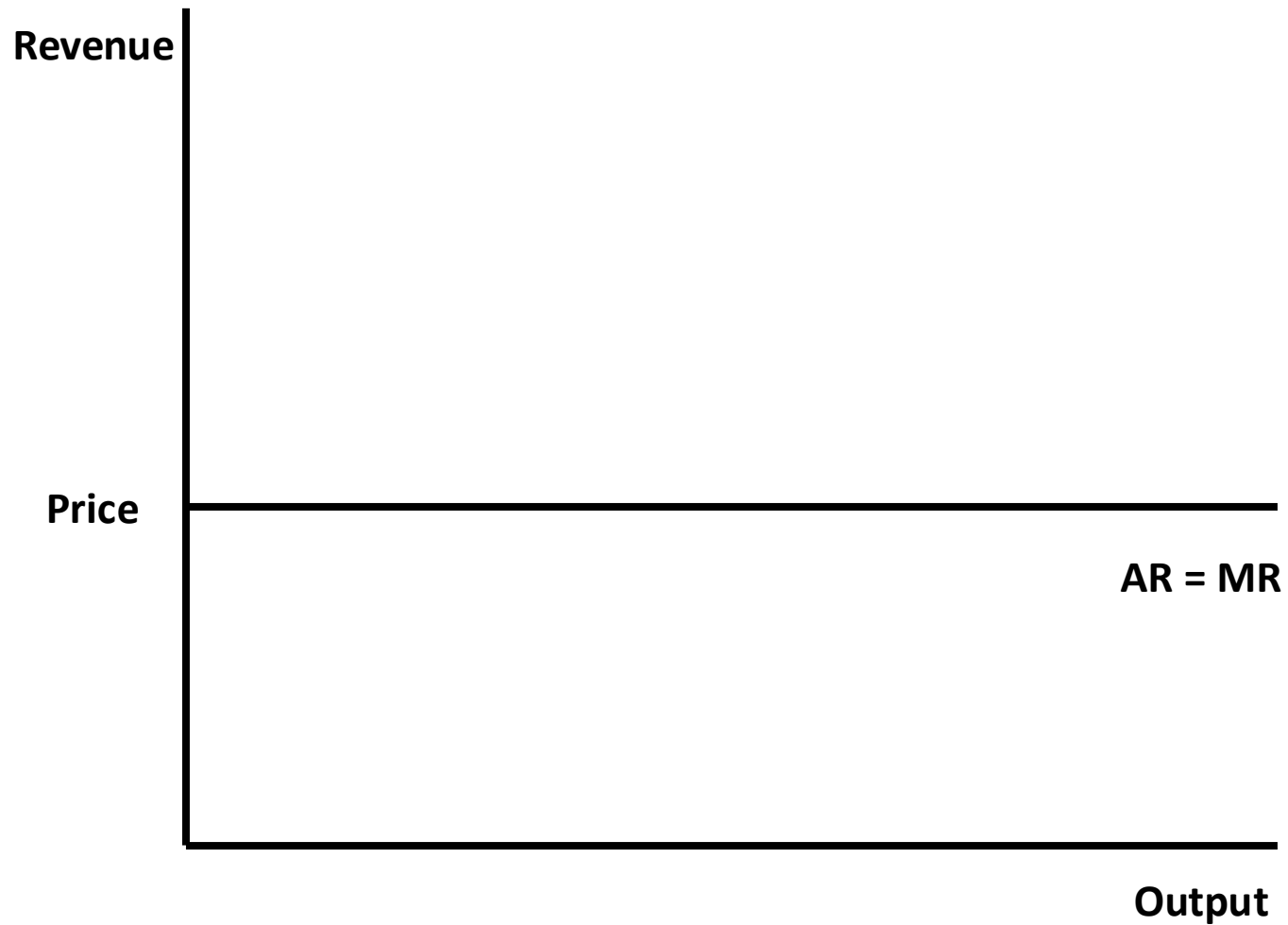
Total revenue curve for a price taker (perfect competition)

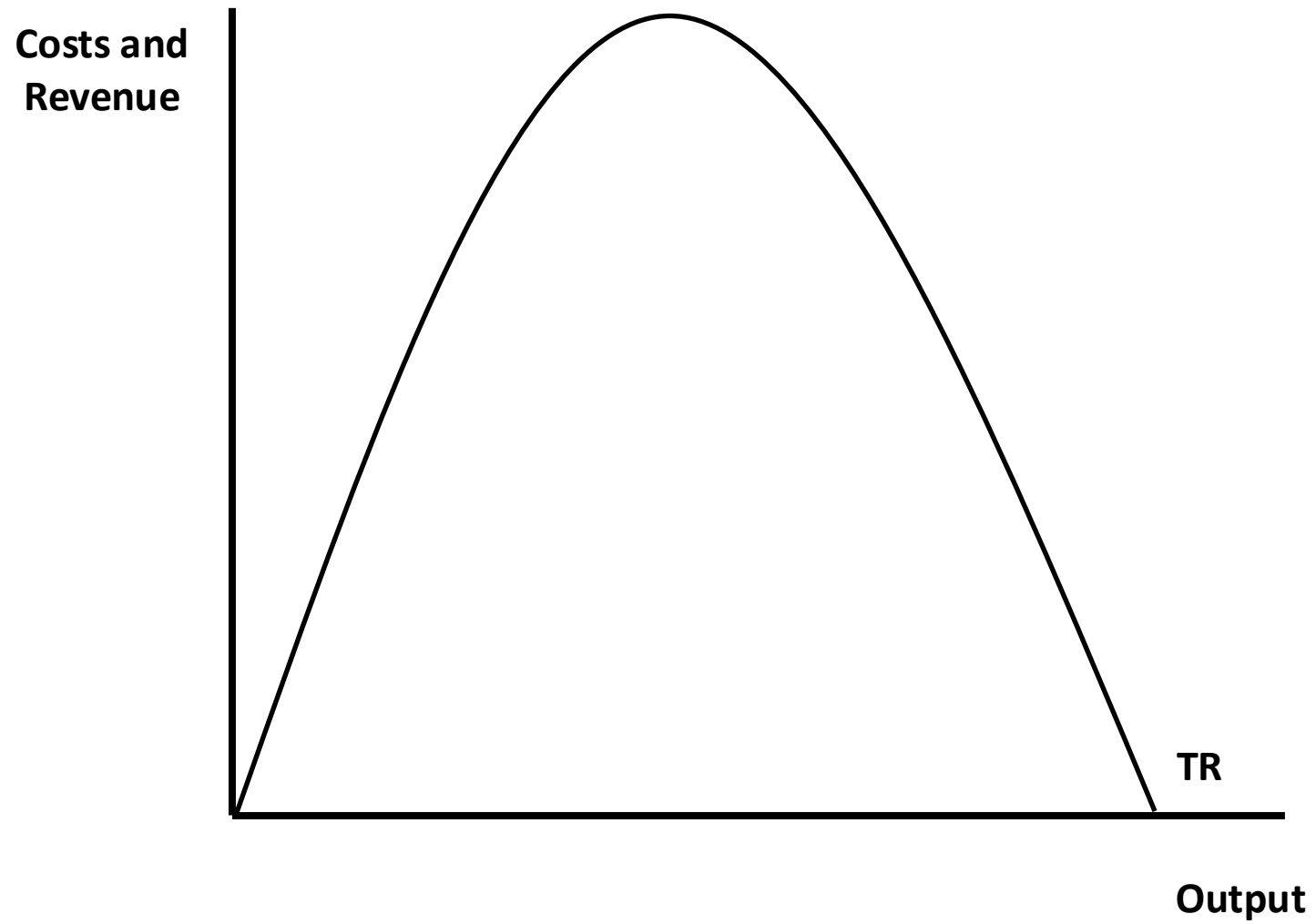


Decrease in total revenue for a price taker (perfect competition) due to fall in market price

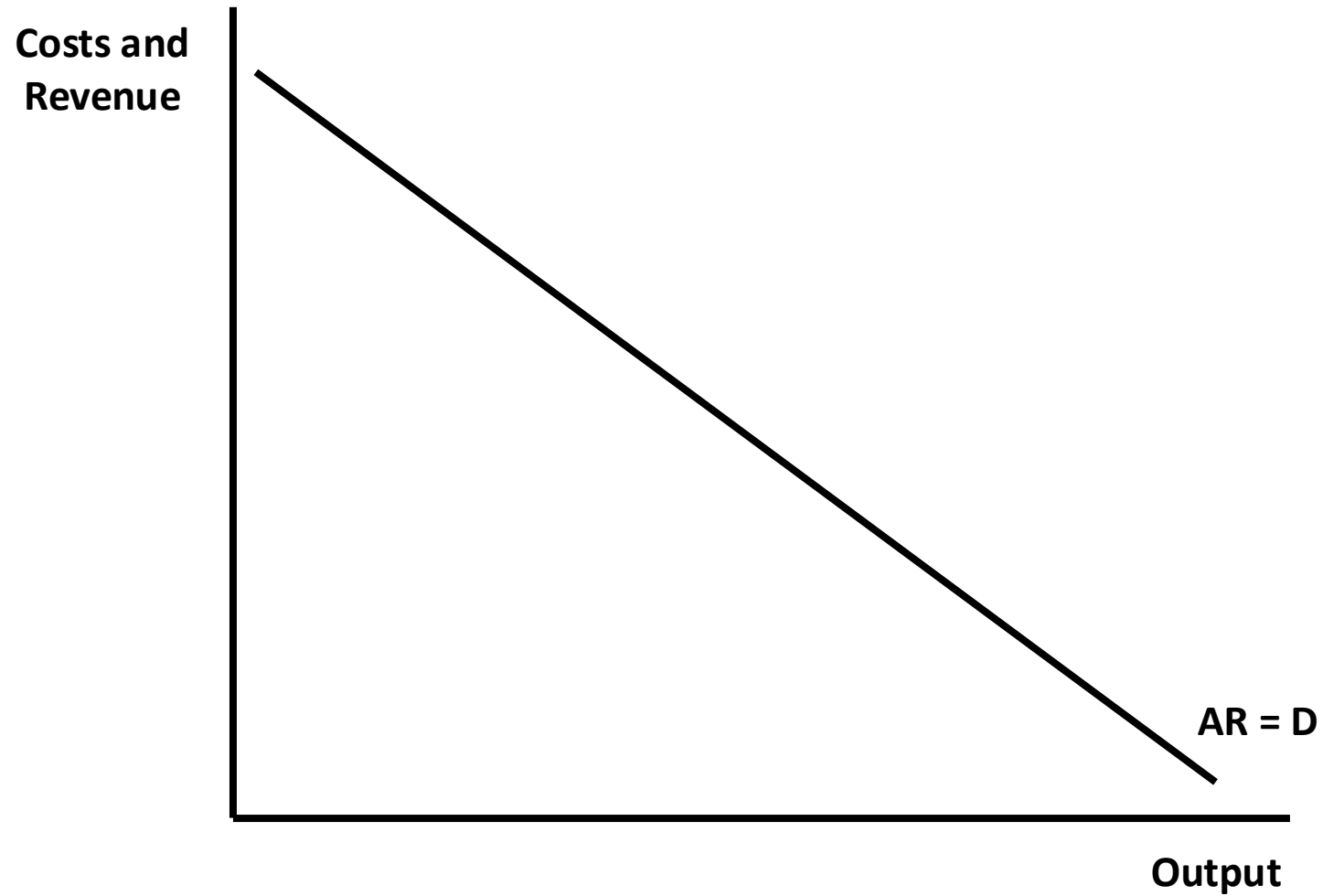


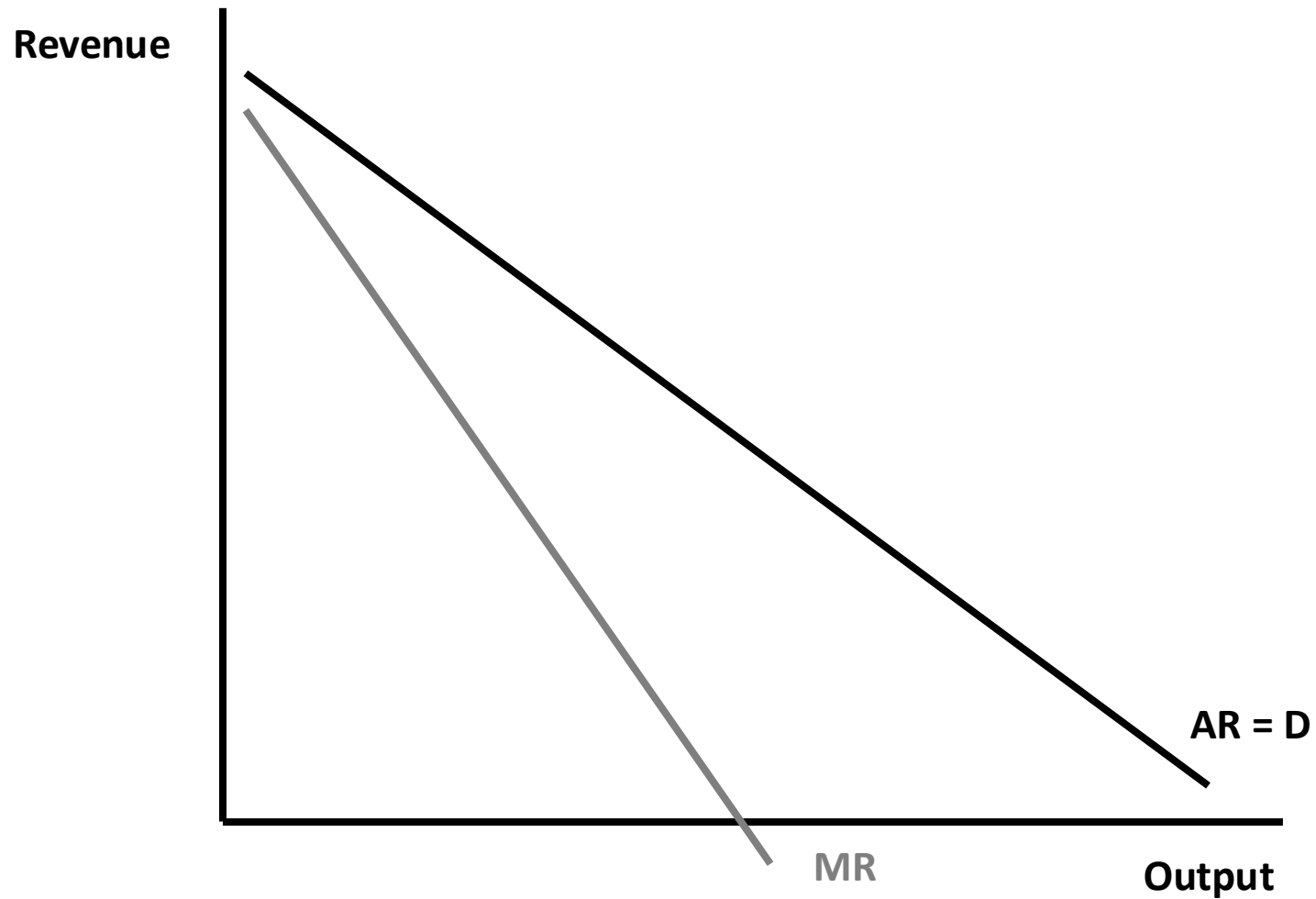
Marginal Revenue MR curve for a price taker (perfect competition); MR is the gradient of the TR curve



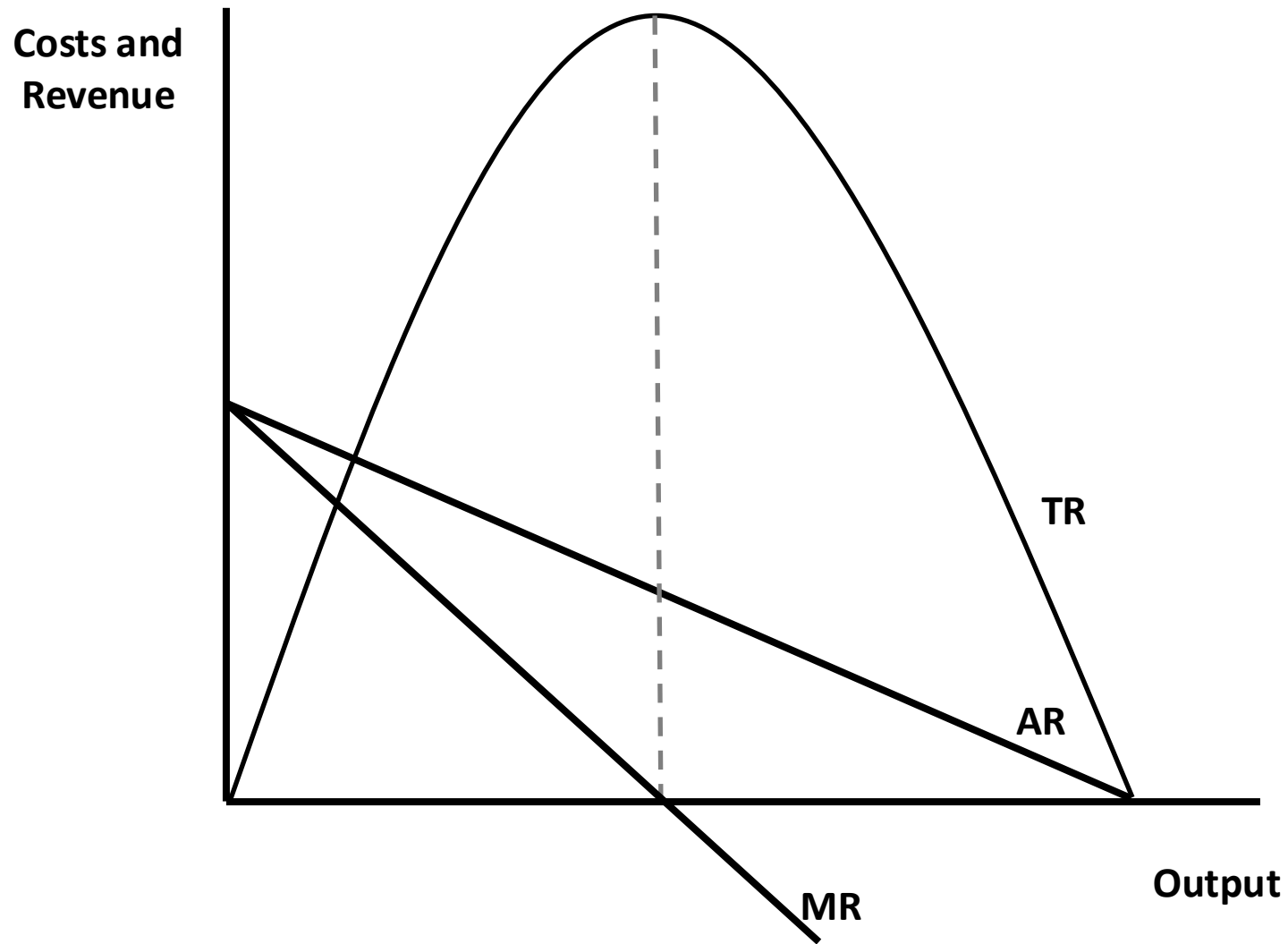


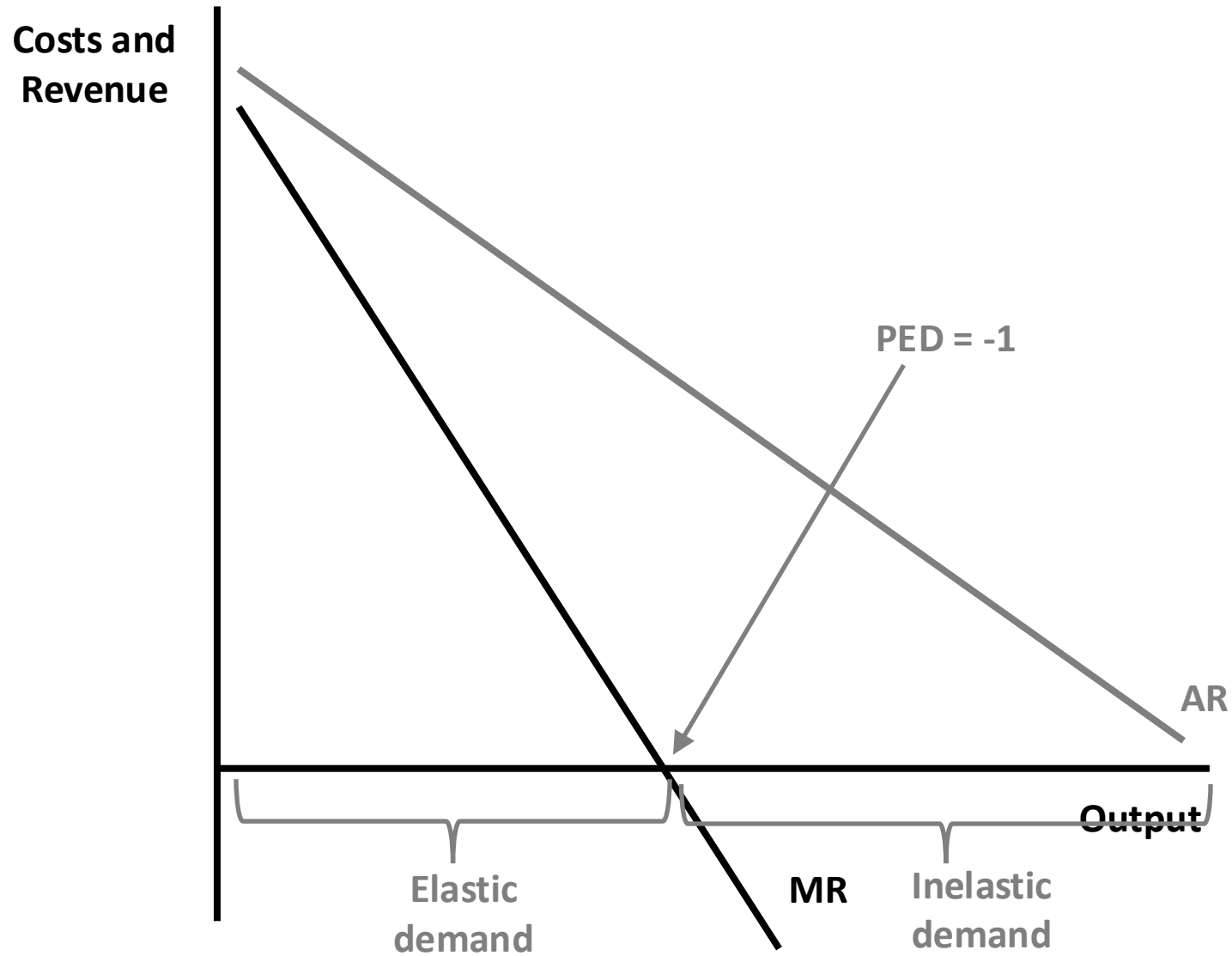
Total revenue curve for a price maker (imperfect competition)



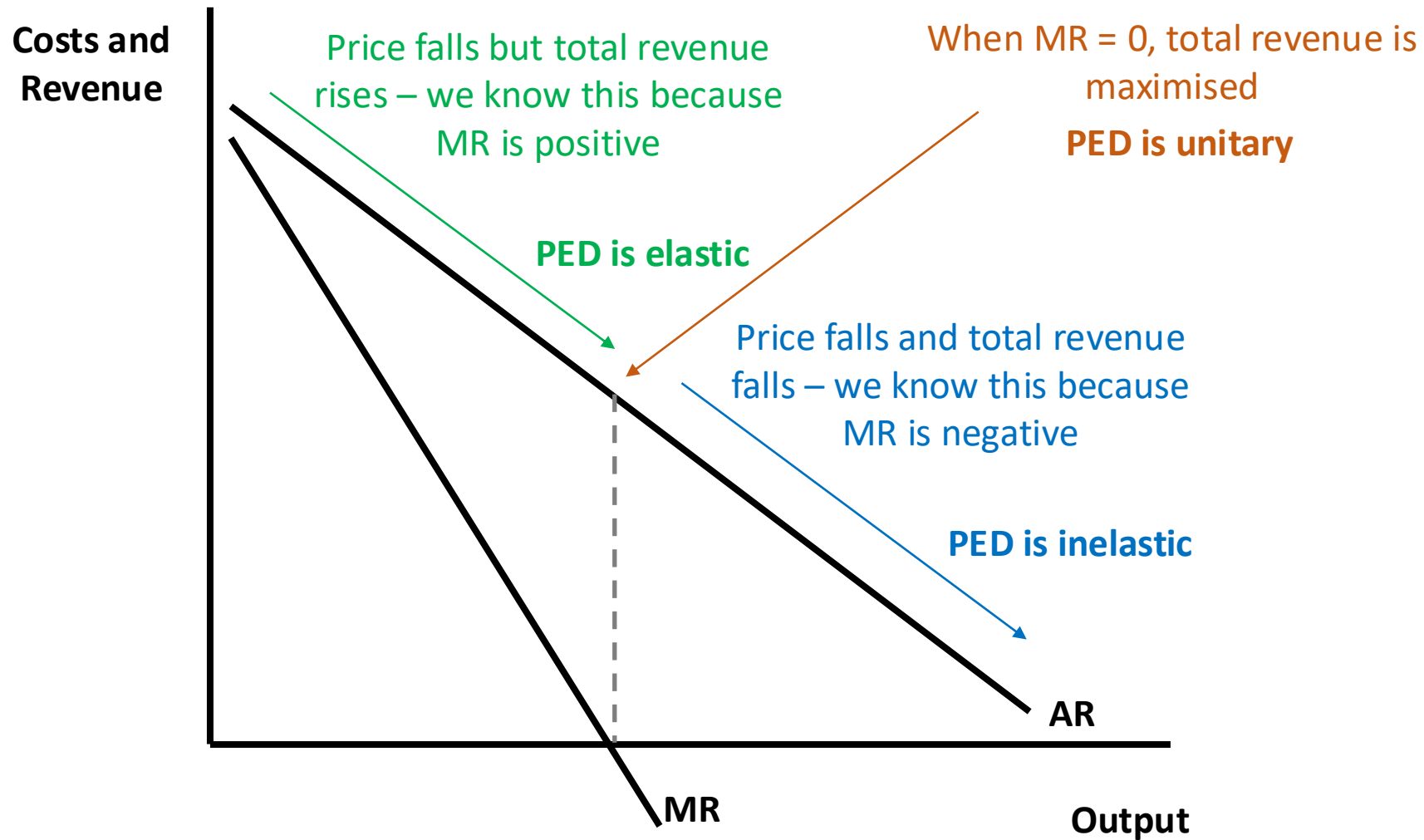


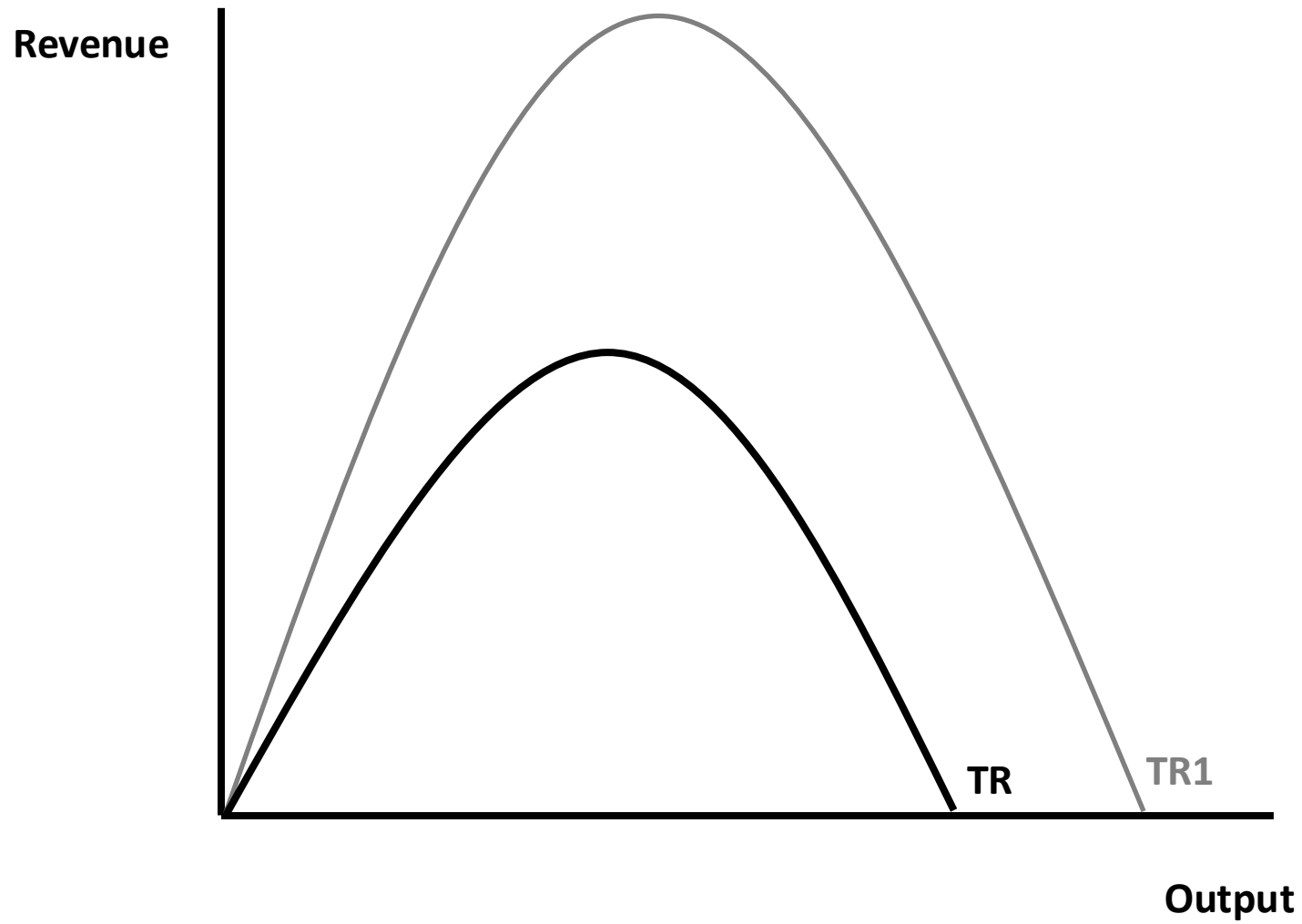
Average and marginal revenue curves for price makers
(imperfect competition)



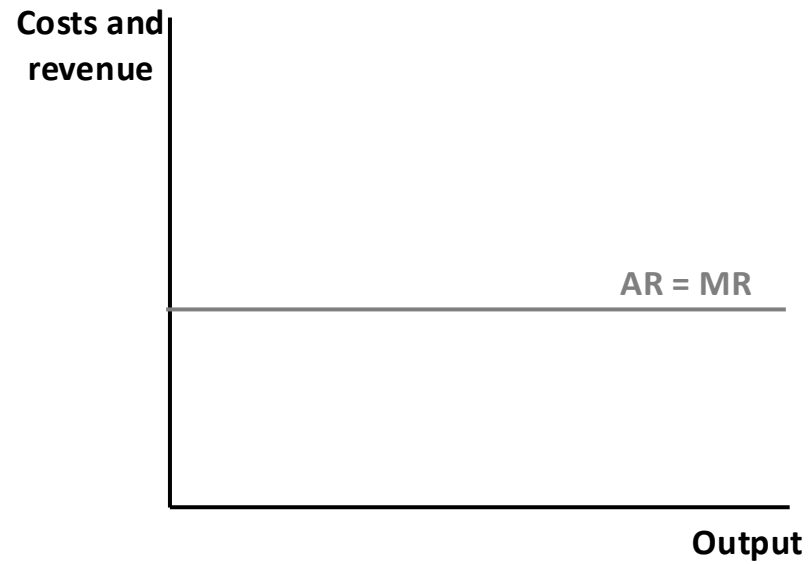
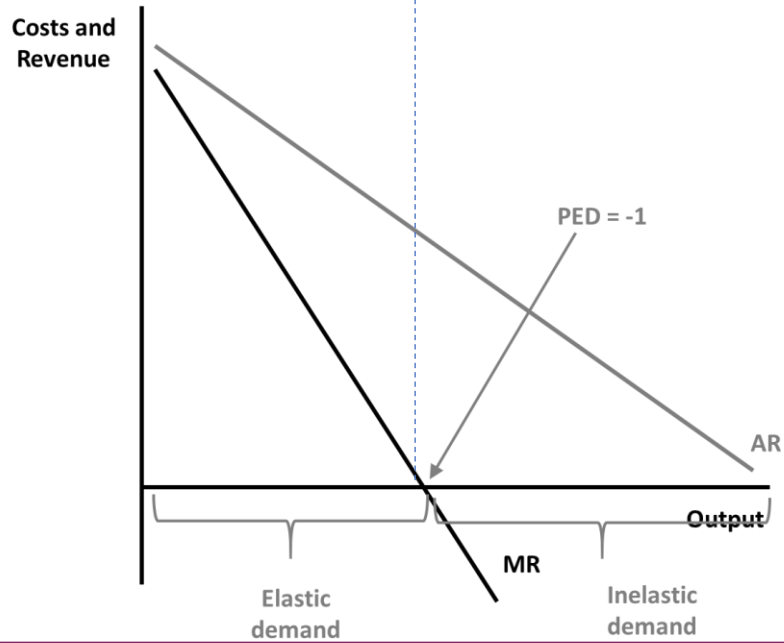
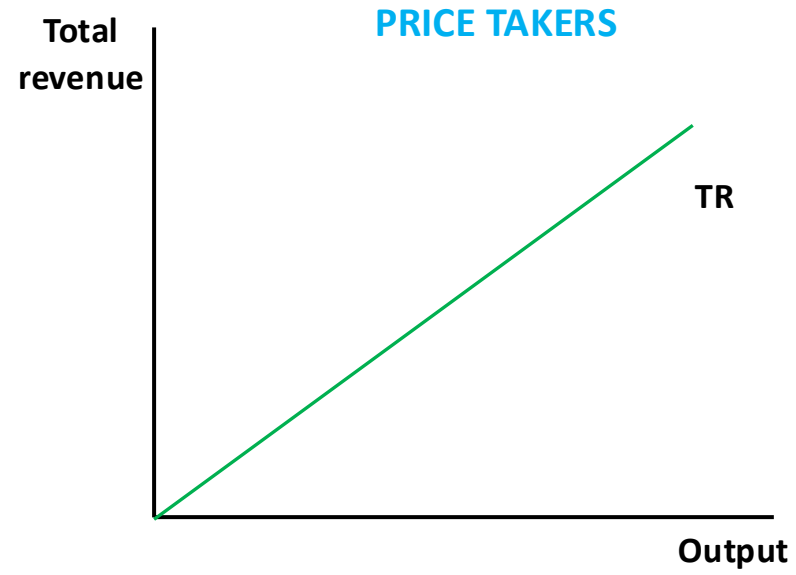
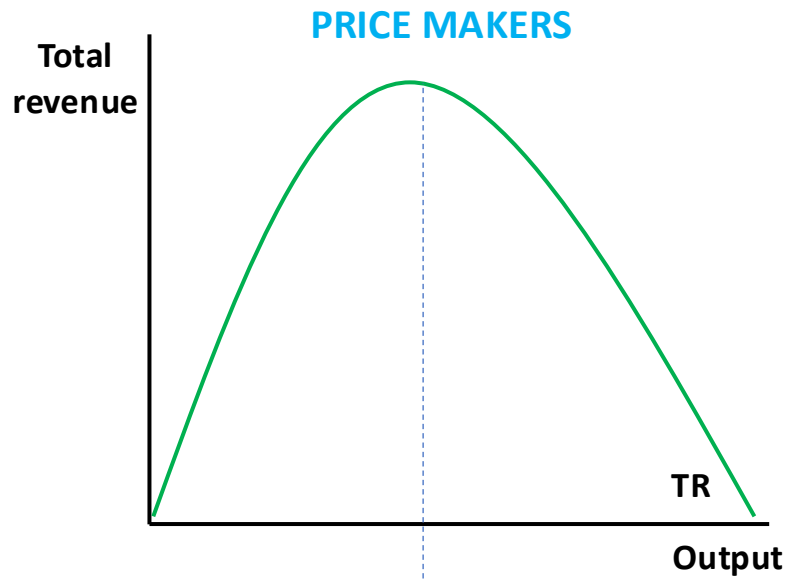


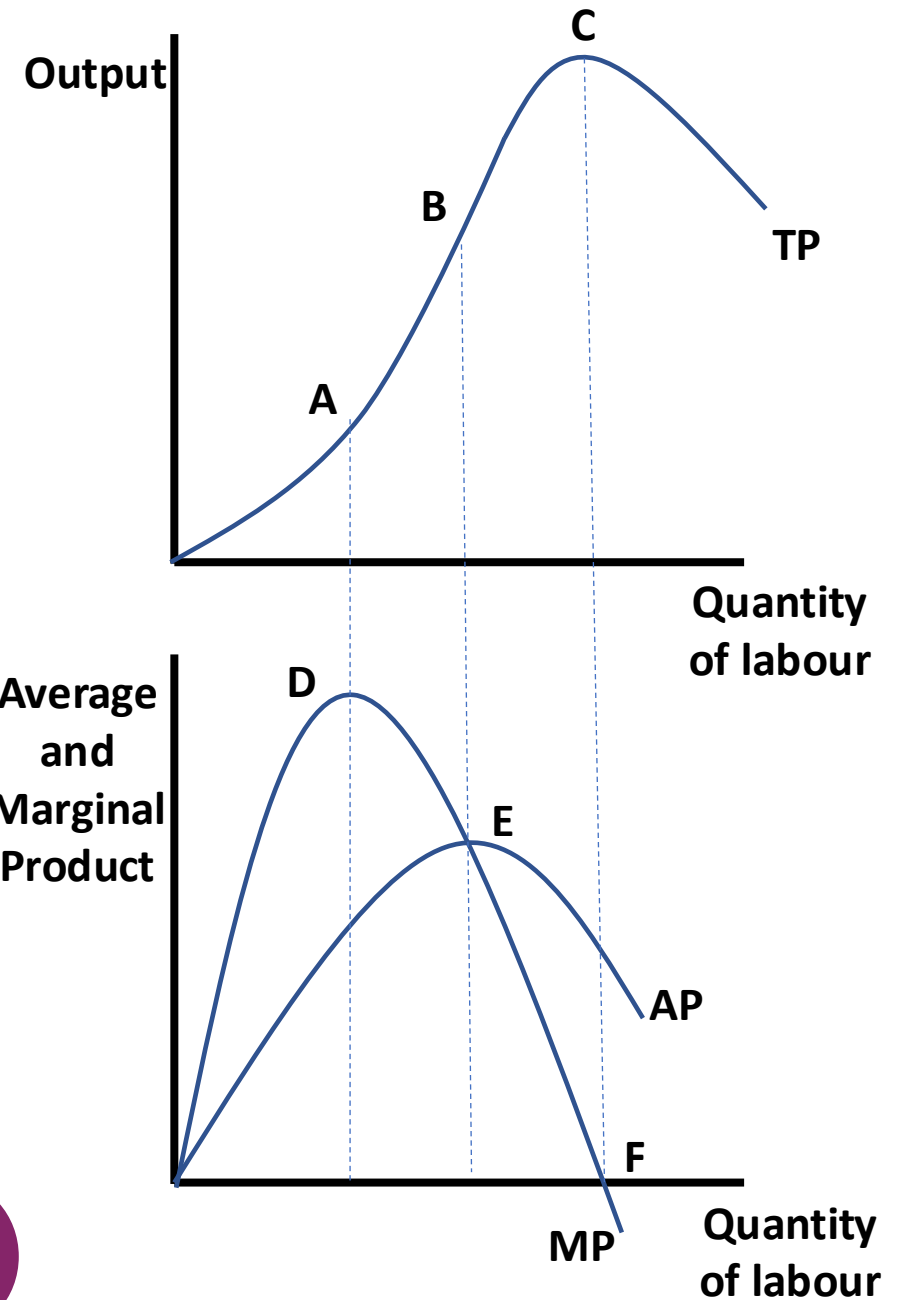
Outputs showing elasticity of demand derived from $AR = D$ curve



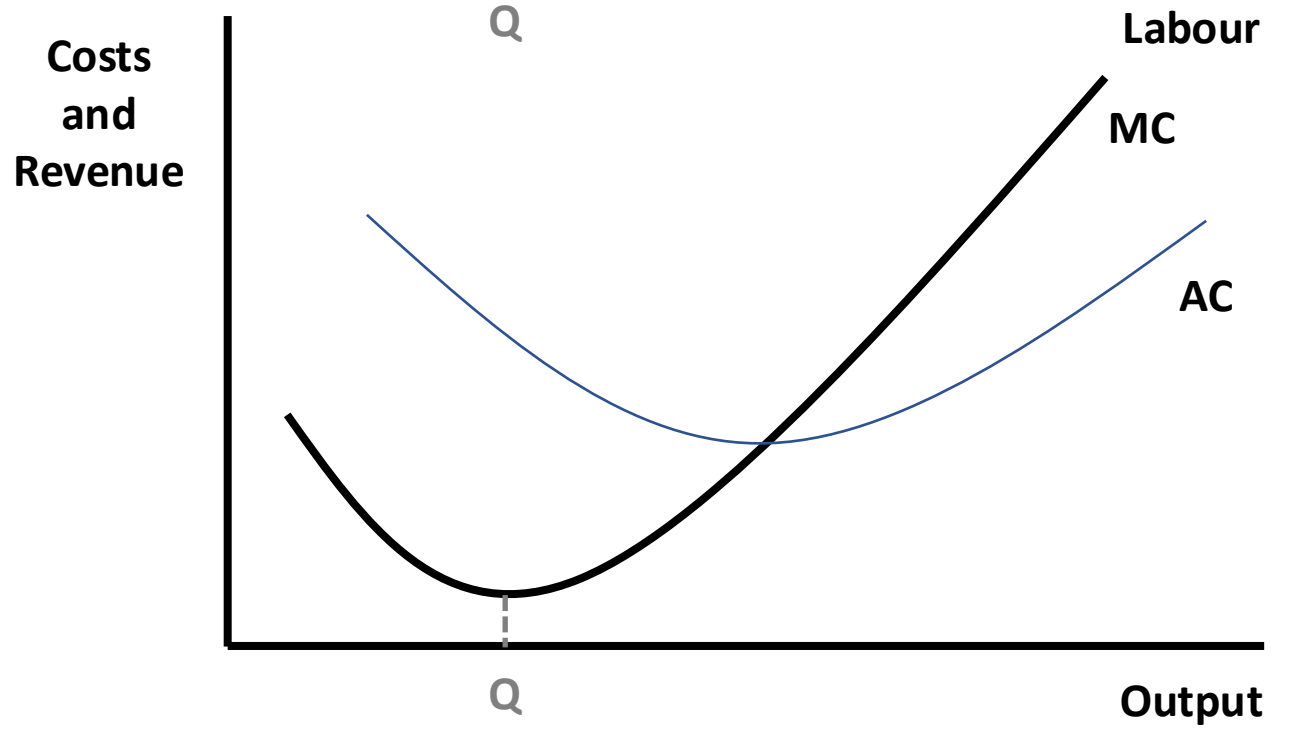
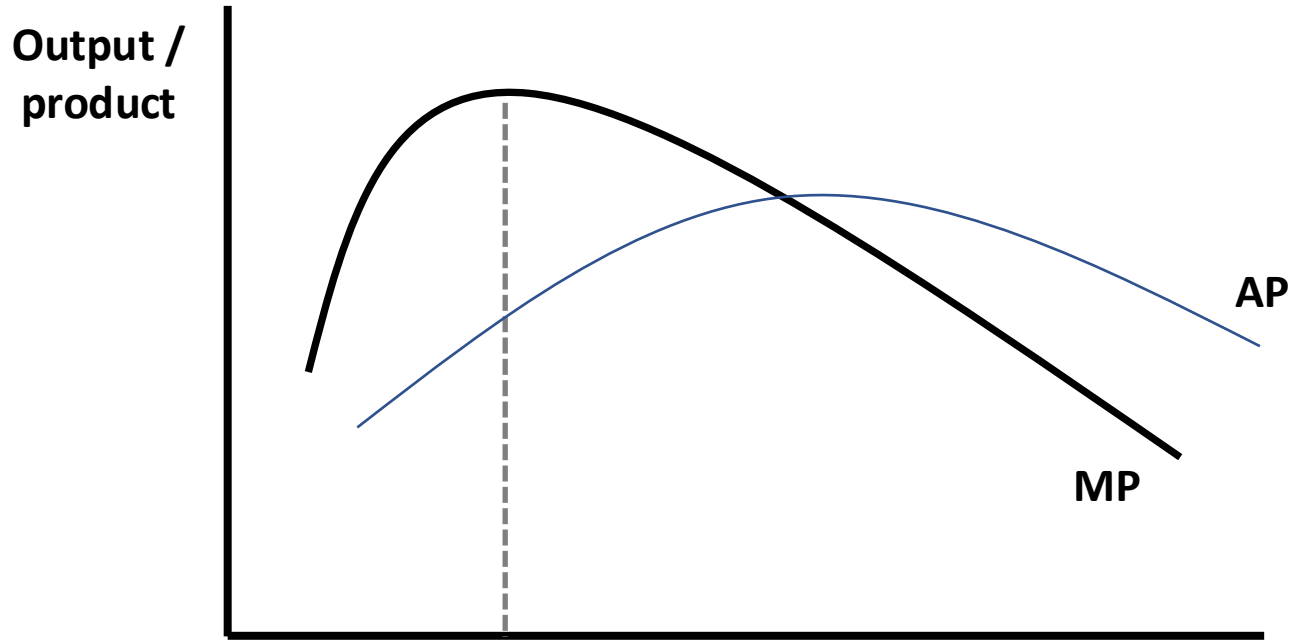


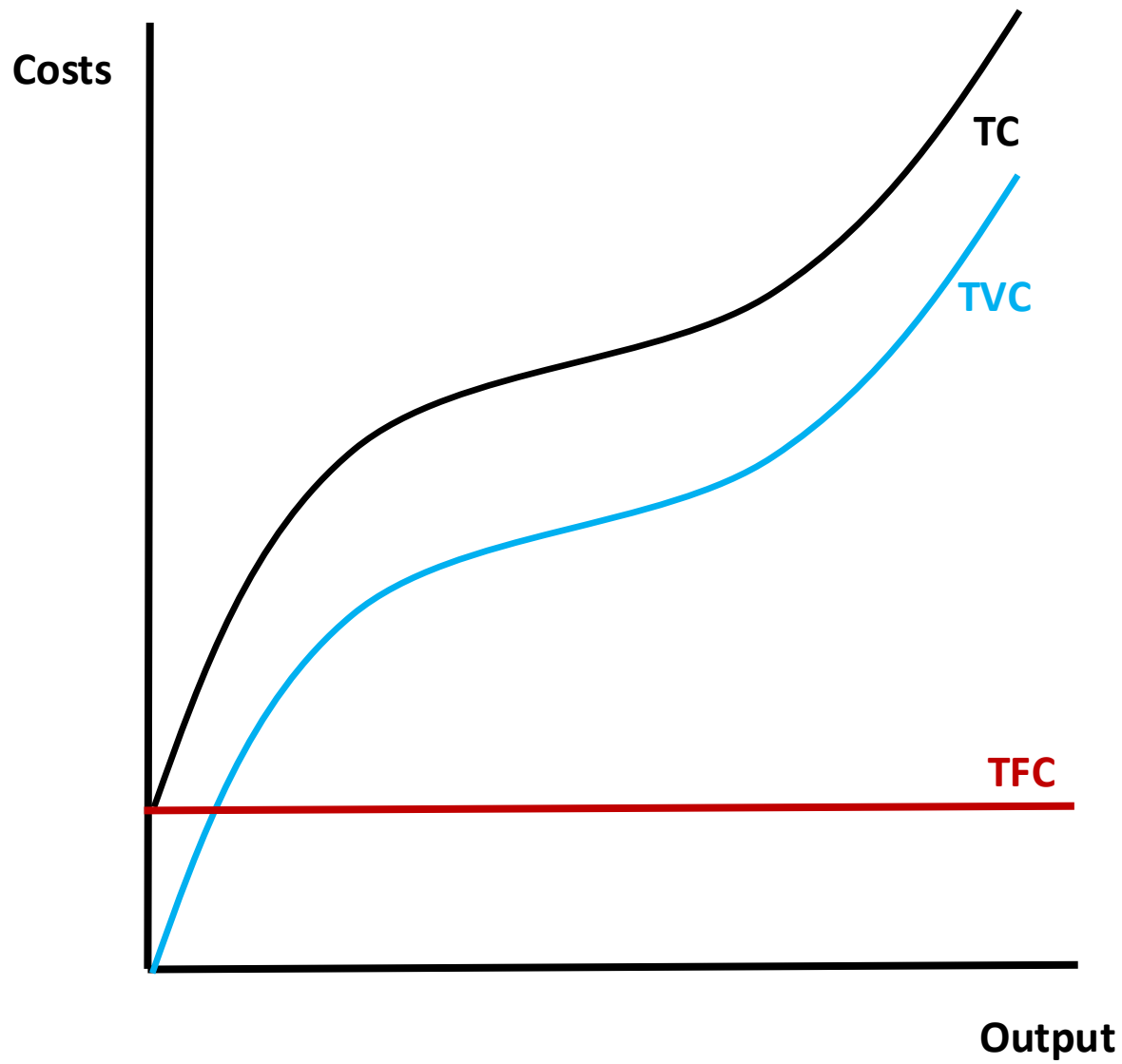
Increase in total revenue for a price maker (imperfect competition), due to increase in demand



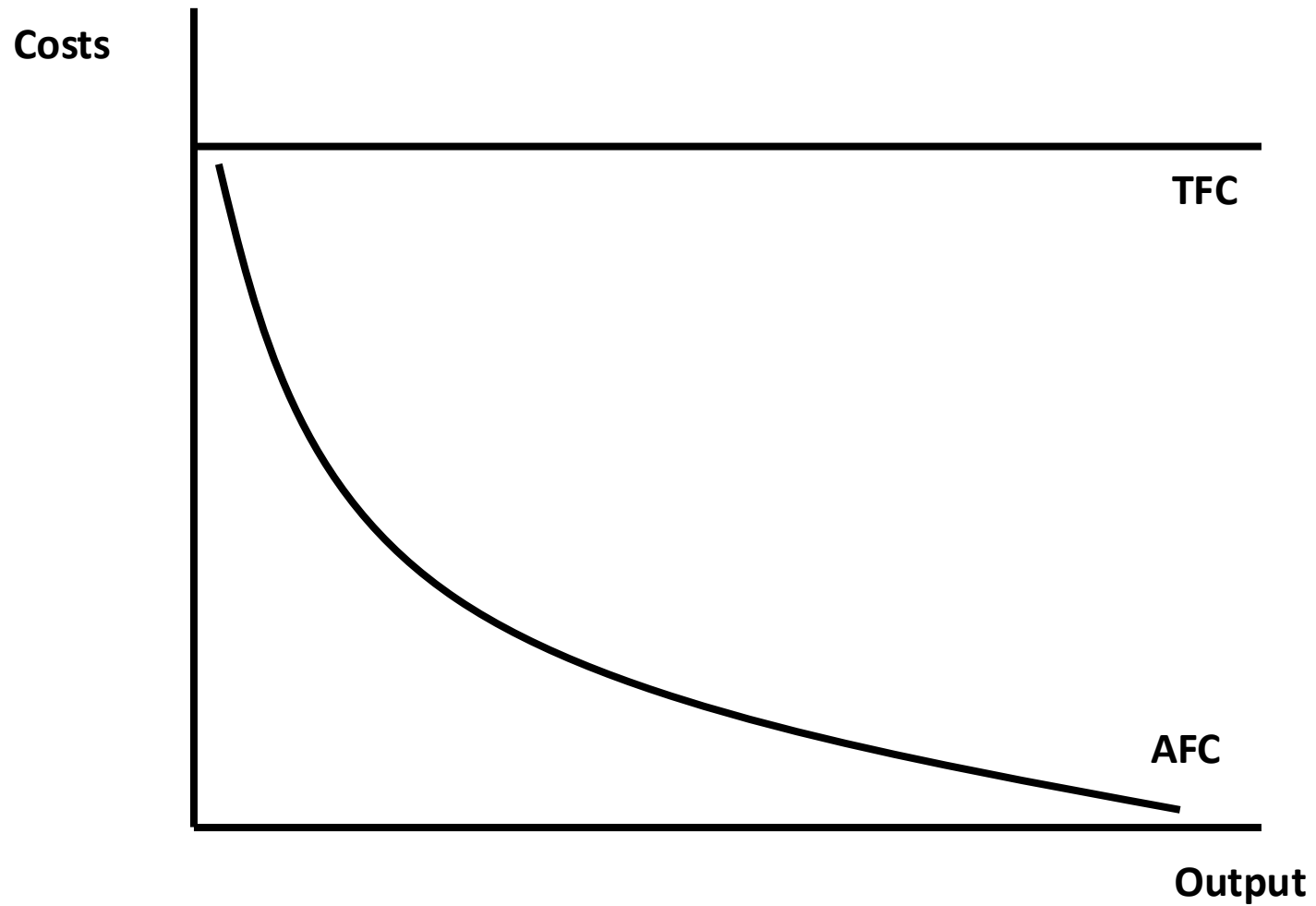


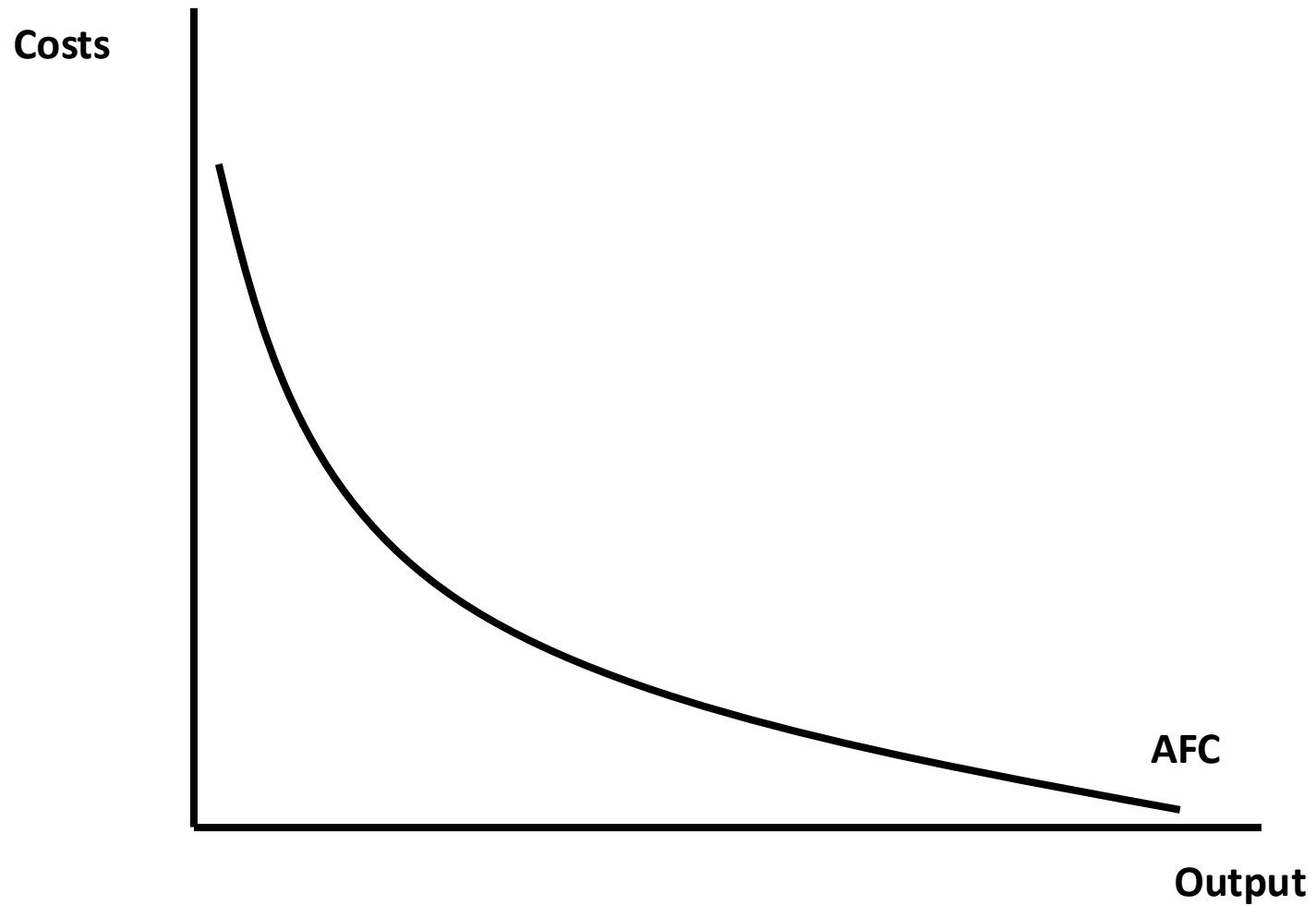
Relationship between total product curve and average product and marginal product curves. $AP = TP/Q_{lab}$; MP is the change in TP when one more unit of labour is added – it is the gradient of the TP

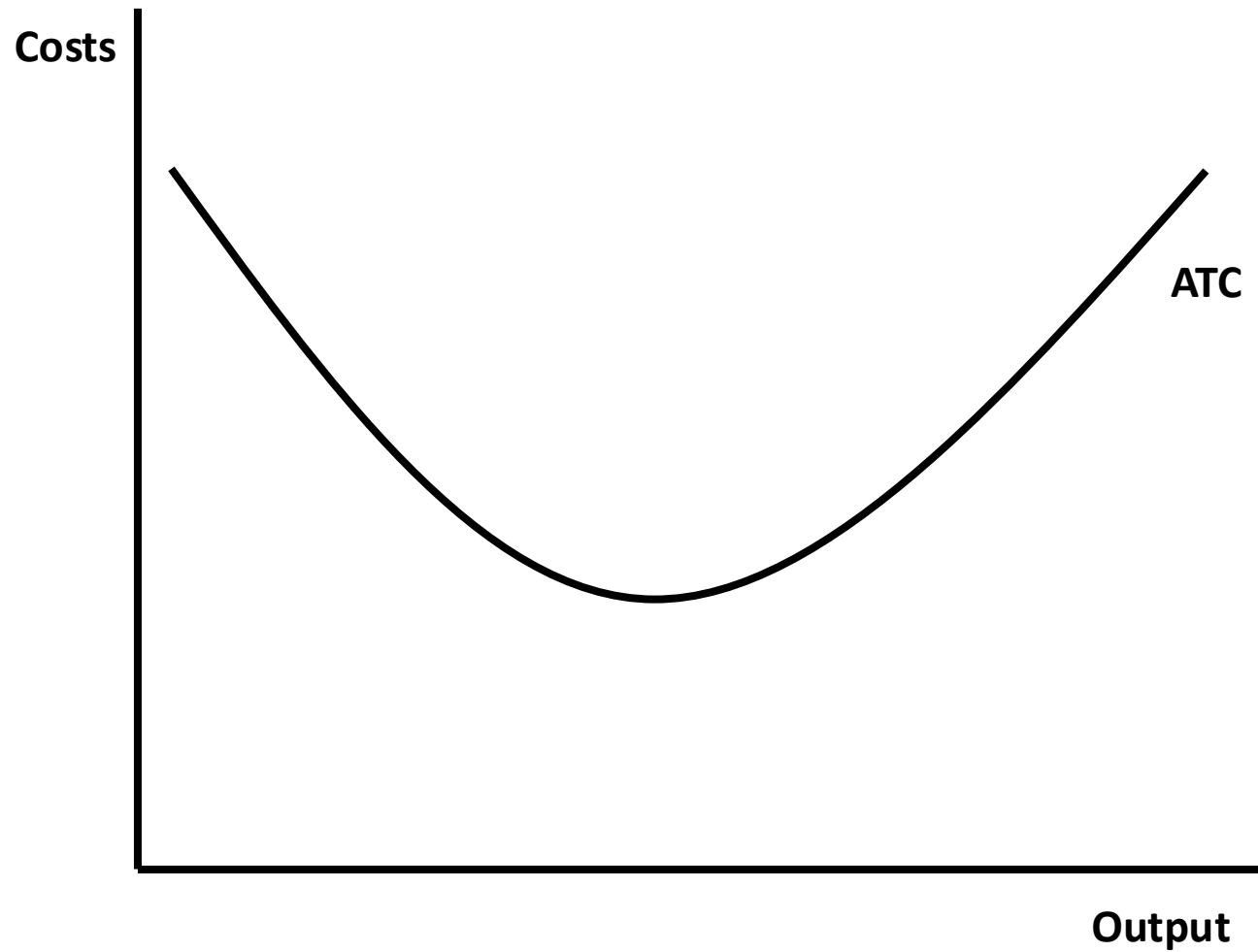


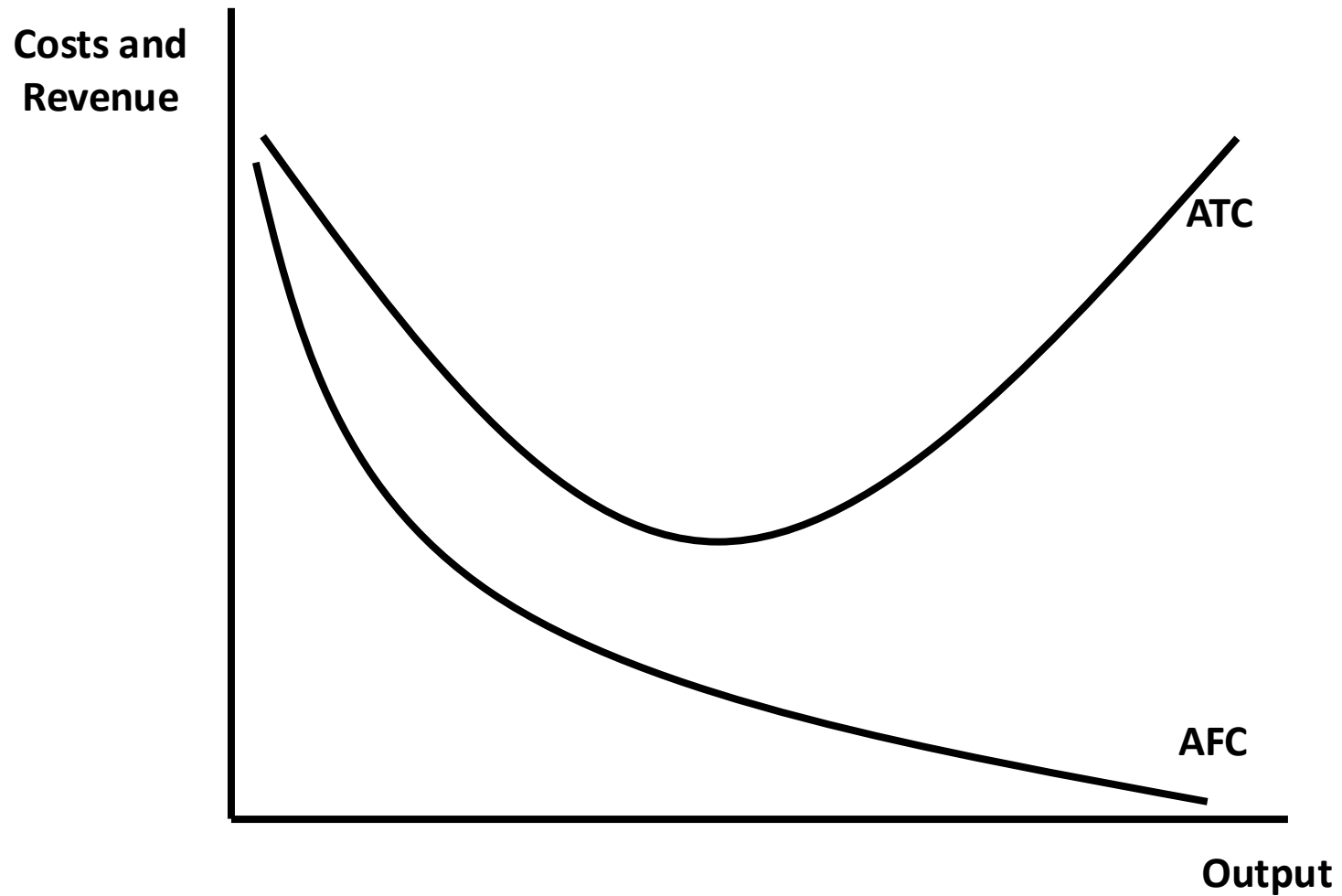


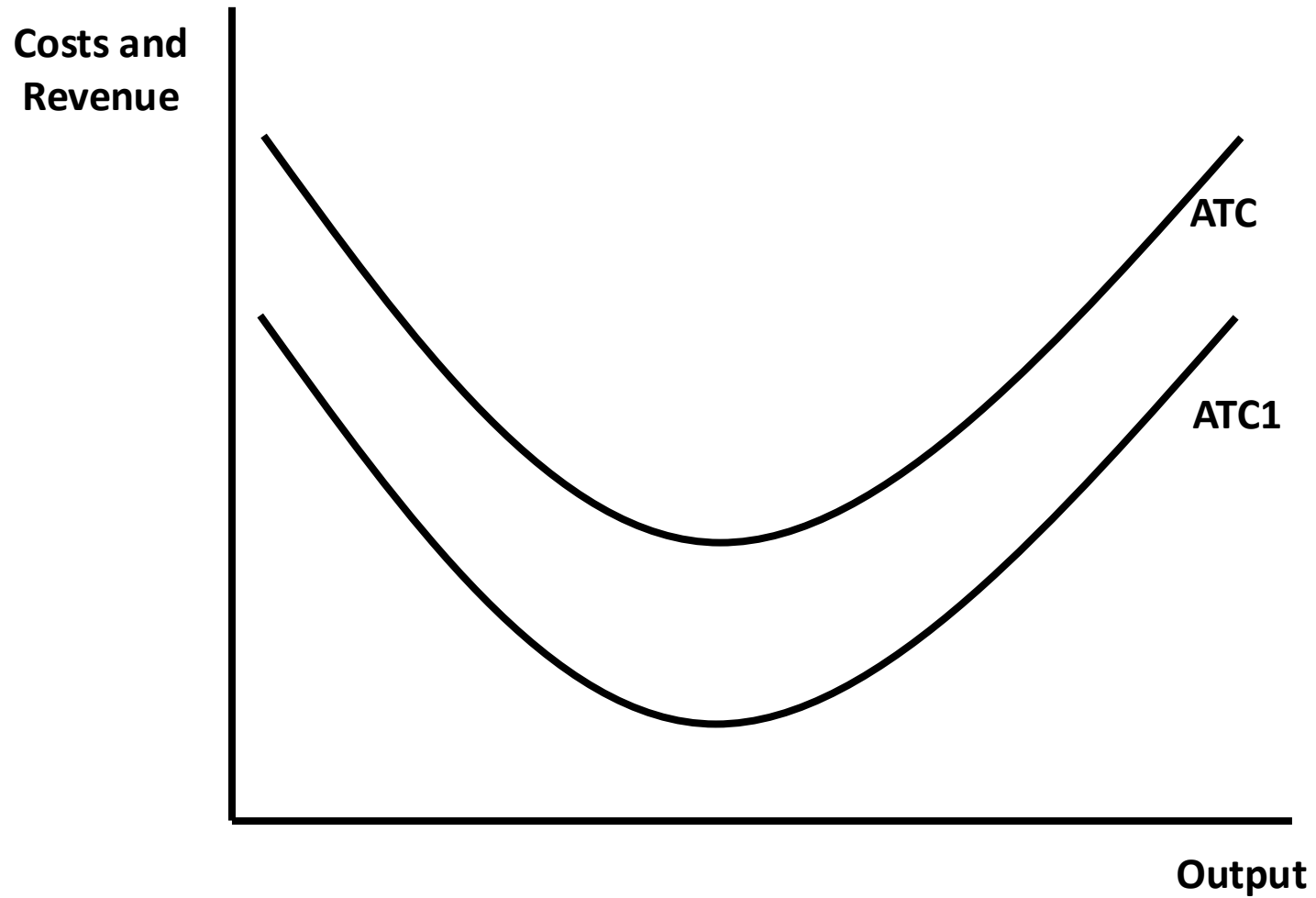
Total cost curves: $TFC + TVC = TC$



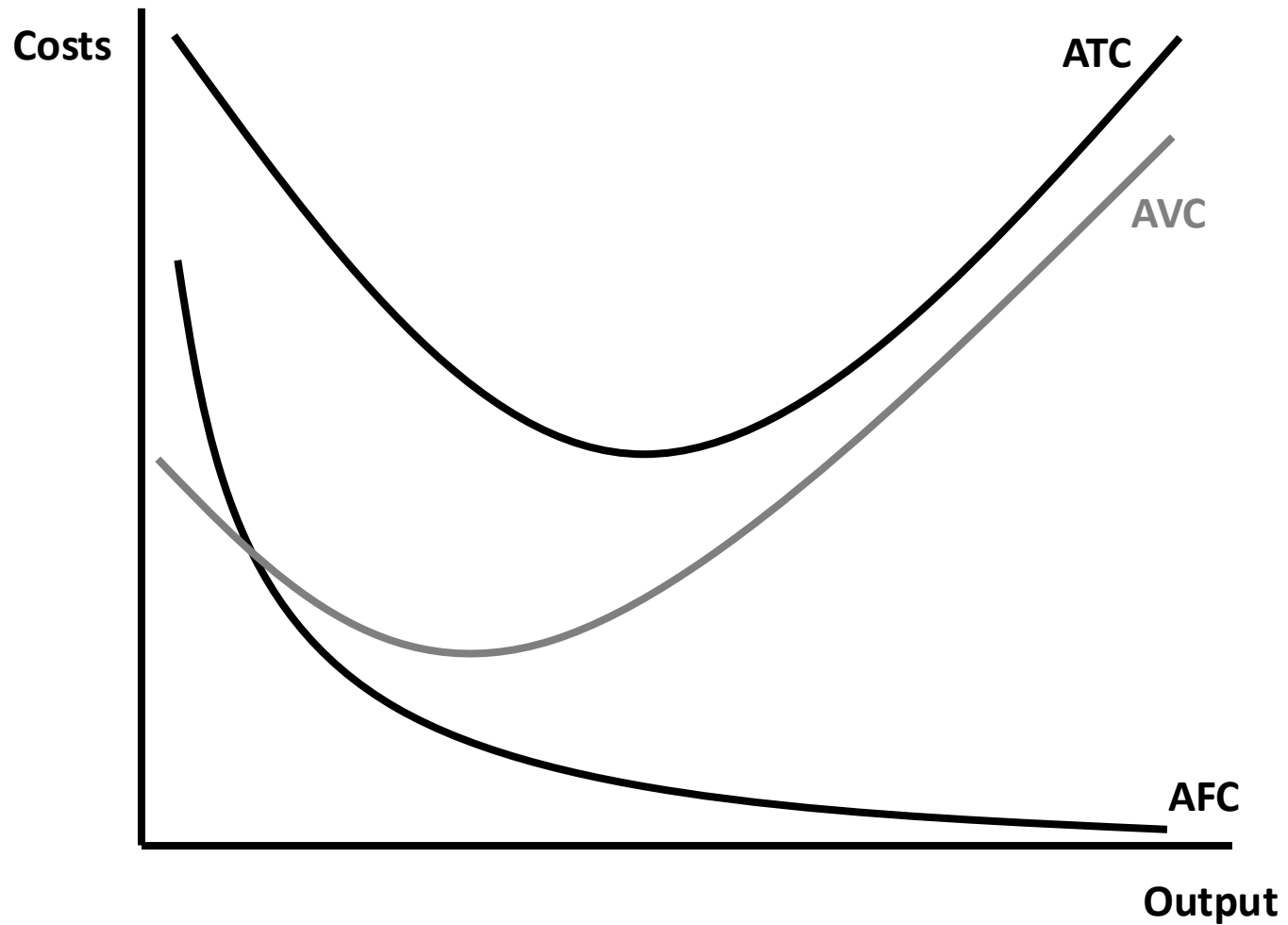




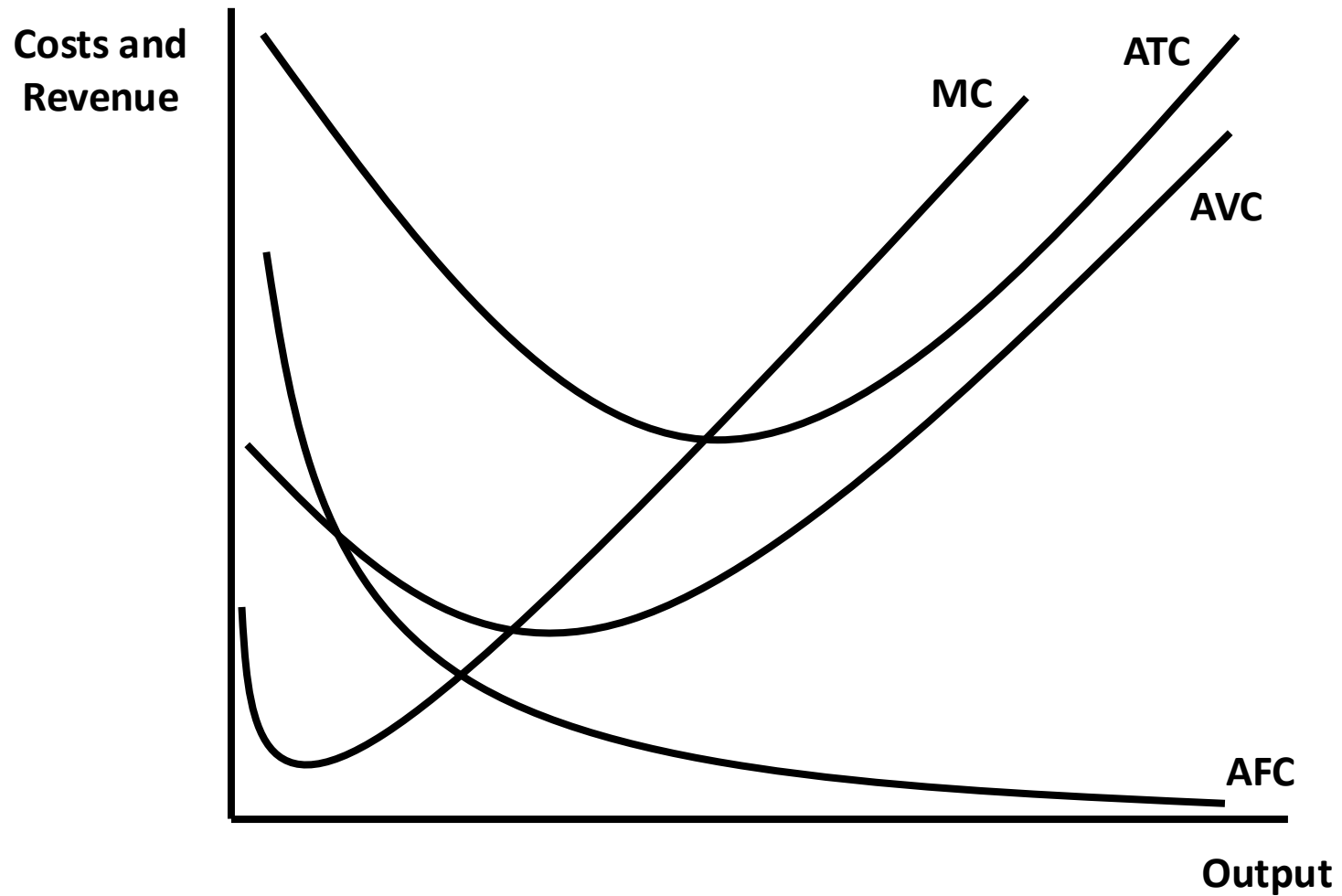




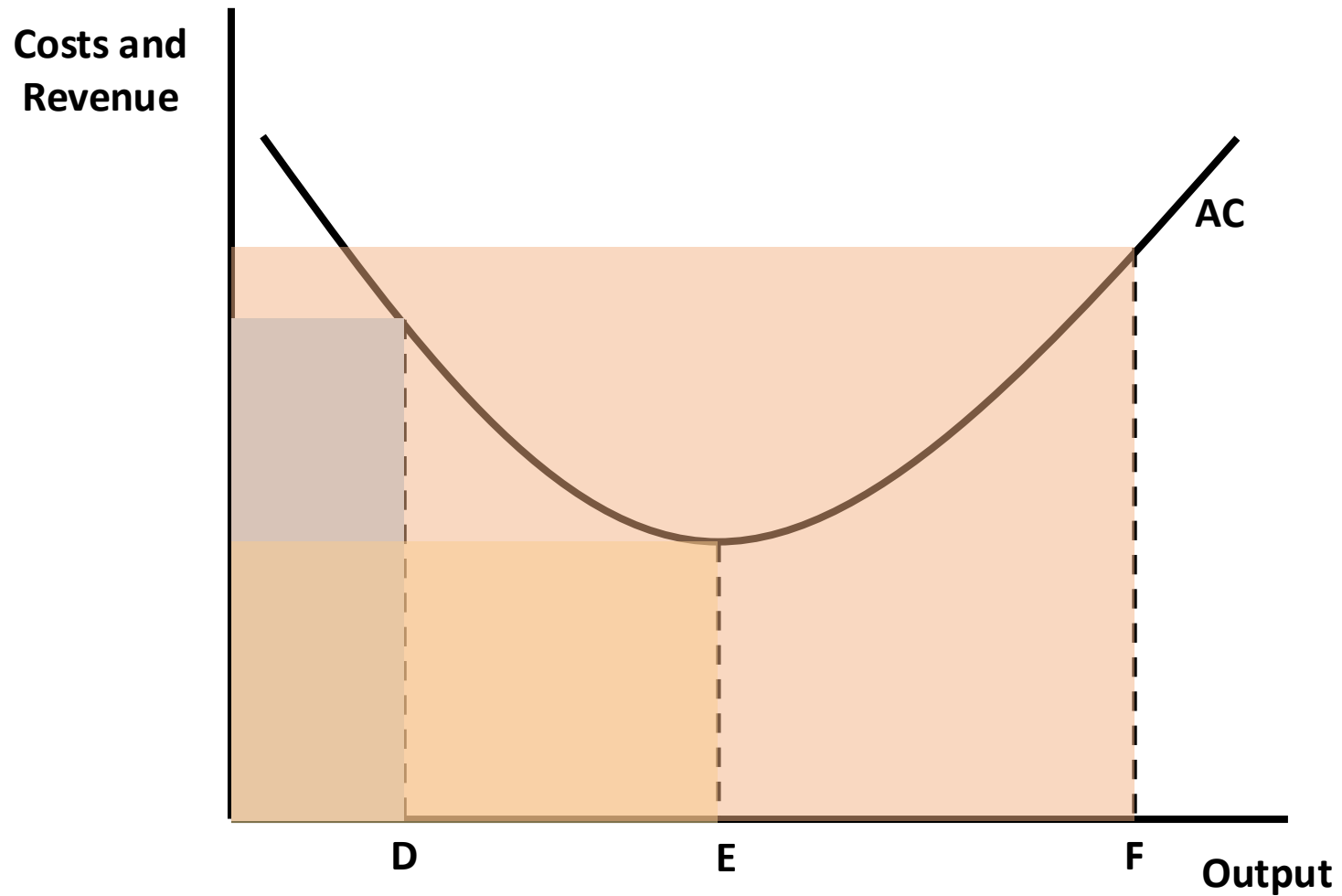
Fall in average total costs



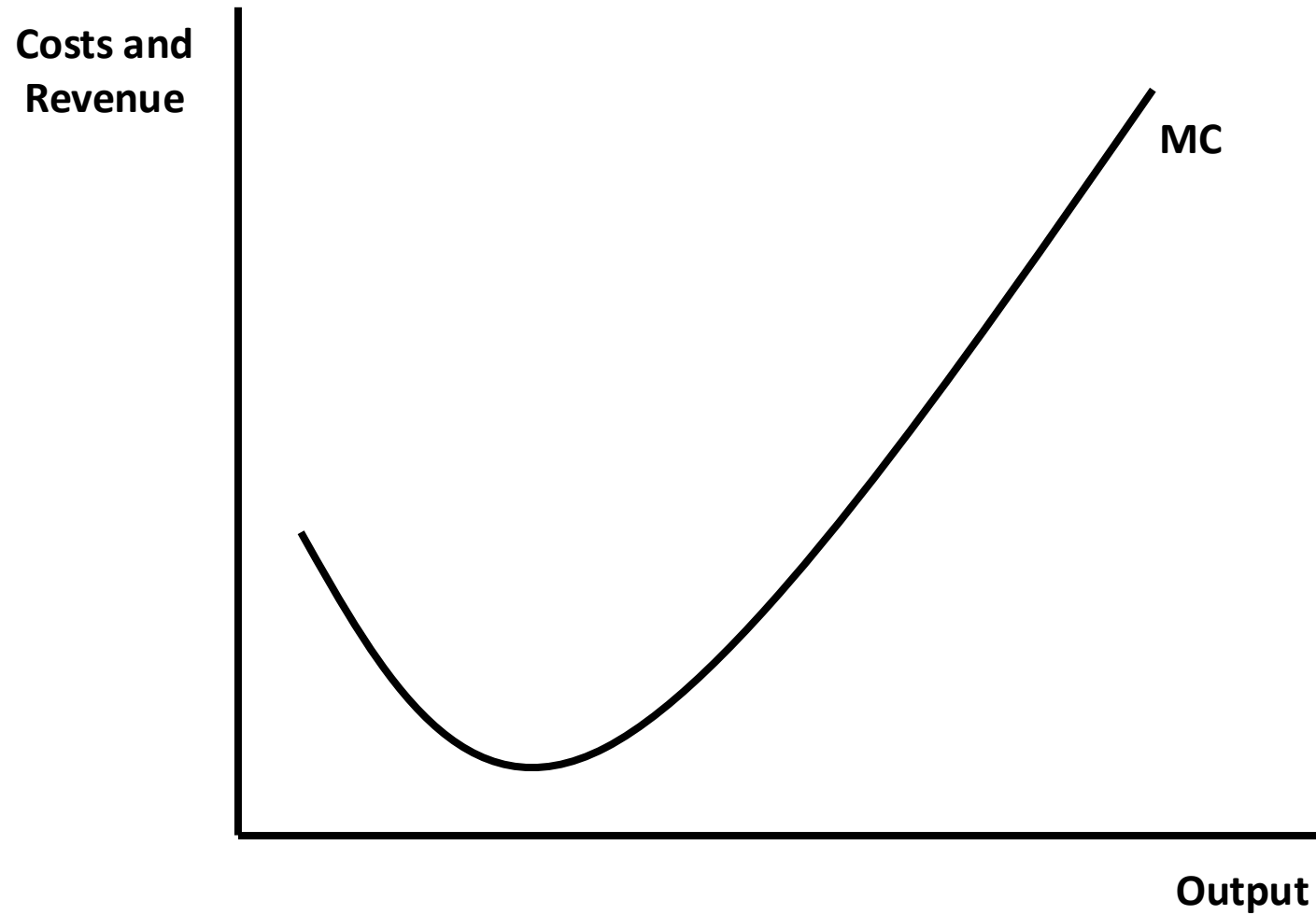
Average fixed, average variable and average total cost curves ($ATC = AFC + AVC$)

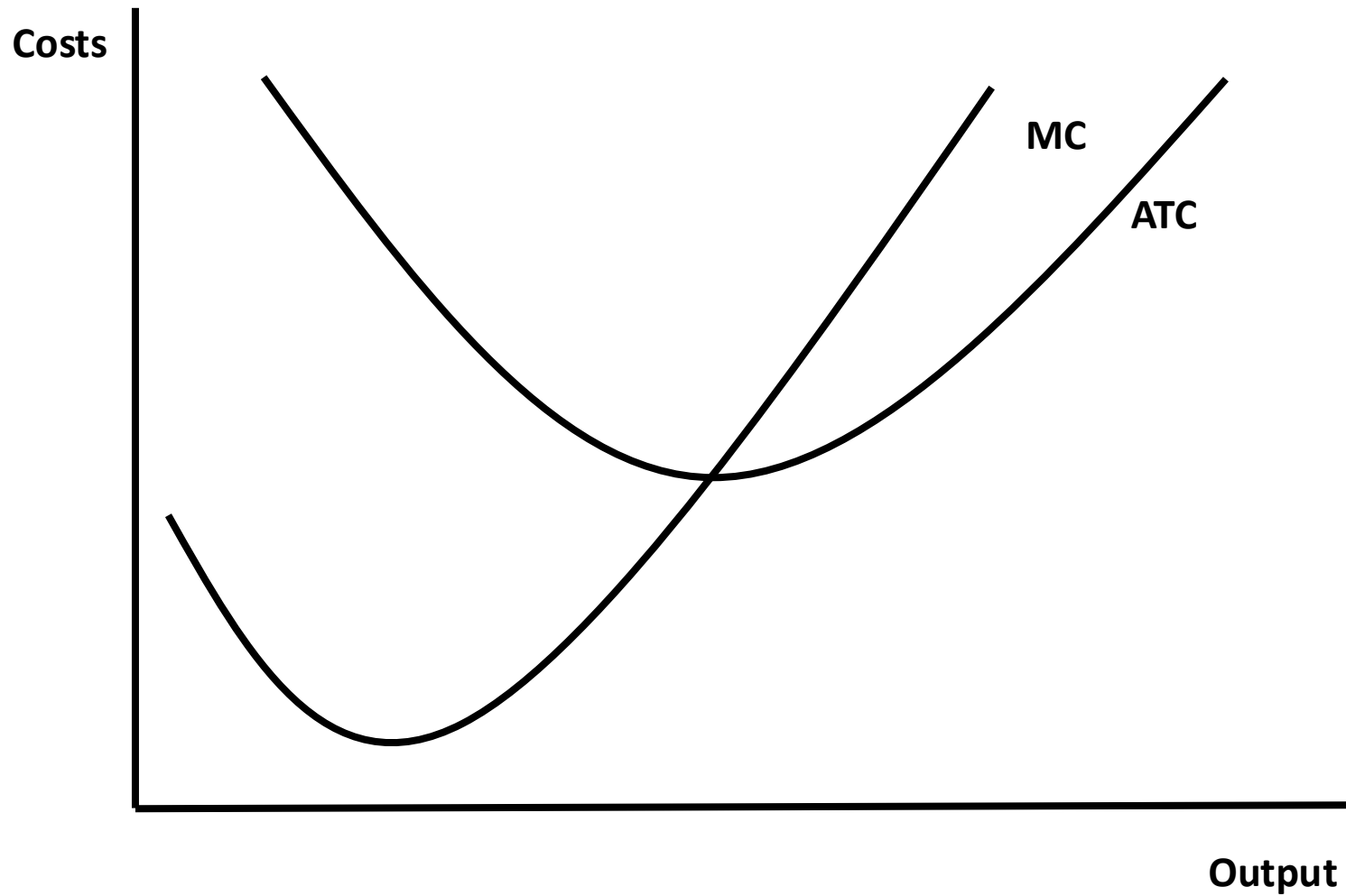


Short run cost curves (MC always cuts ATC and AVC curves at their minimum points)

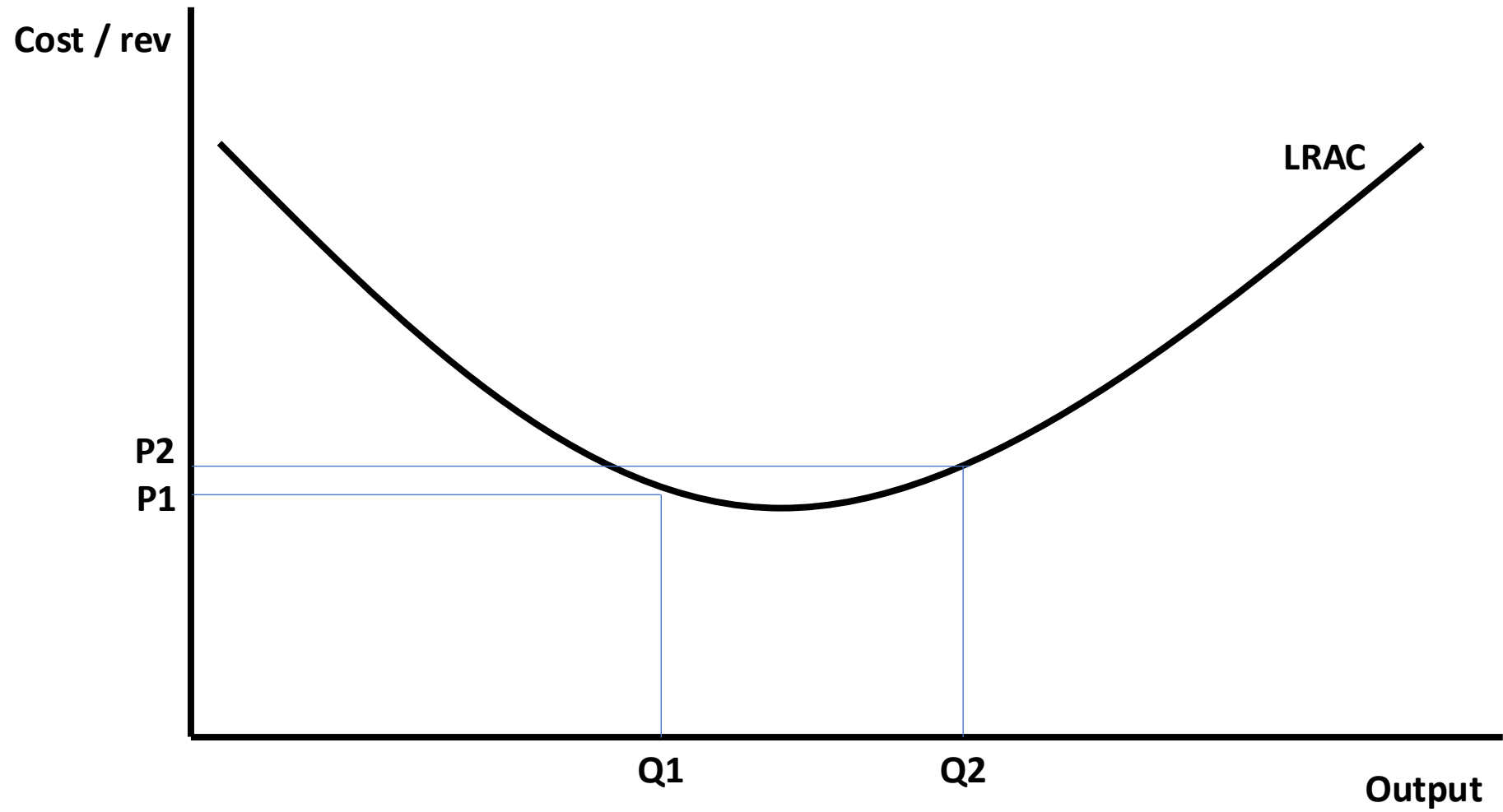


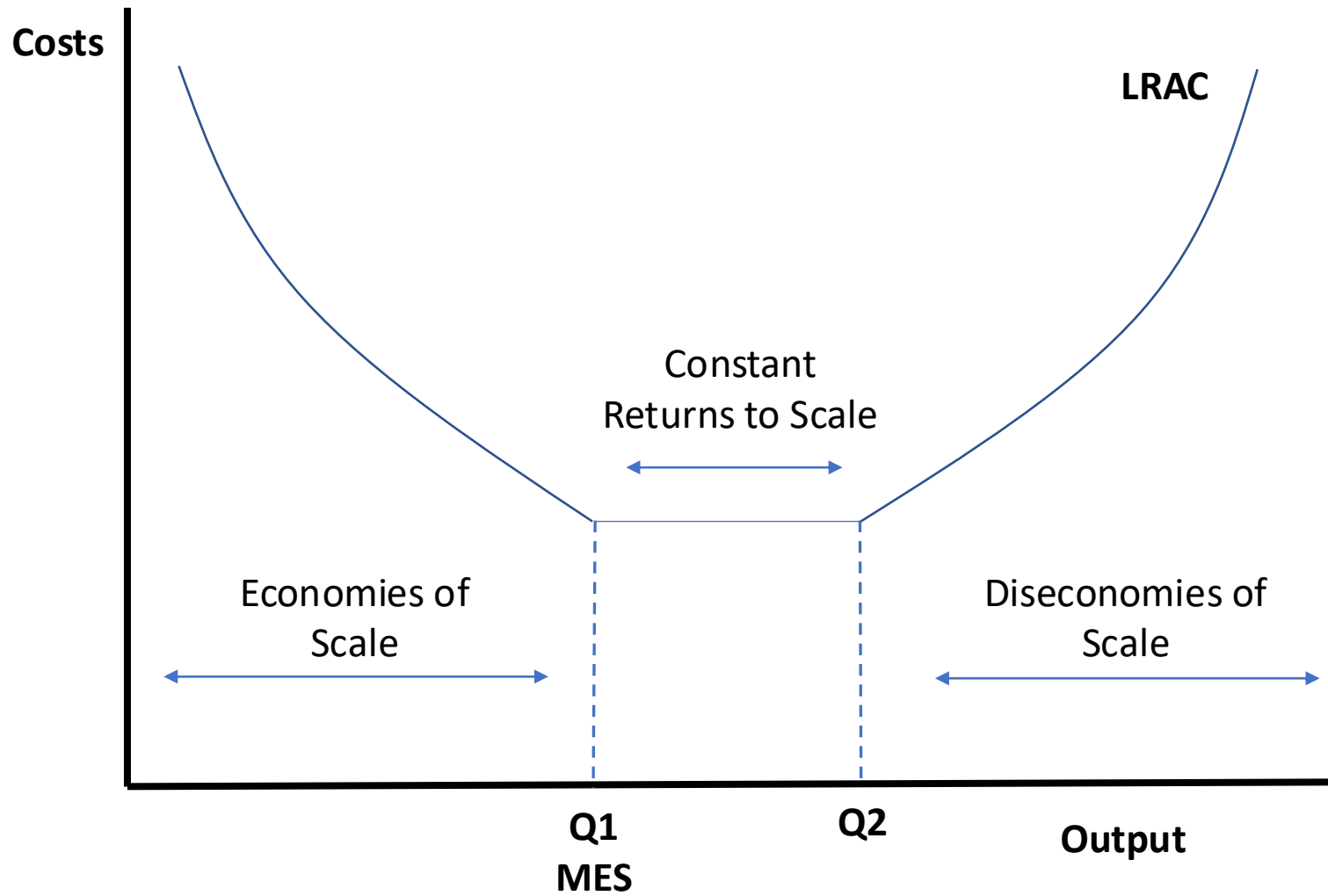
Total costs = average cost x output $TC=AC \times Q$



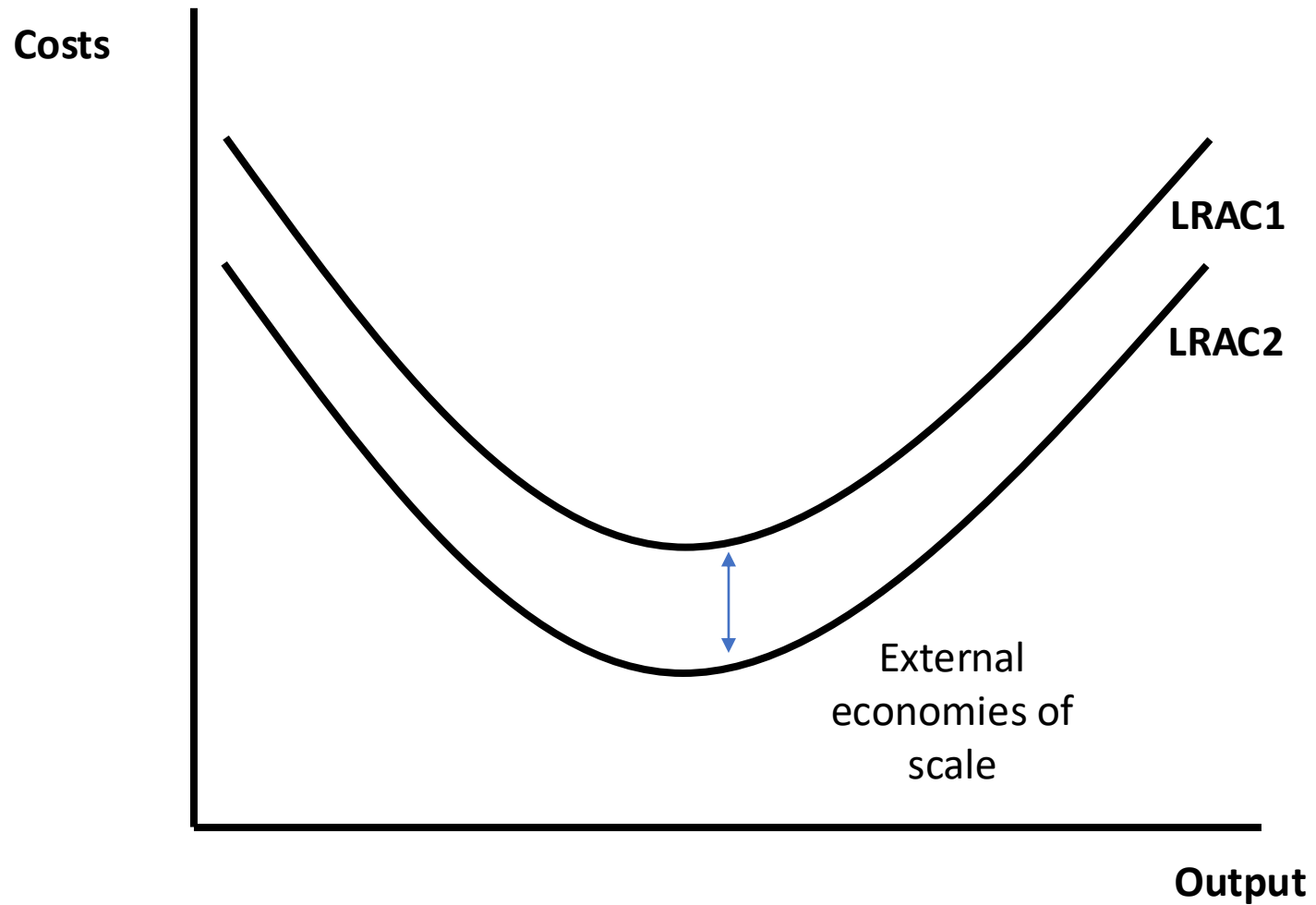


MC must cut ATC at its minimum point

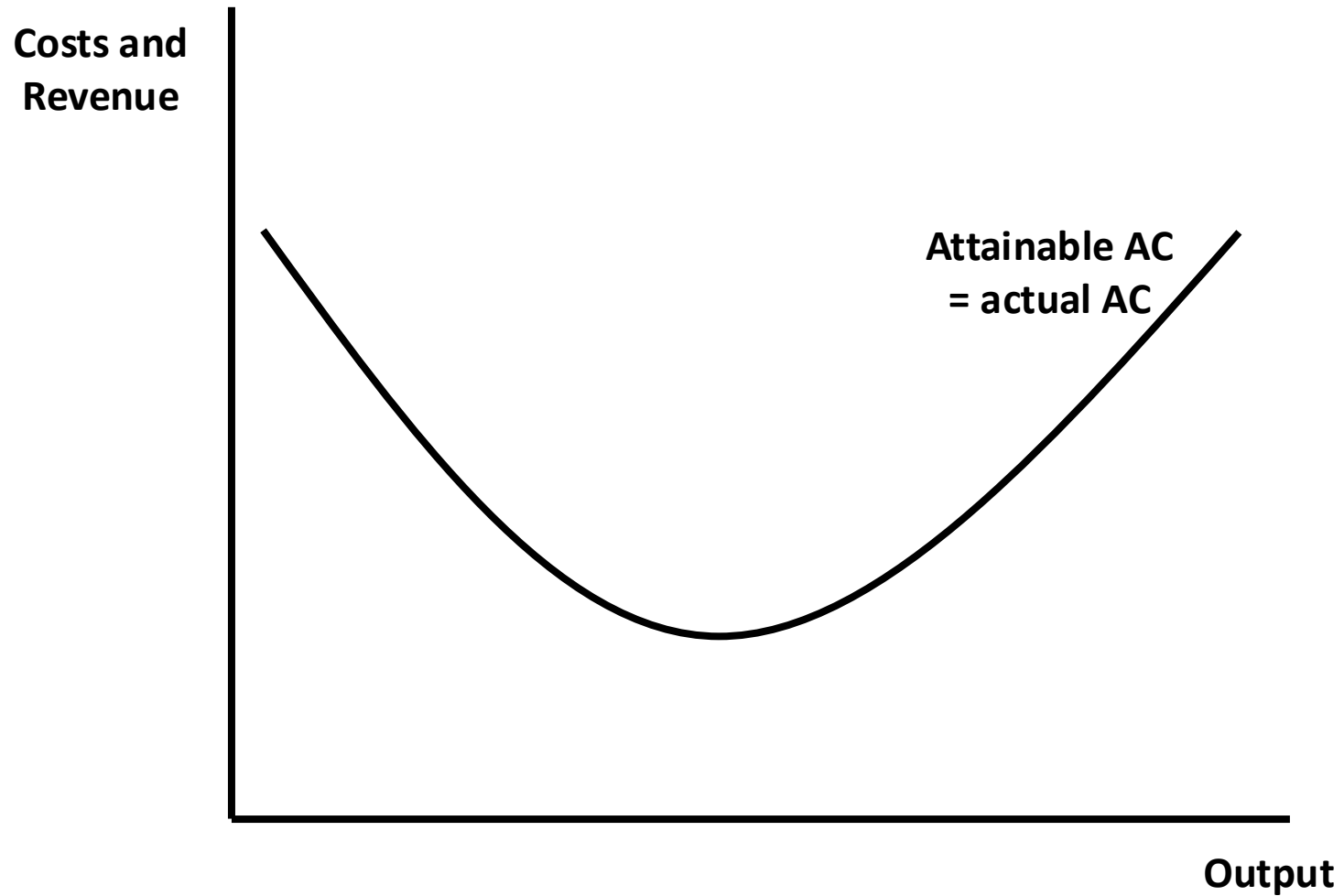




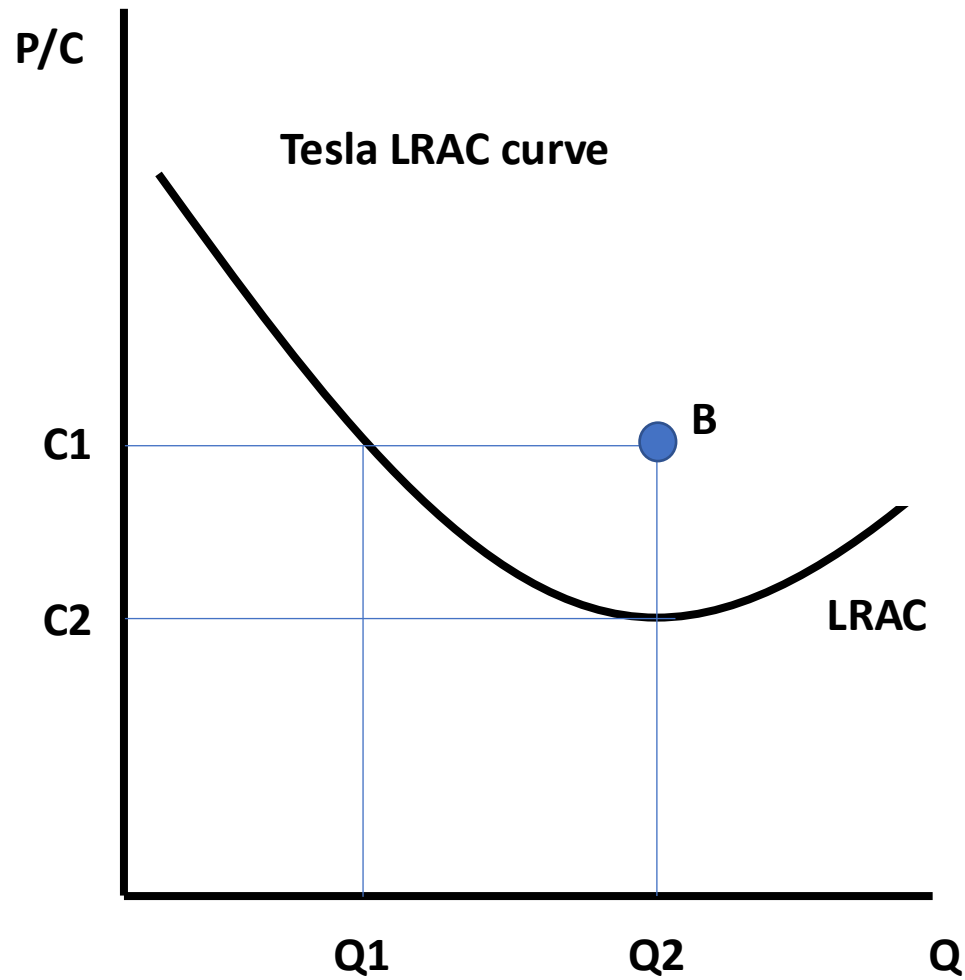
Long run average cost curve showing the returns to scale; productive efficiency (minimum LRAC) between Q1 and Q2. Q1 is the minimum efficient scale MES



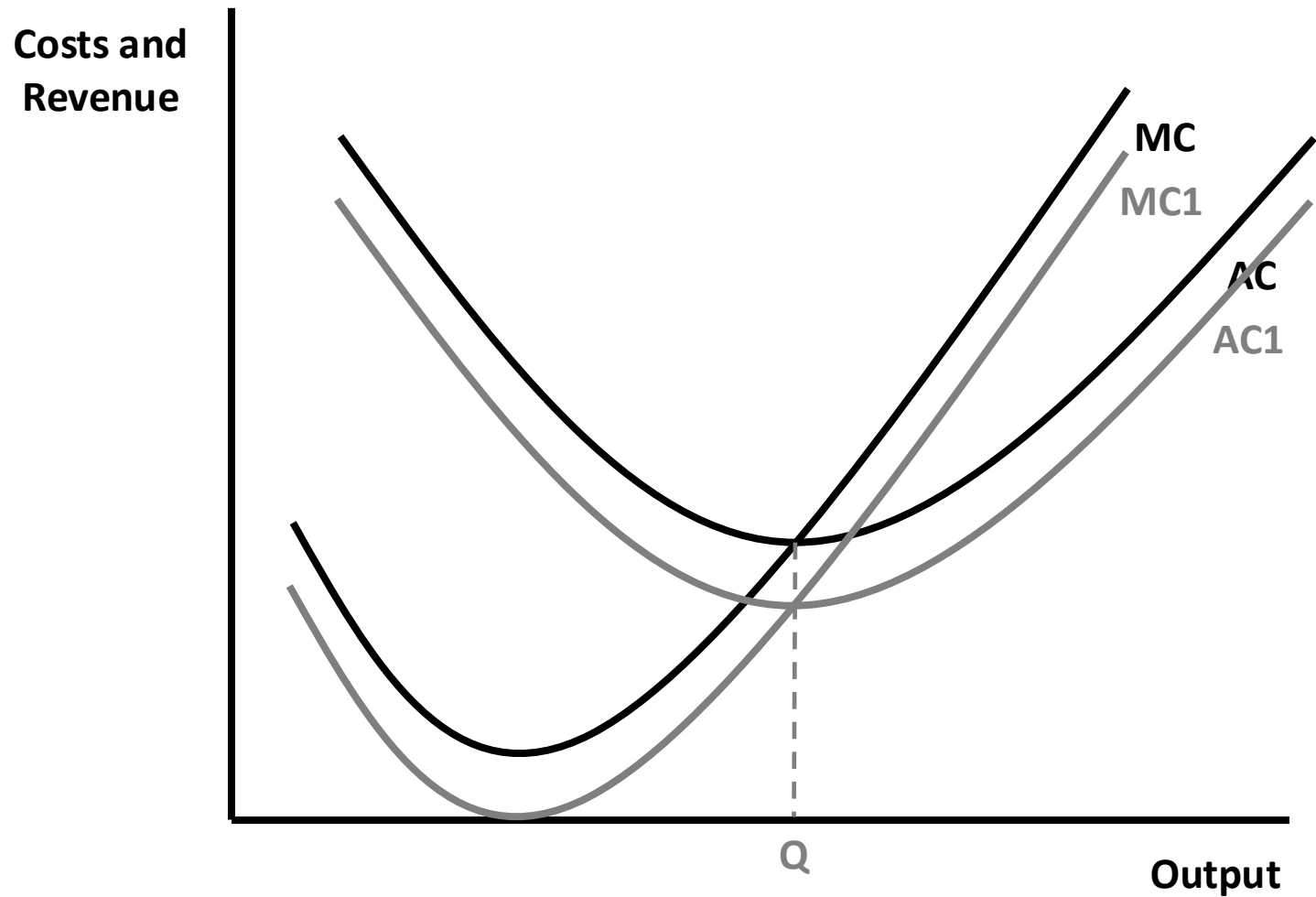
External economies of scale (LRAC shifts down)



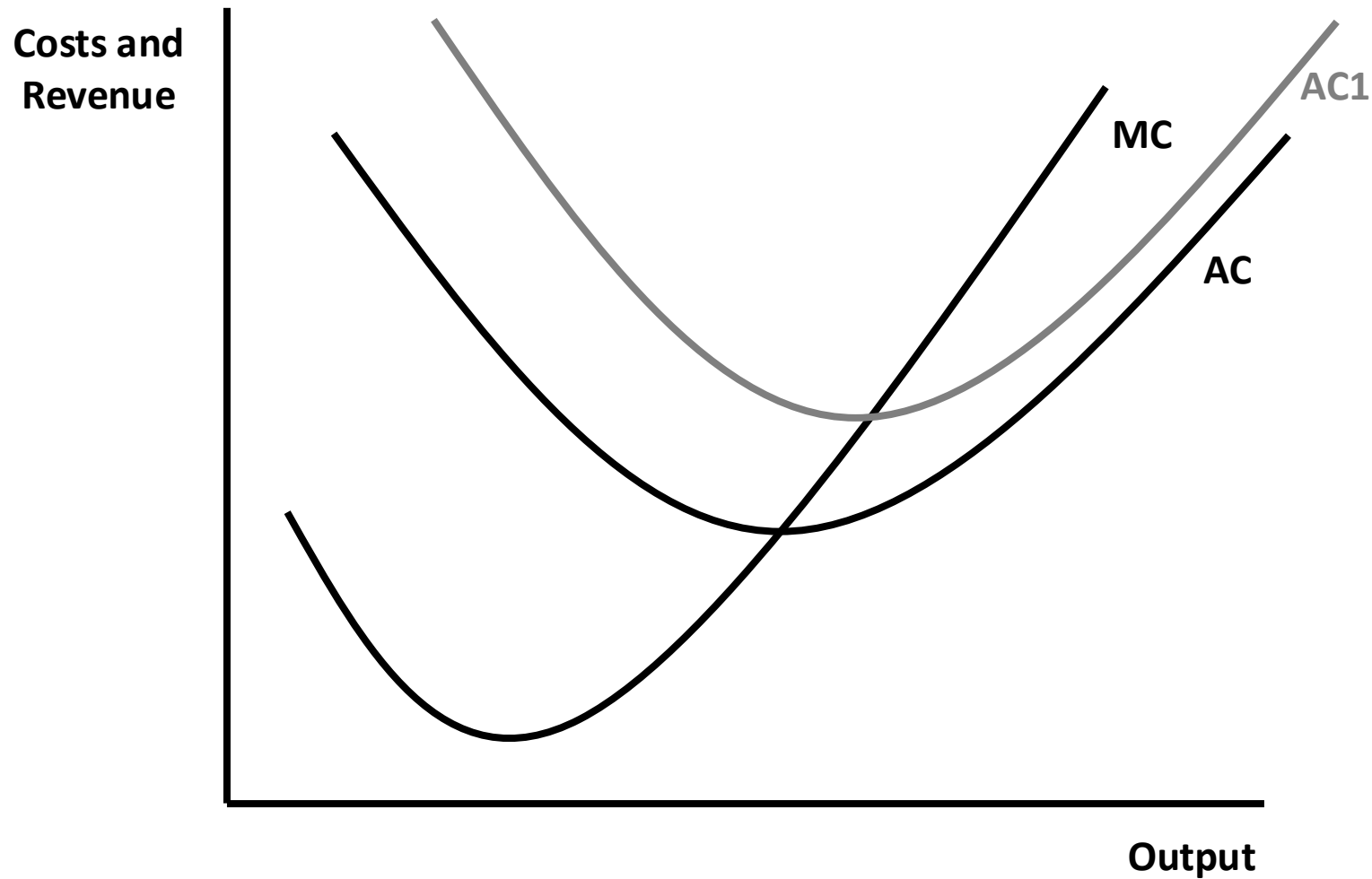
X-efficiency: Attainable AC = Actual AC



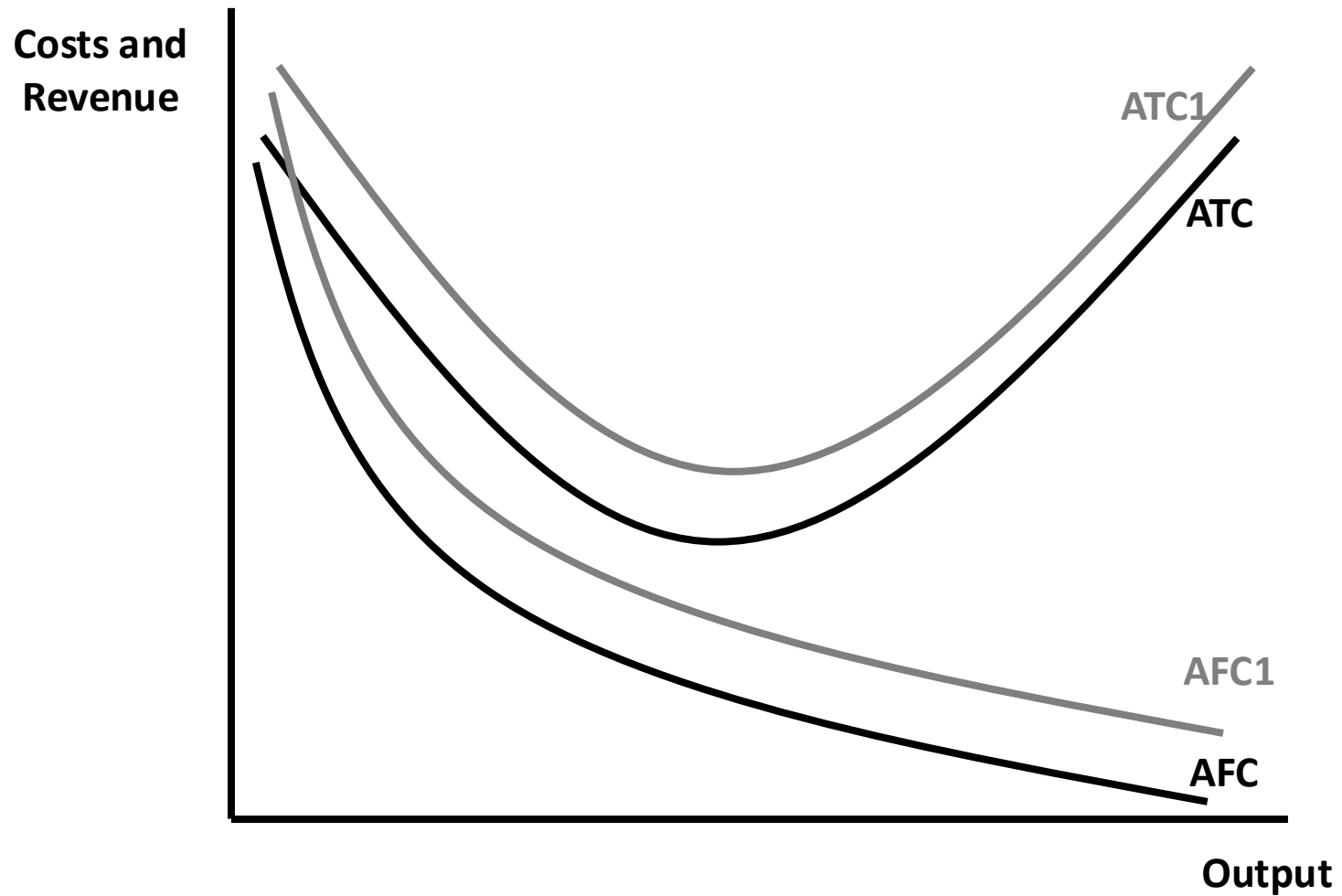
Long run average cost curve for Tesla (Point B shows some X-inefficiency)



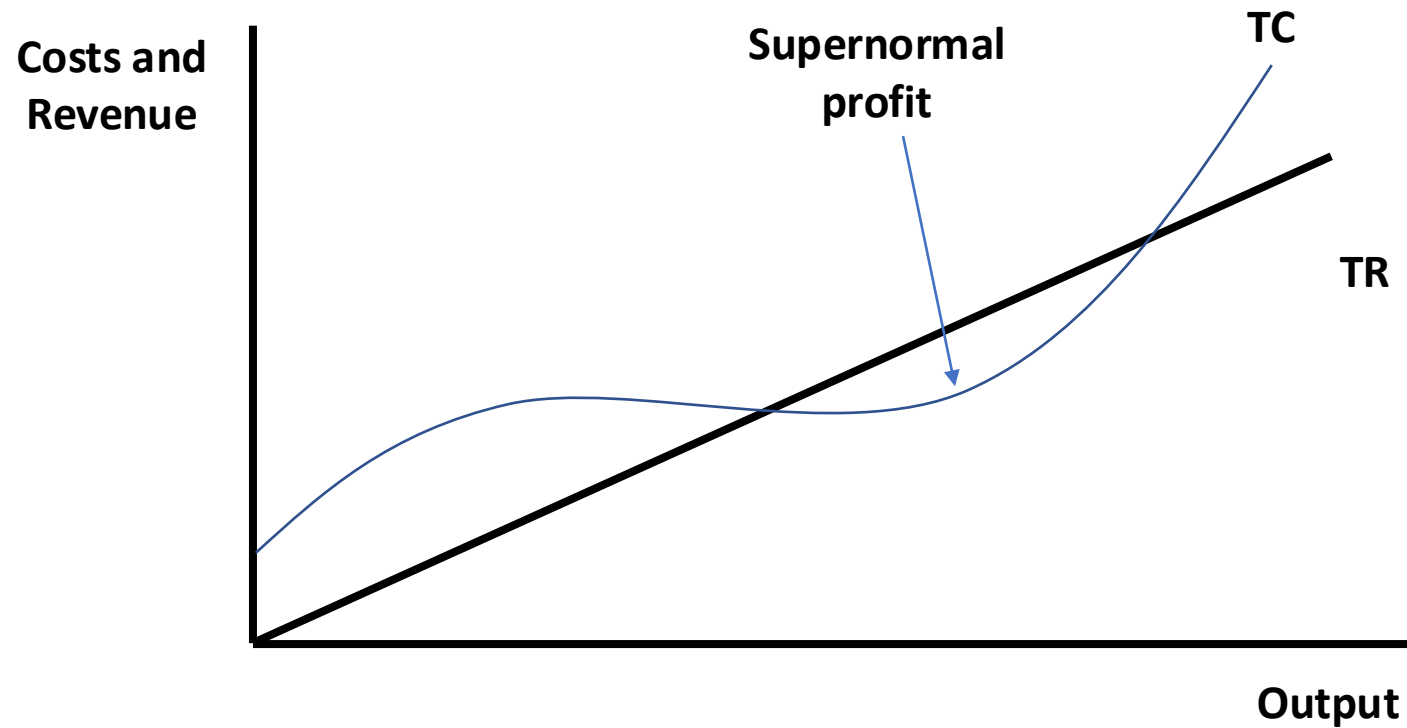
Shift down in MC and AC after a decrease in variable costs



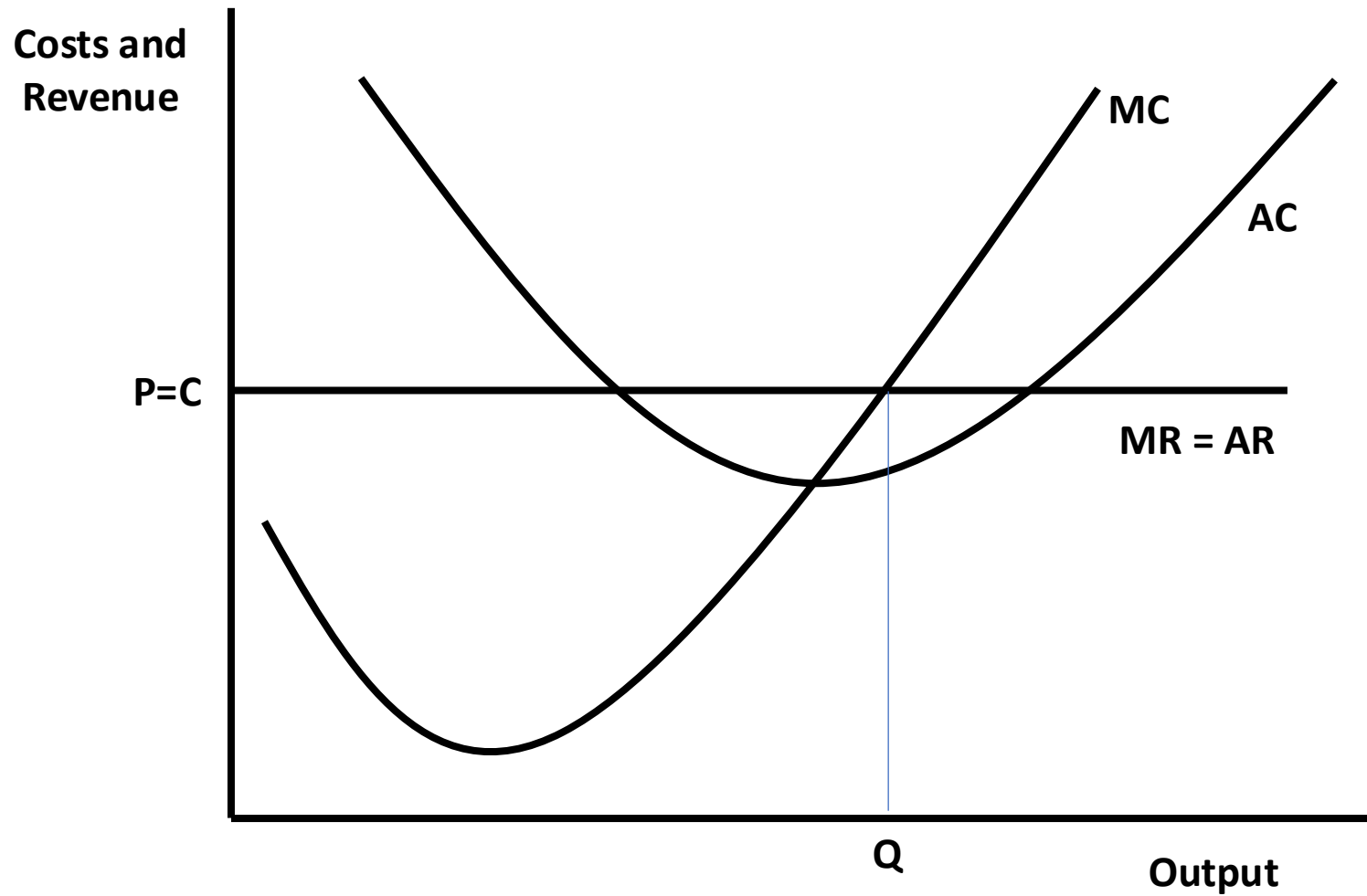
Impact of an increase in fixed costs on the average total cost curve; no change in MC

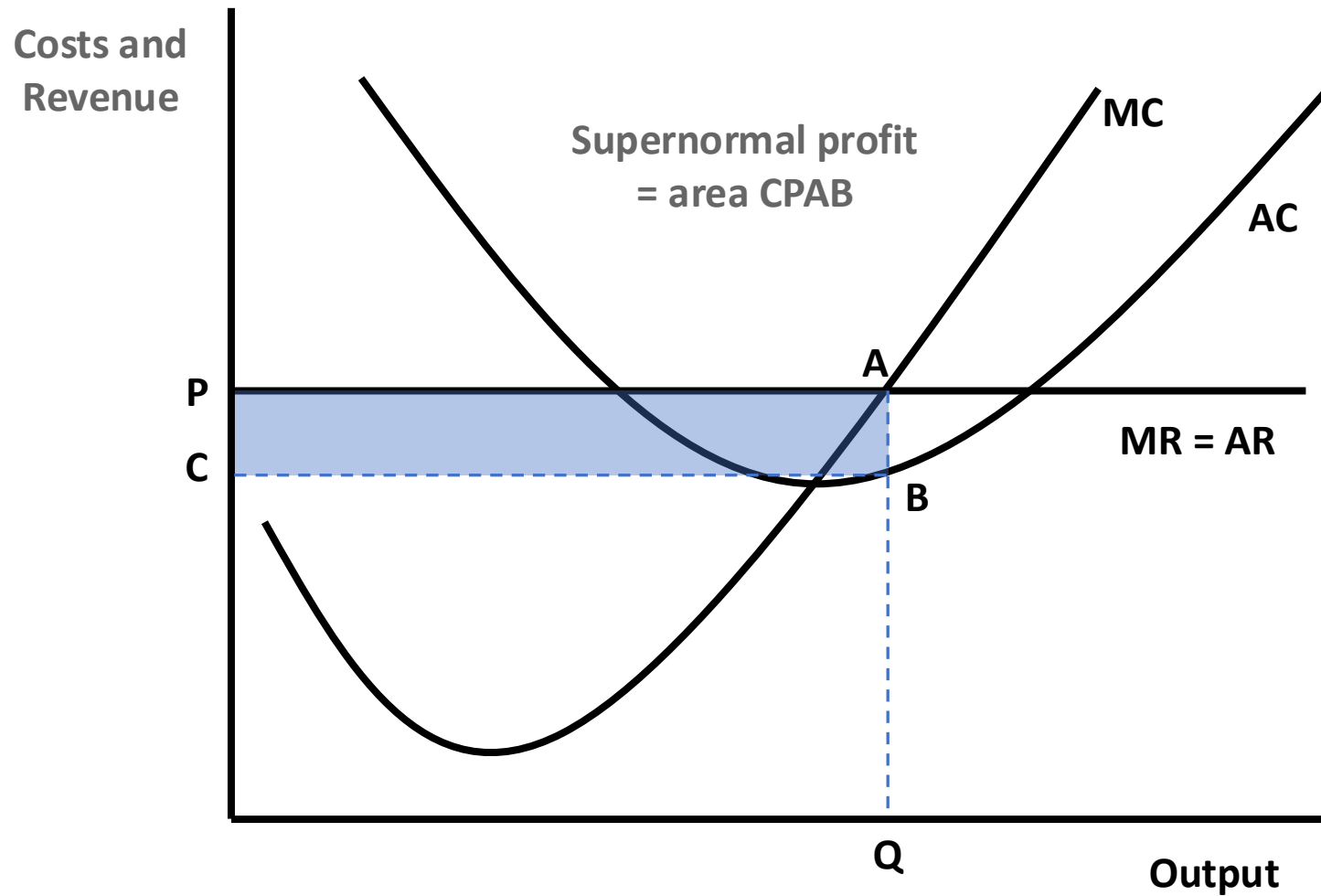


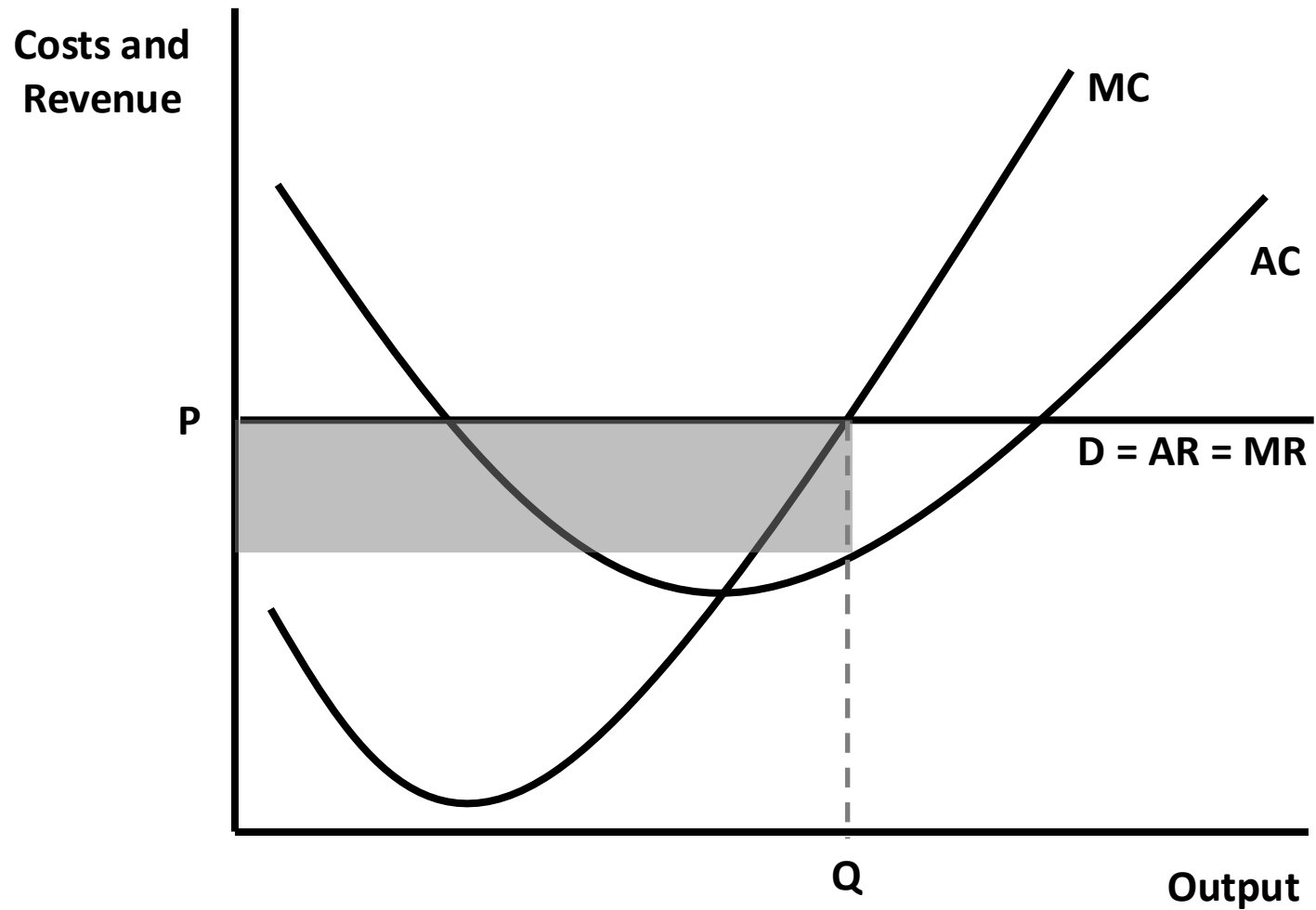
Impact of an increase in fixed costs on the average fixed cost curve and average total cost curve

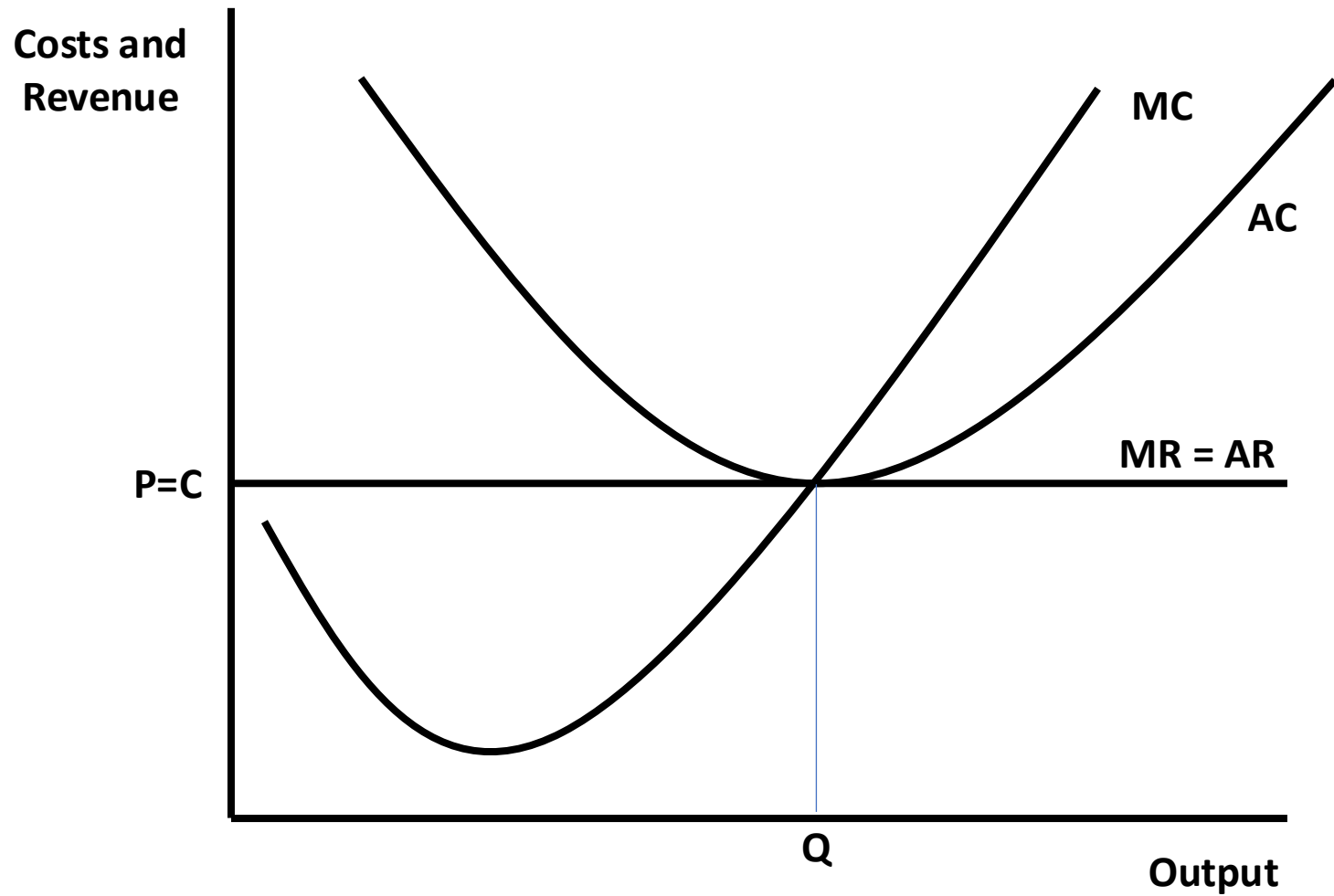


Total cost and total revenue for a price taker (perfect competition)

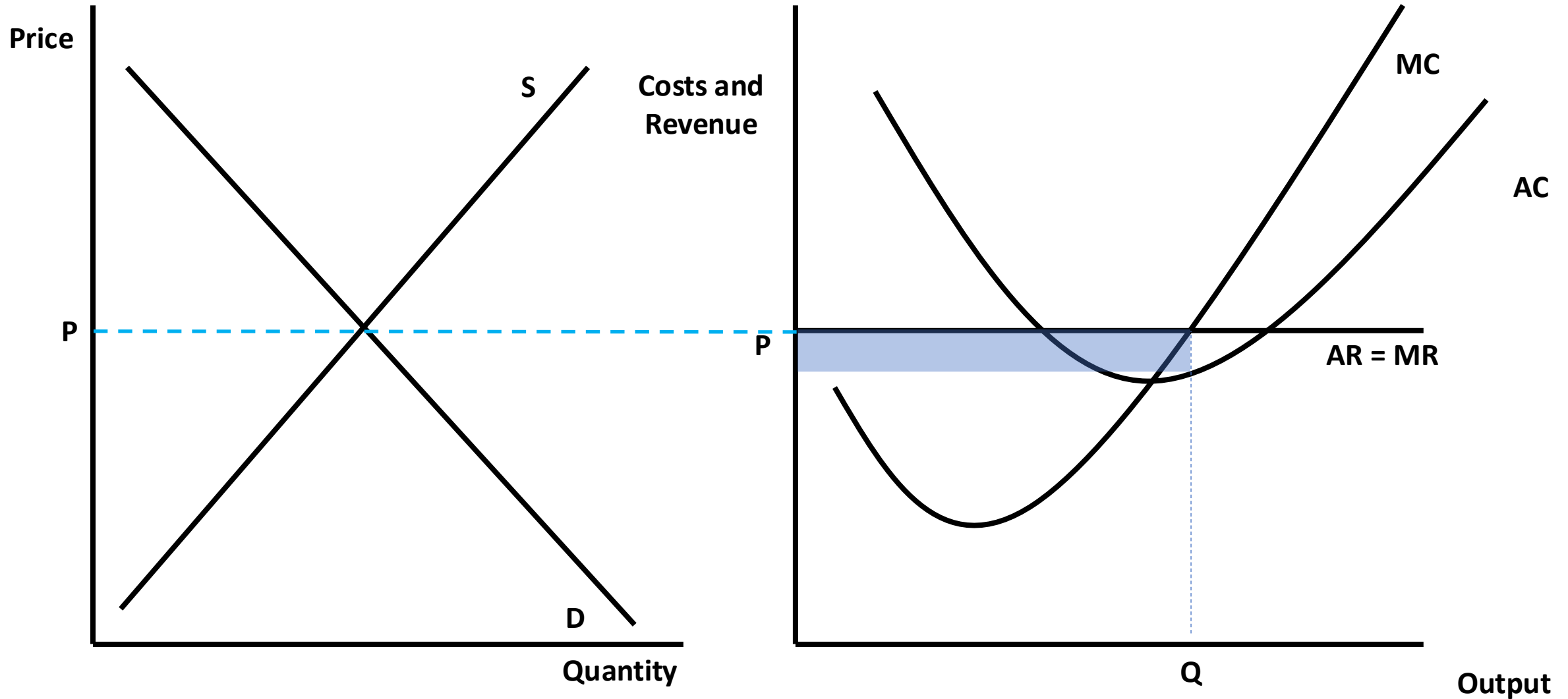






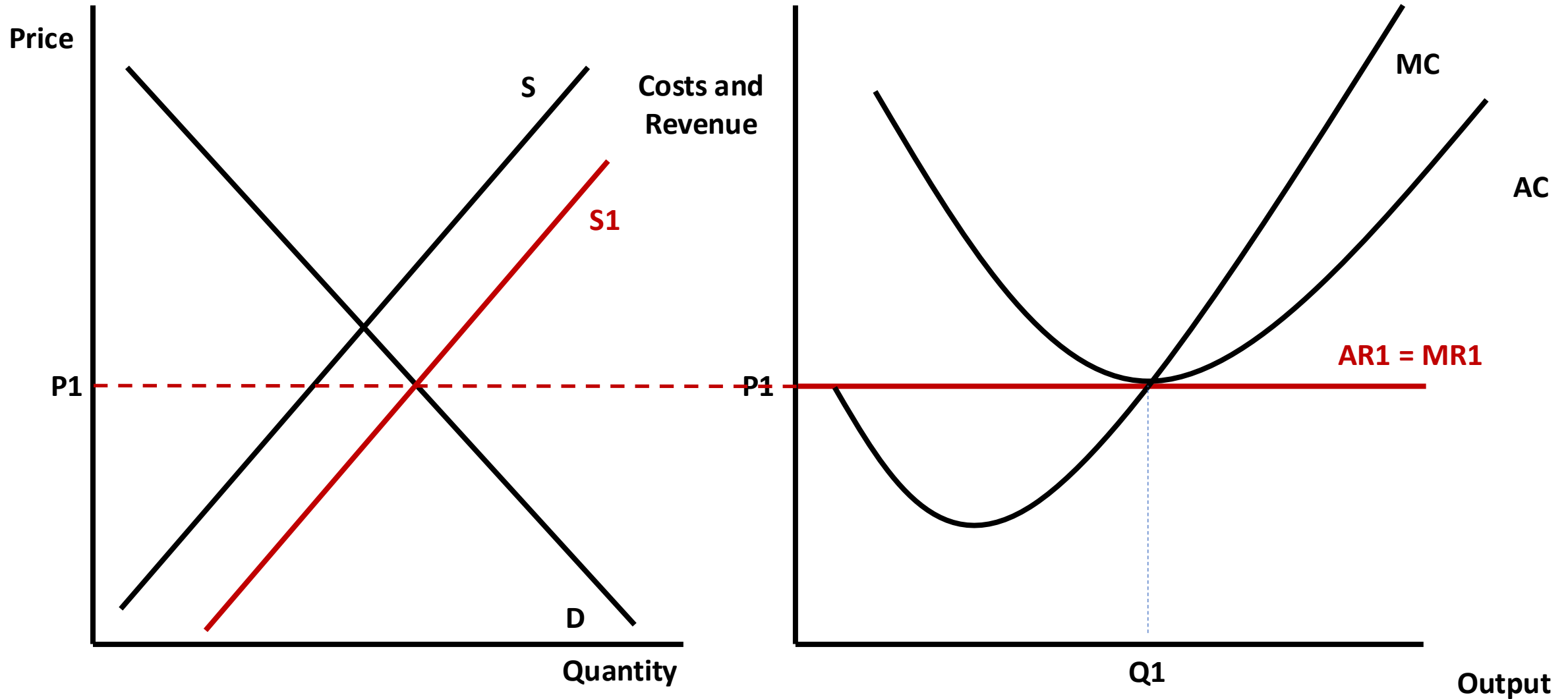


Short-Run Equilibrium

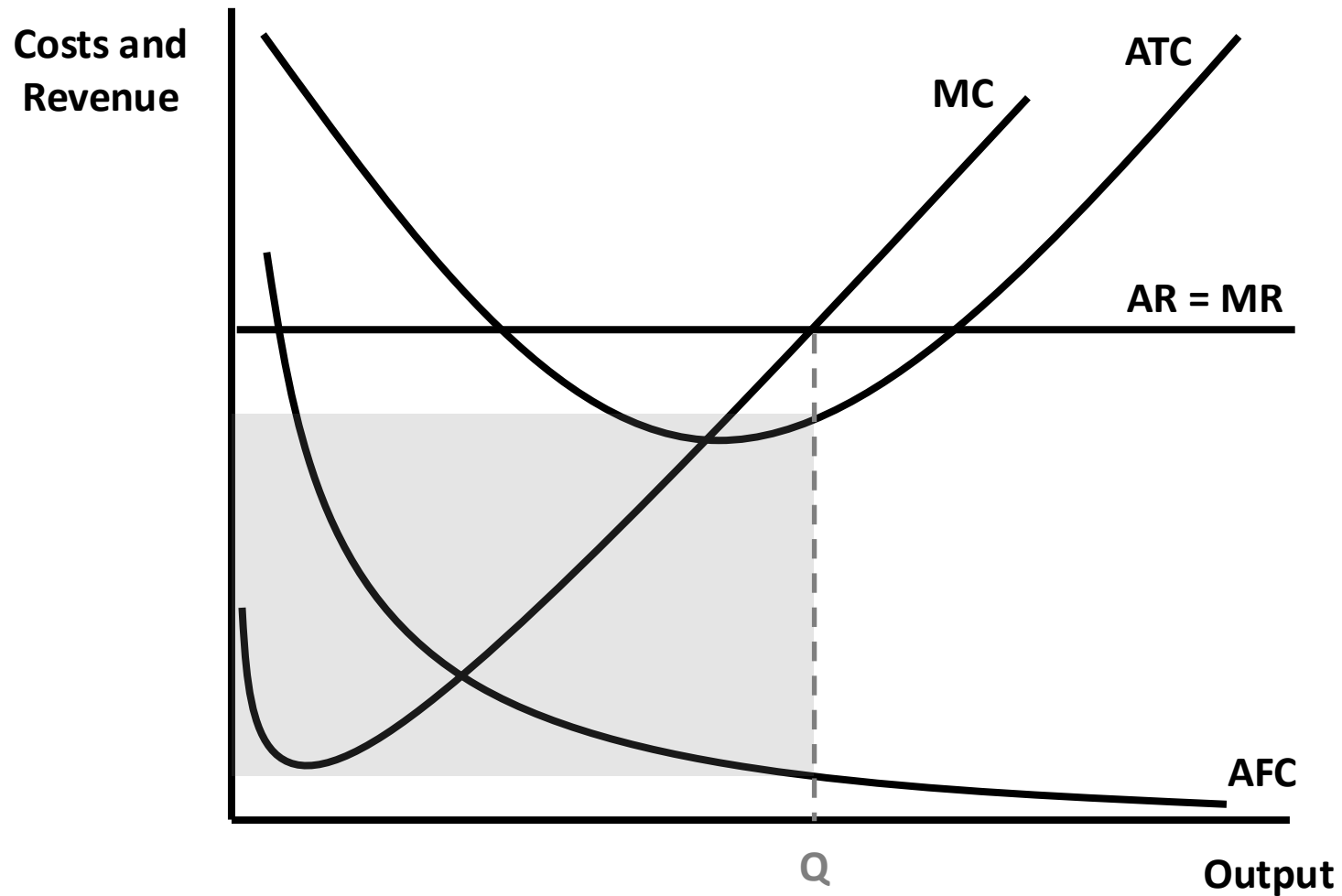


Market determines the price taken by the perfect competitor in the short run; supernormal profits can be made

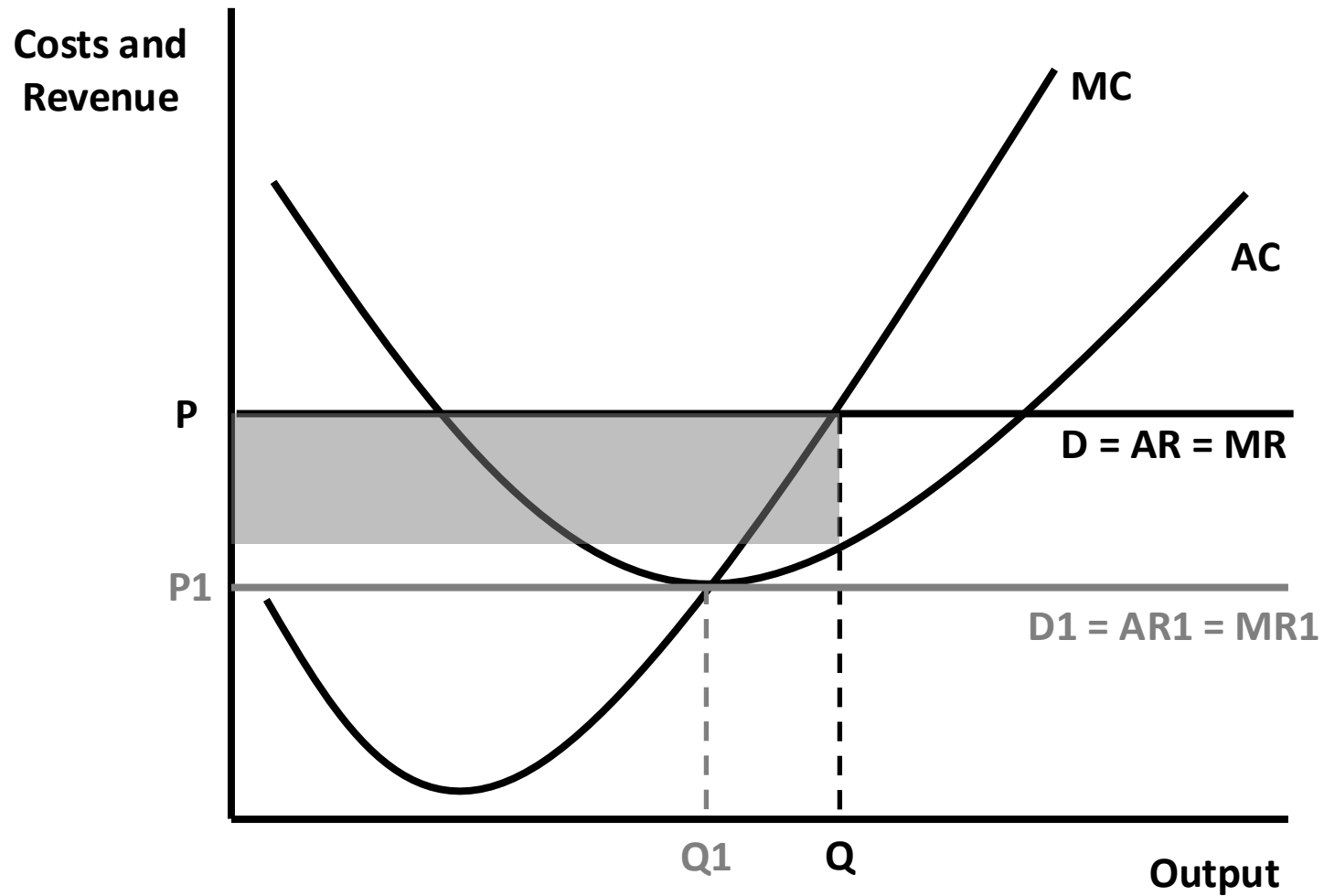
Long-Run Equilibrium



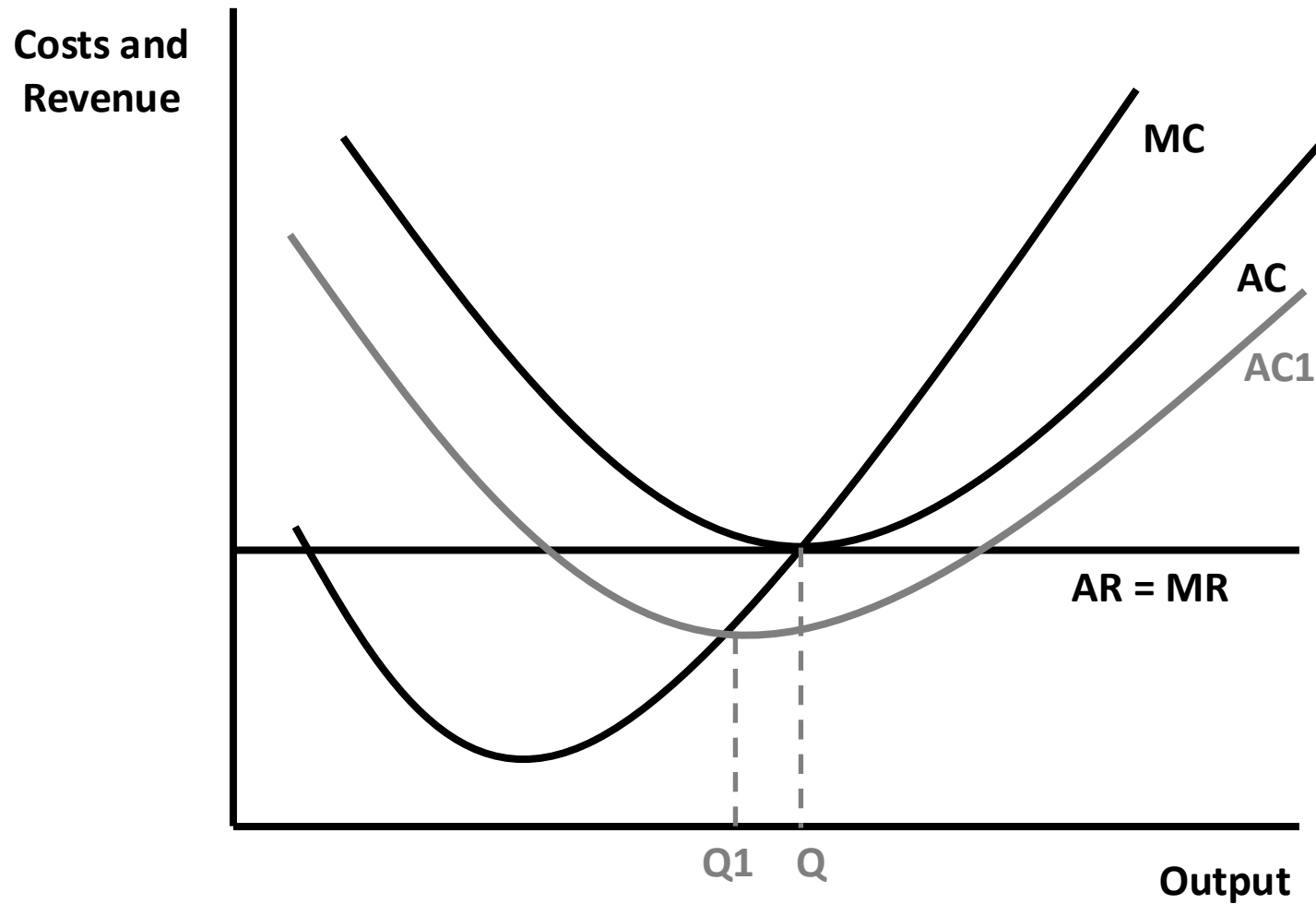
Short run supernormal profits attract new firms to join the market increasing the market supply and reducing the market price; this continues until all supernormal profits of the perfectly competitive firm are competed away in the long run



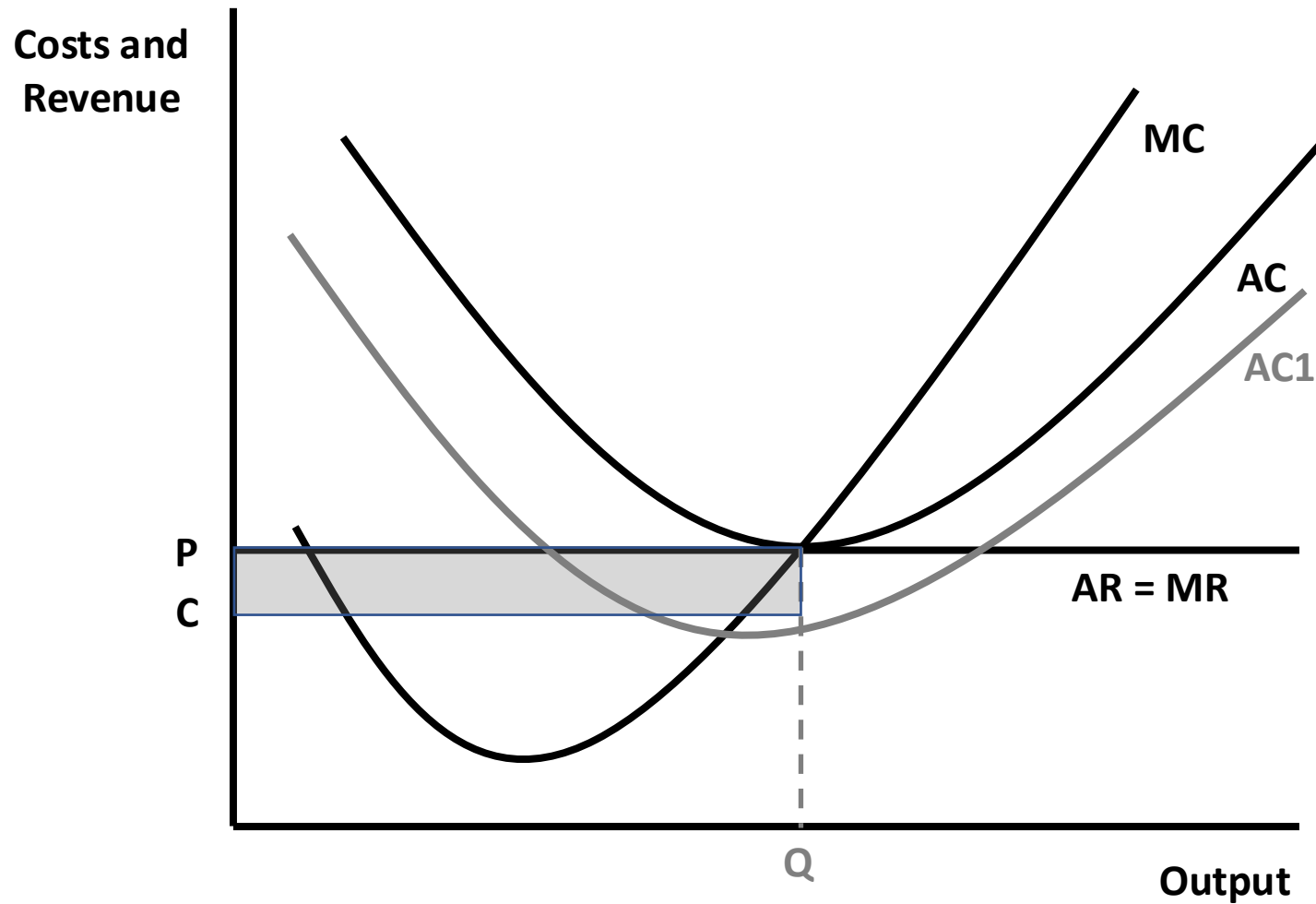
Area showing the total variable costs at the profit-maximising output in perfect competition. ($AVC = ATC - AFC$ and $TVC = AVC \times Q$)



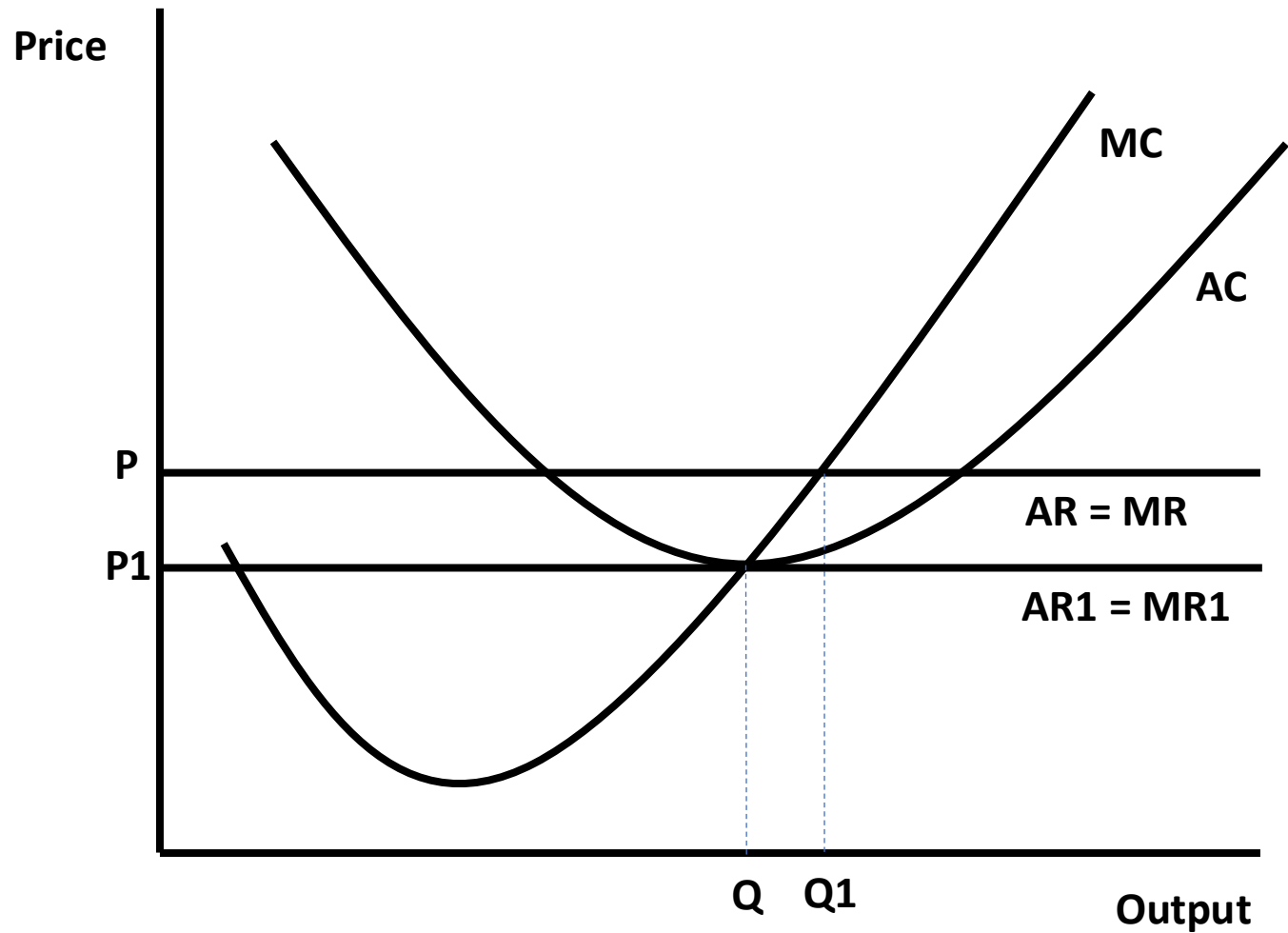
Short run v long run equilibrium for perfect competition (Supernormal profit is competed away as new firms join the market reducing the market price)



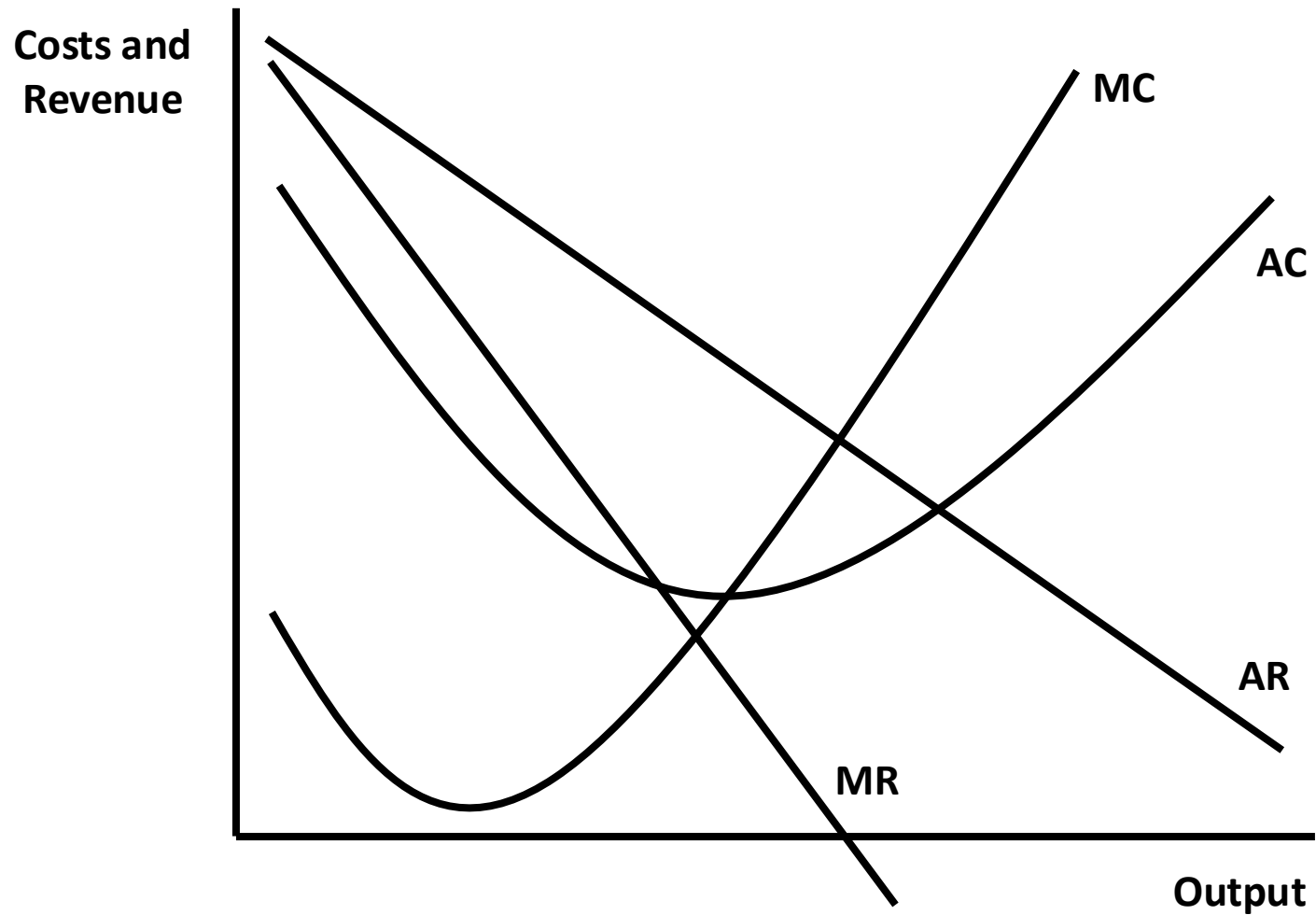
Impact on output of a fall in fixed costs in perfect competition



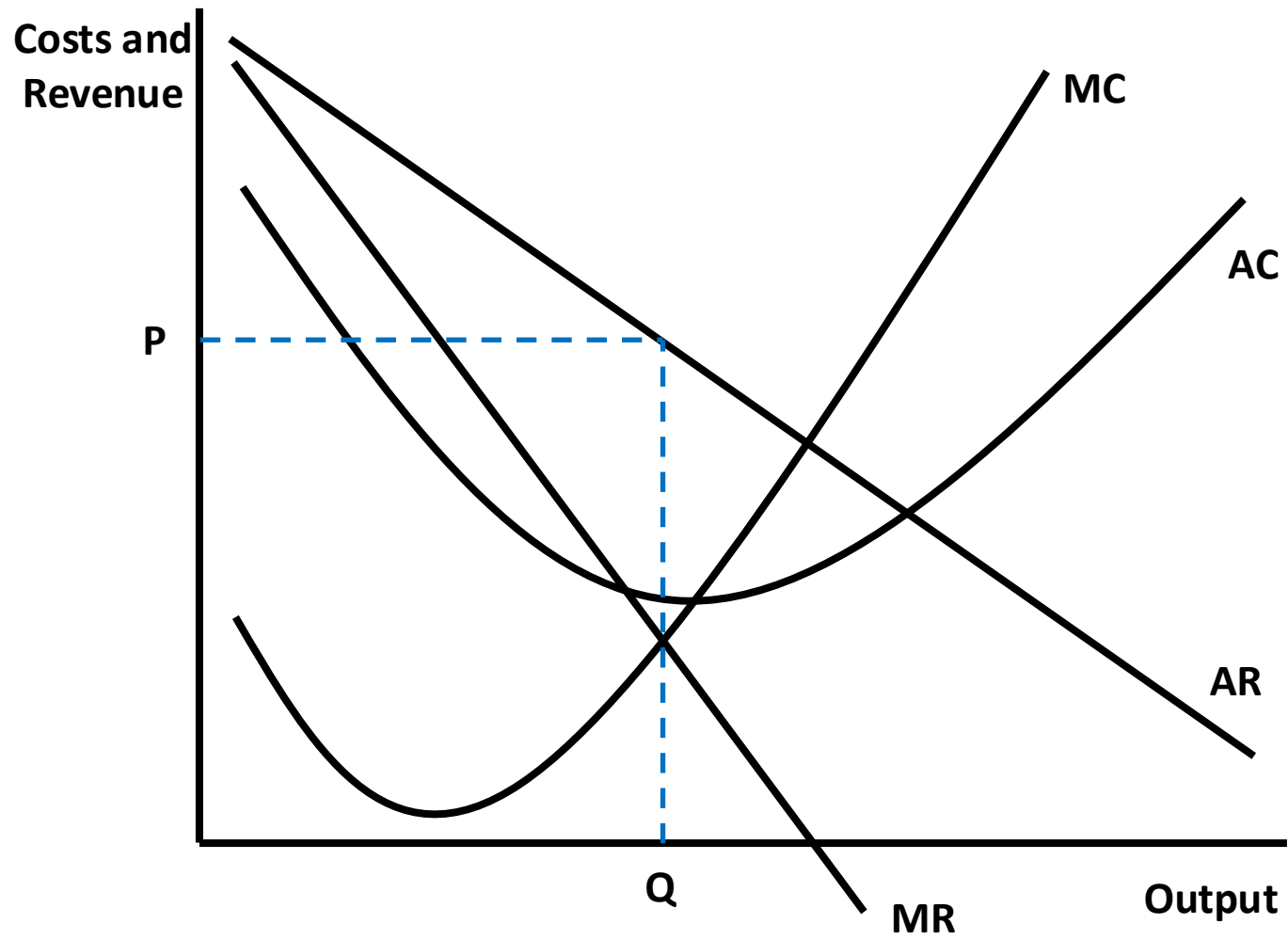
Impact on supernormal profit of a fall in fixed costs in perfect competition

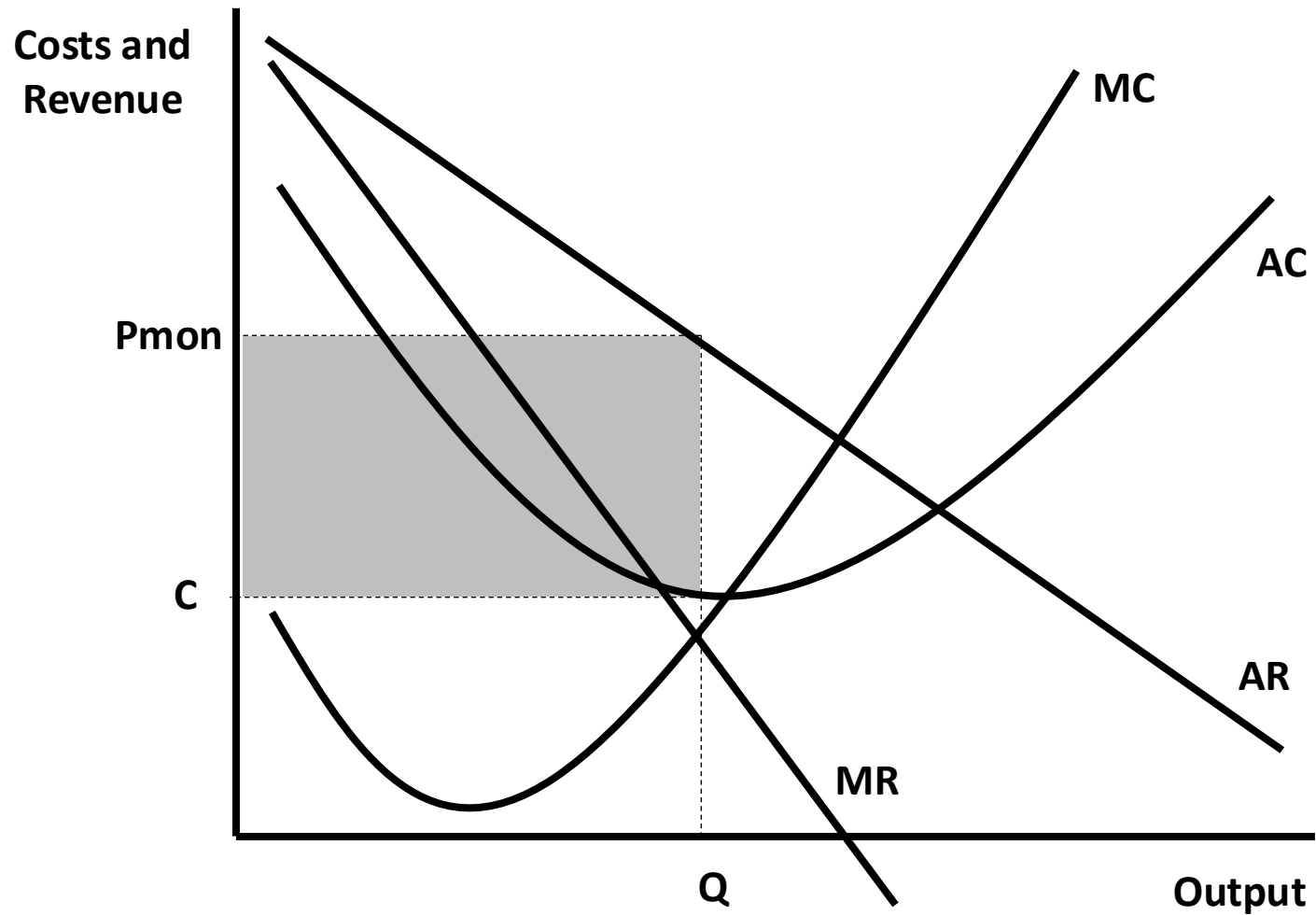


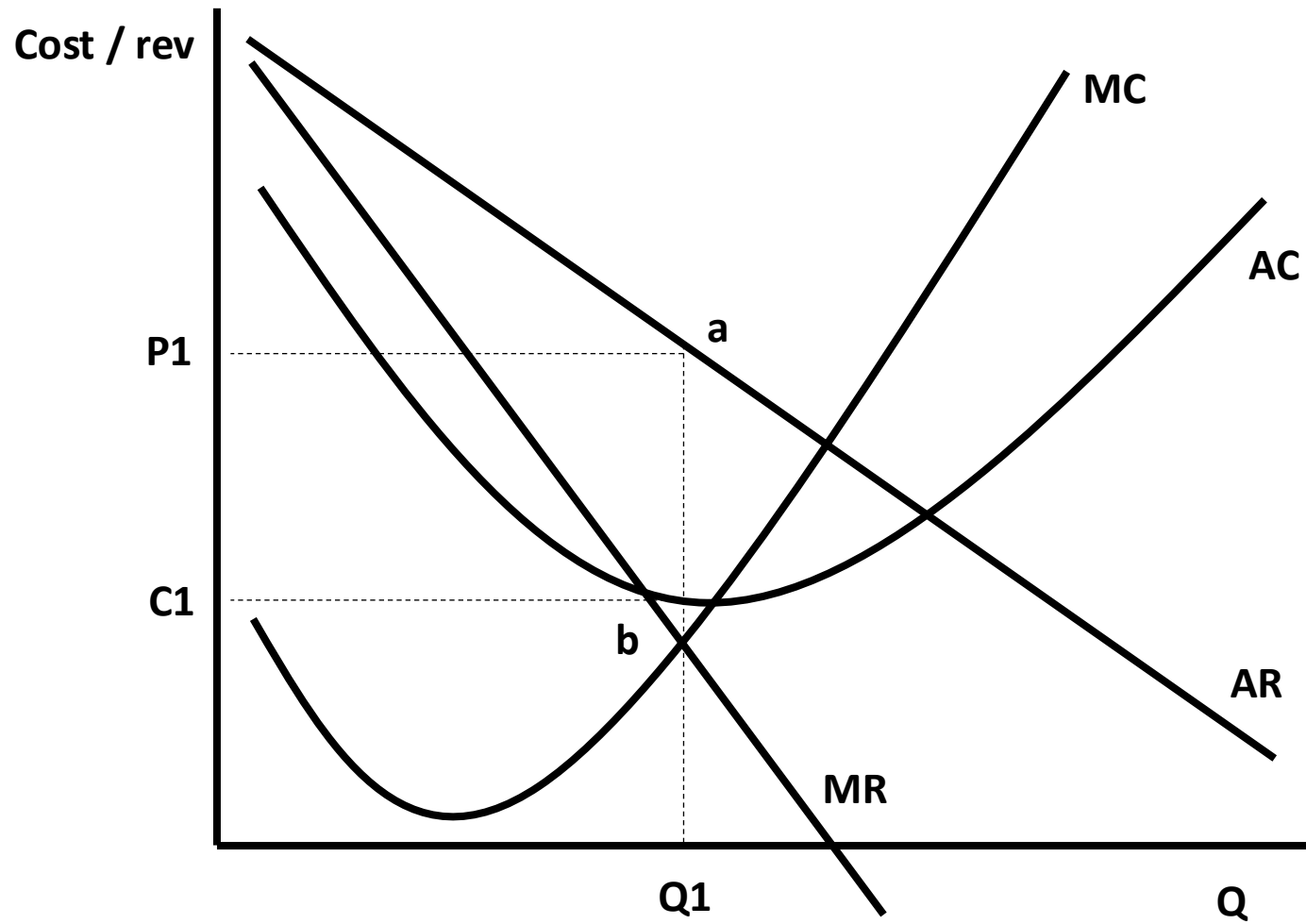
Impact on output of a fall in the market price in perfect competition – supernormal profit at price P becomes normal profit only at P1



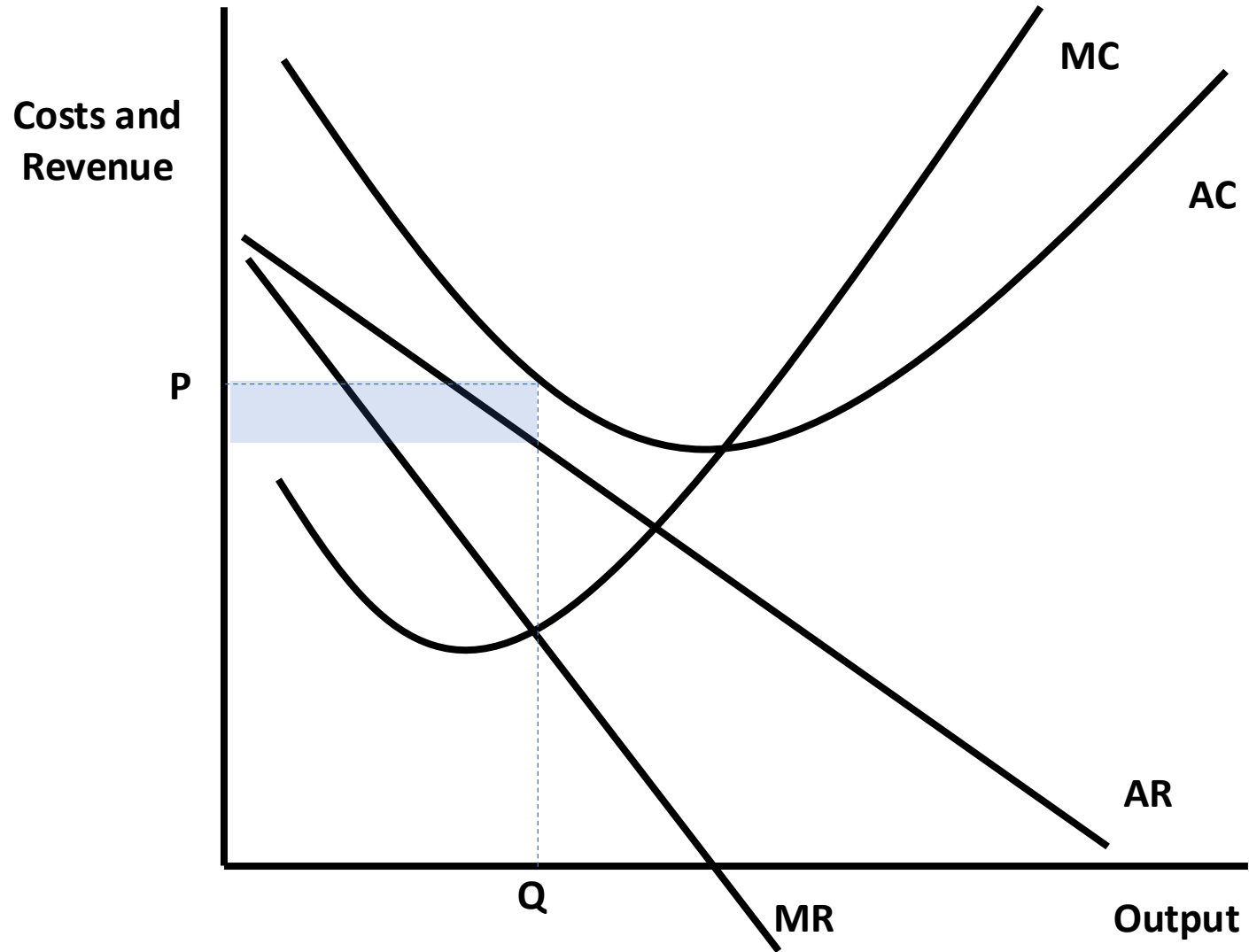
Cost and revenue curves for price maker (imperfect competition)



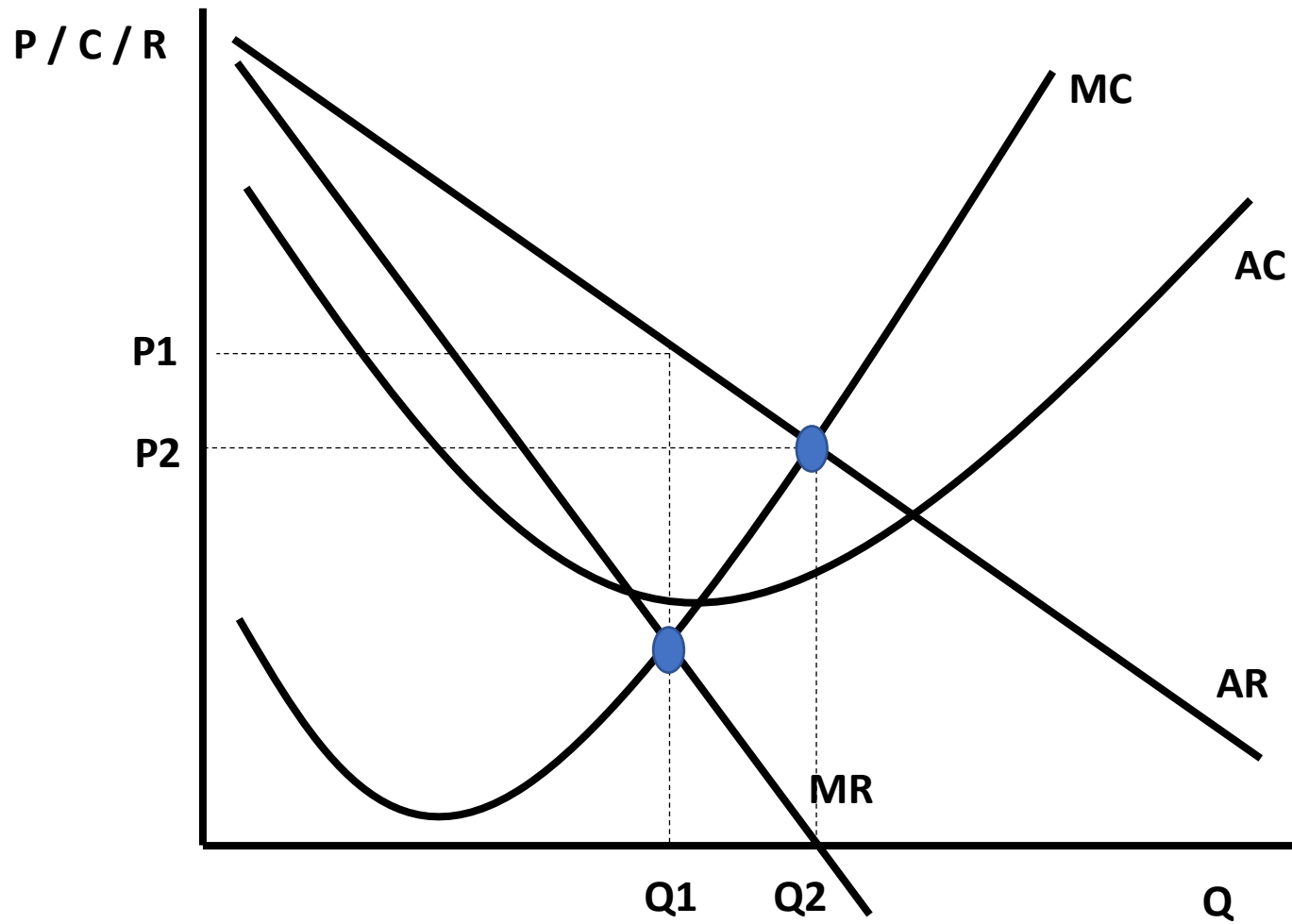




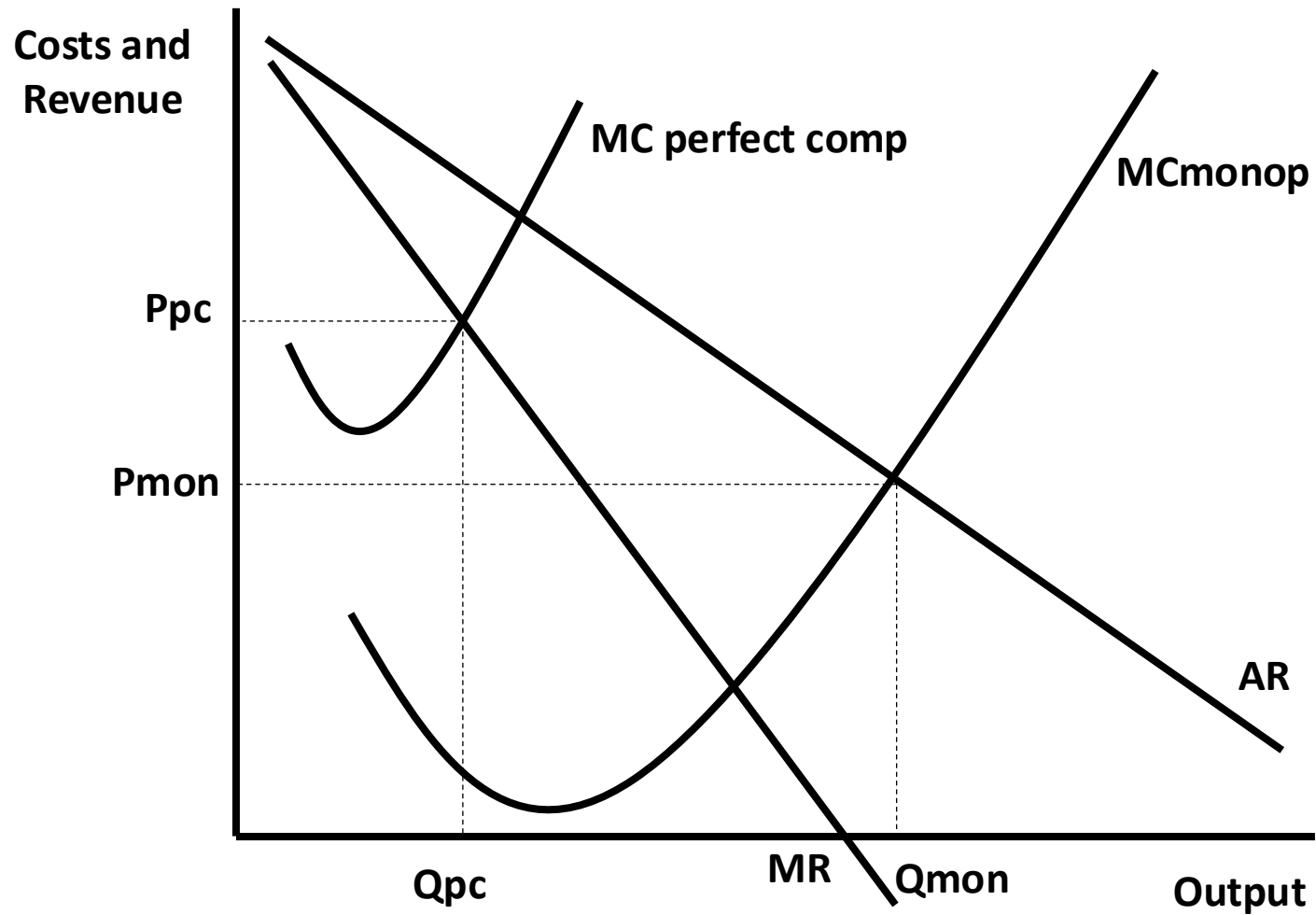
Profit maximising monopoly (output where $MC = MR$); supernormal profit = $P1abC1$ or $P1C1 \times Q1$



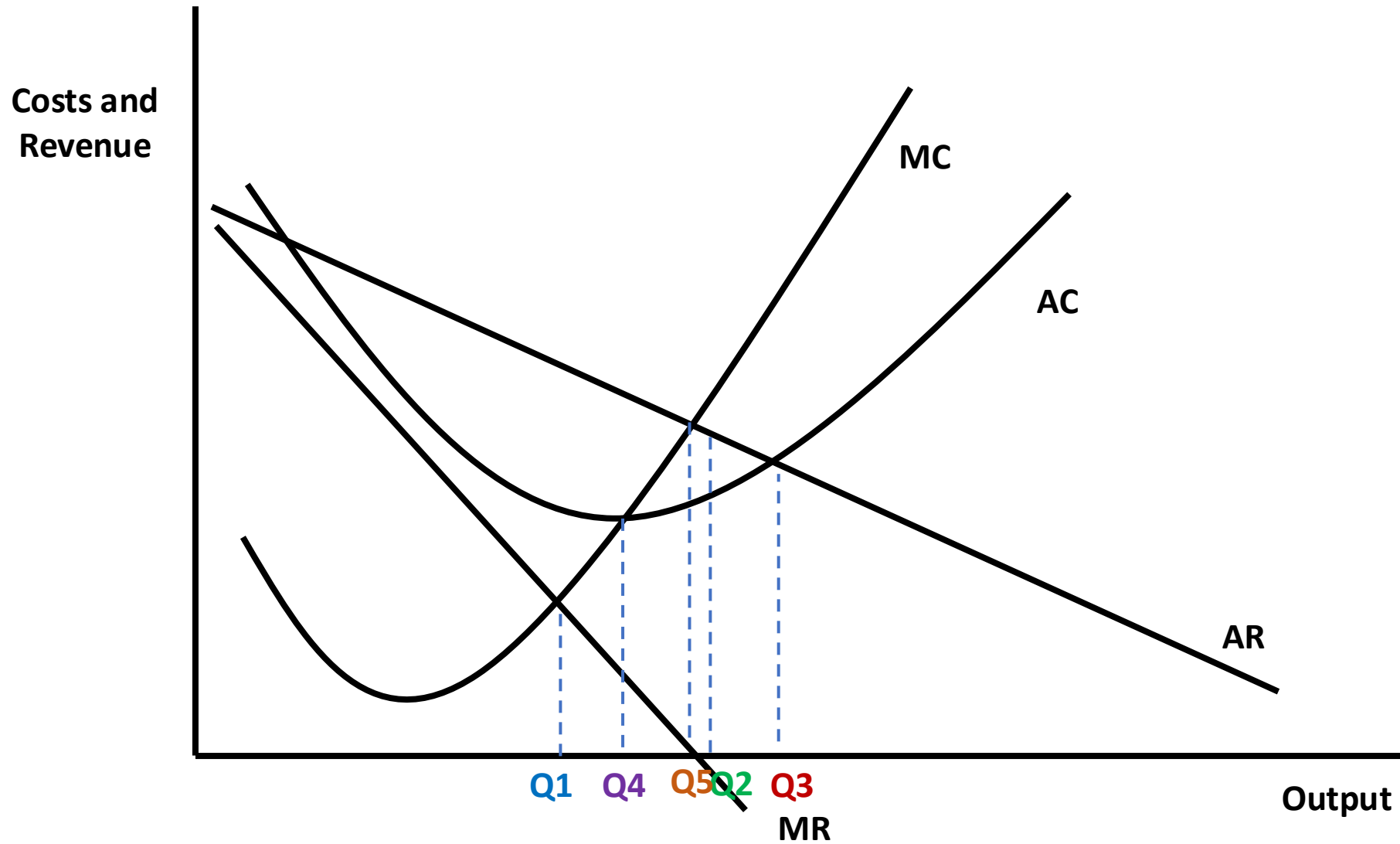
Loss minimising output and price for a price maker



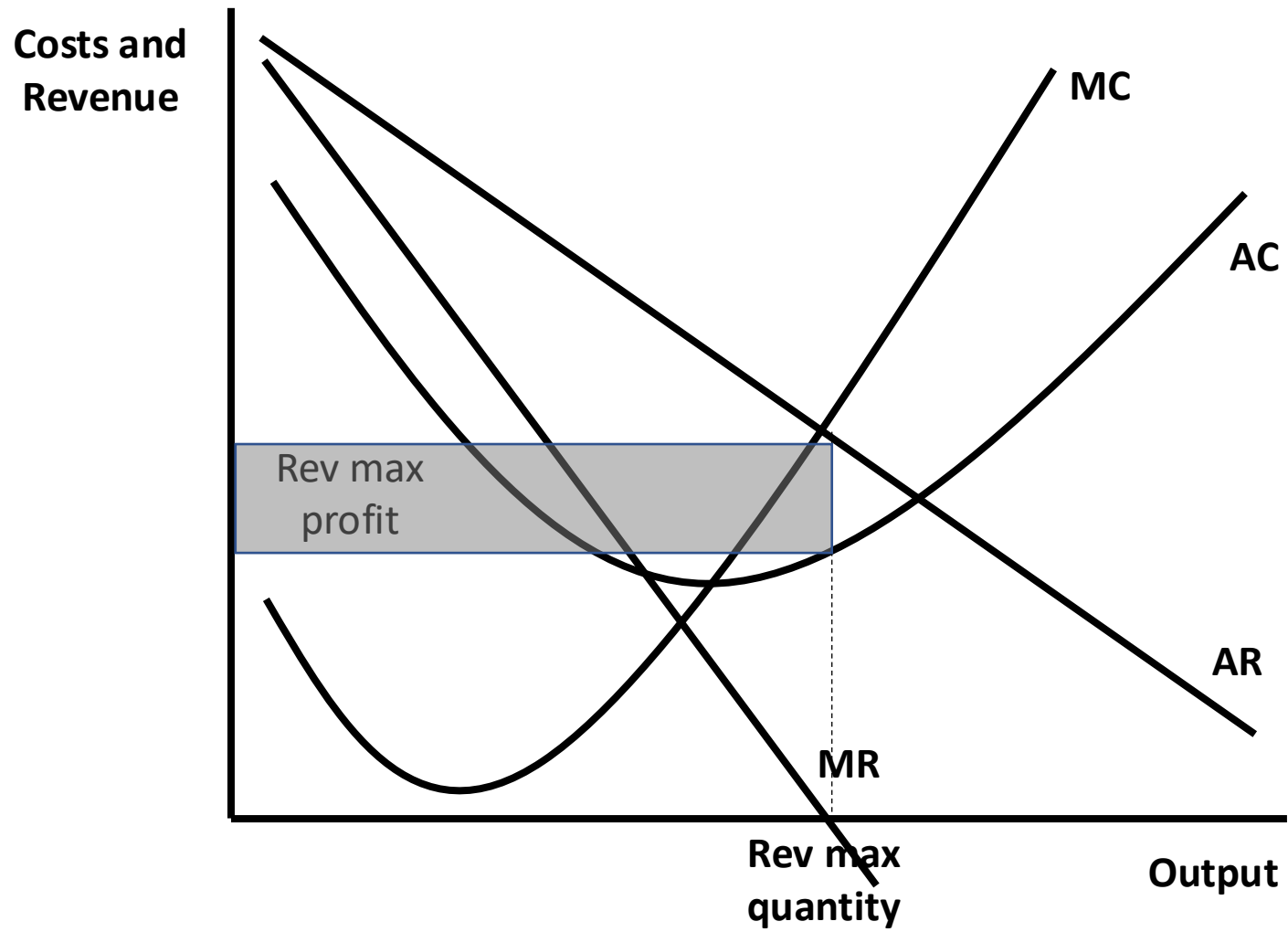
Monopoly profit-maximising output ($MC=MR$) compared to allocatively efficient output ($MC=AR$)



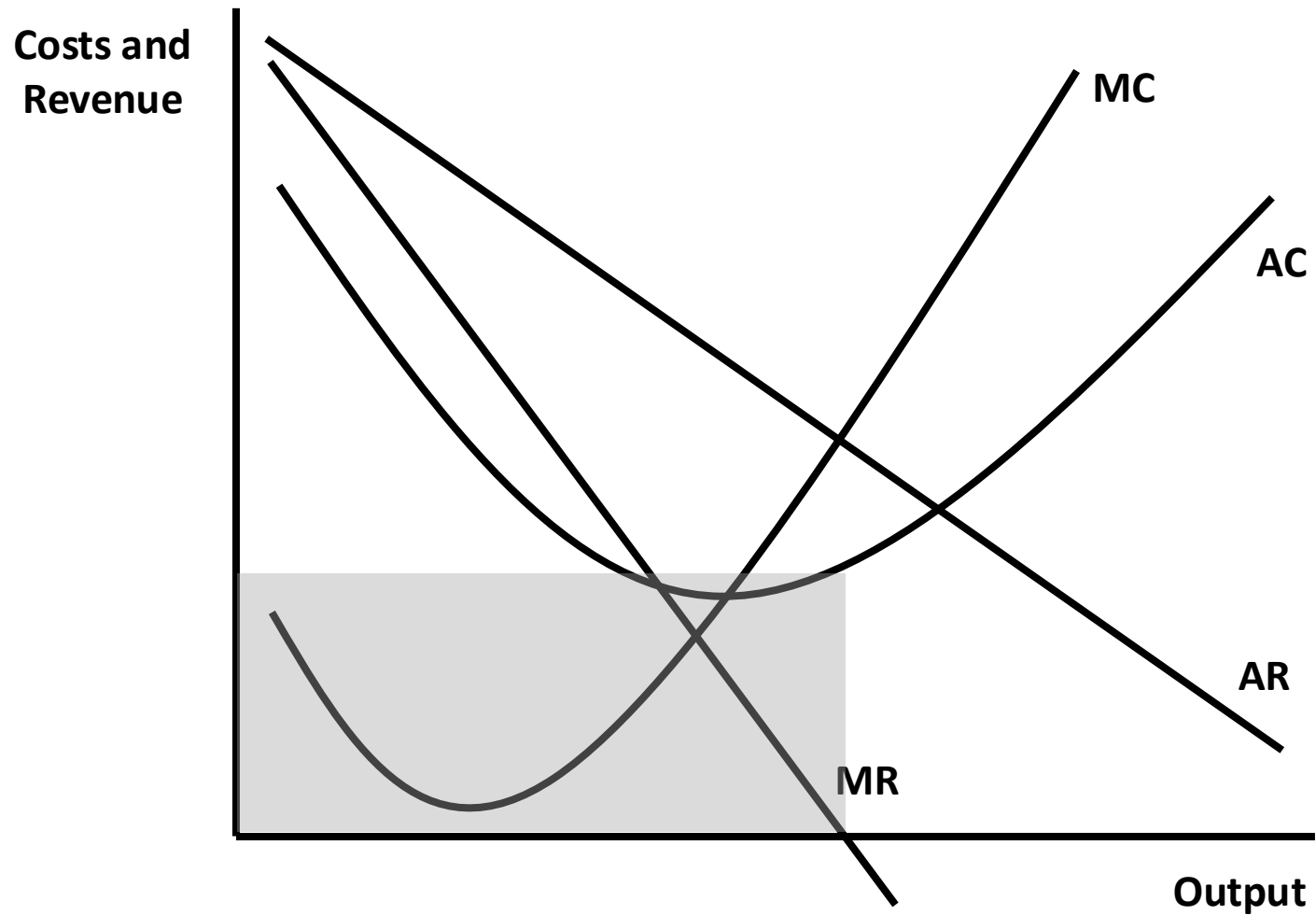
Showing how the monopoly price could be lower than the price under perfect competition if the monopoly can gain economies of scale



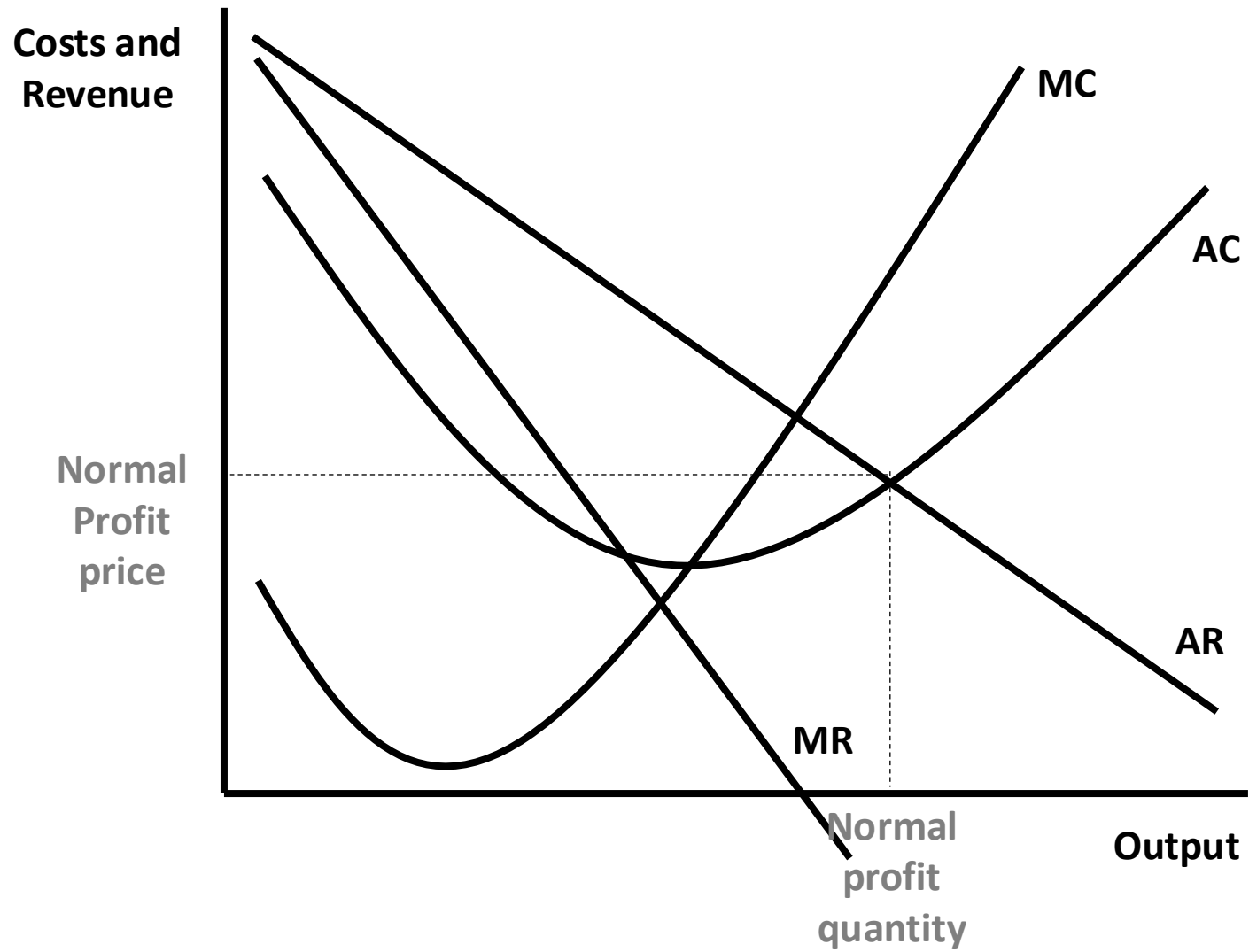
Q1 = profit-maximising output; Q4 = productively efficient output; Q5 = allocatively efficient output; Q2 = revenue-maximising output; Q3 = sales-maximising output



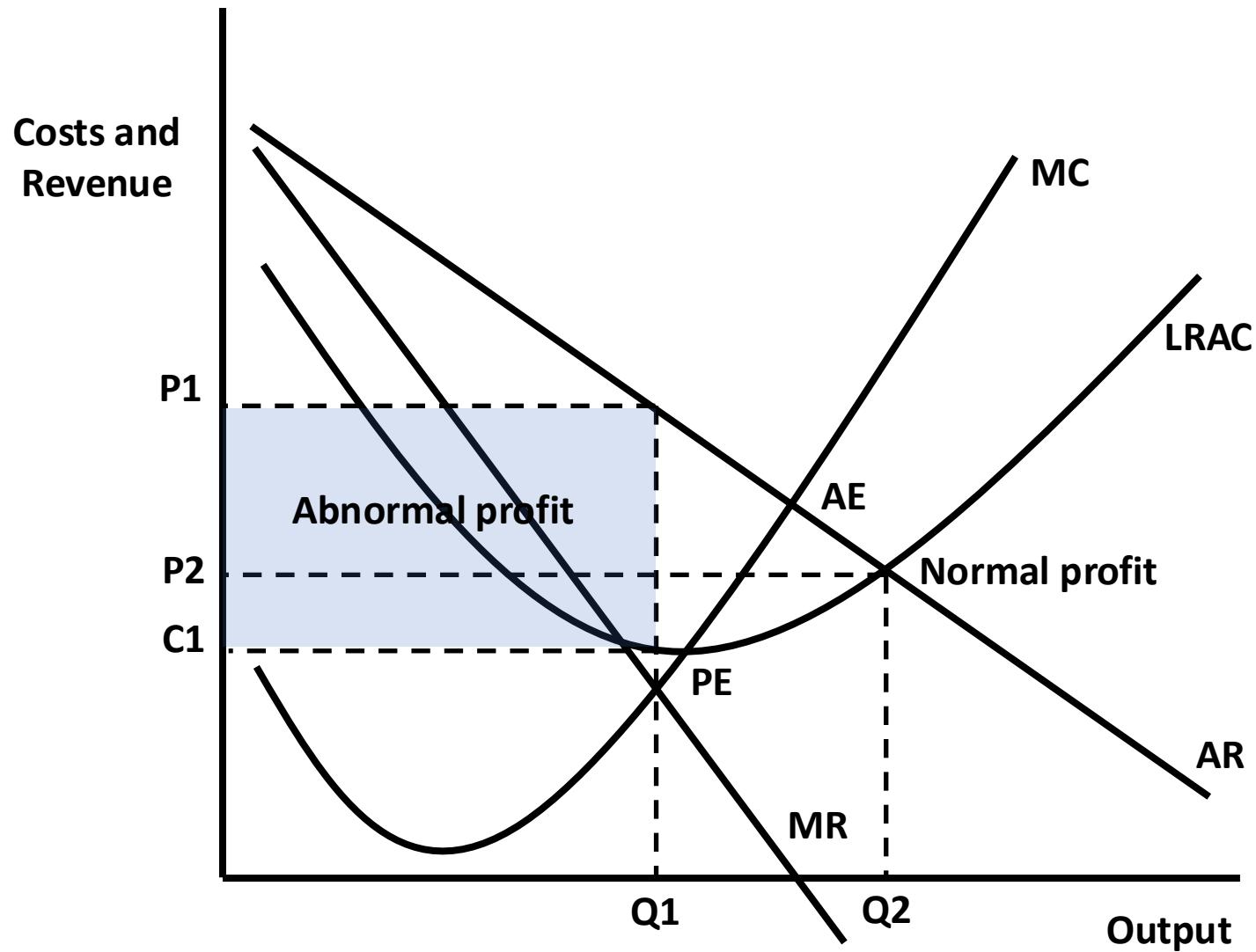
Supernormal profit at revenue maximising output



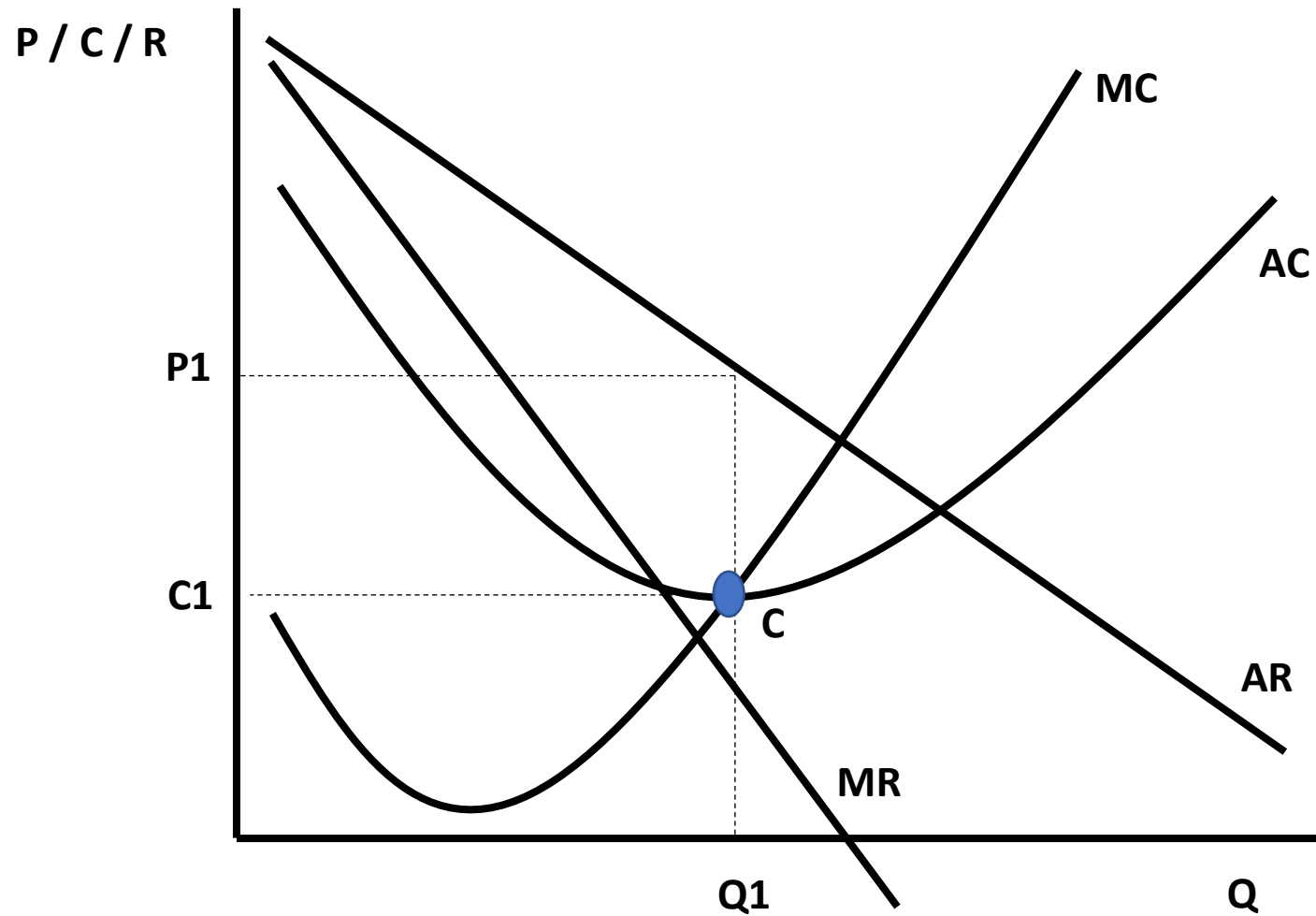
Total costs at revenue-maximising output



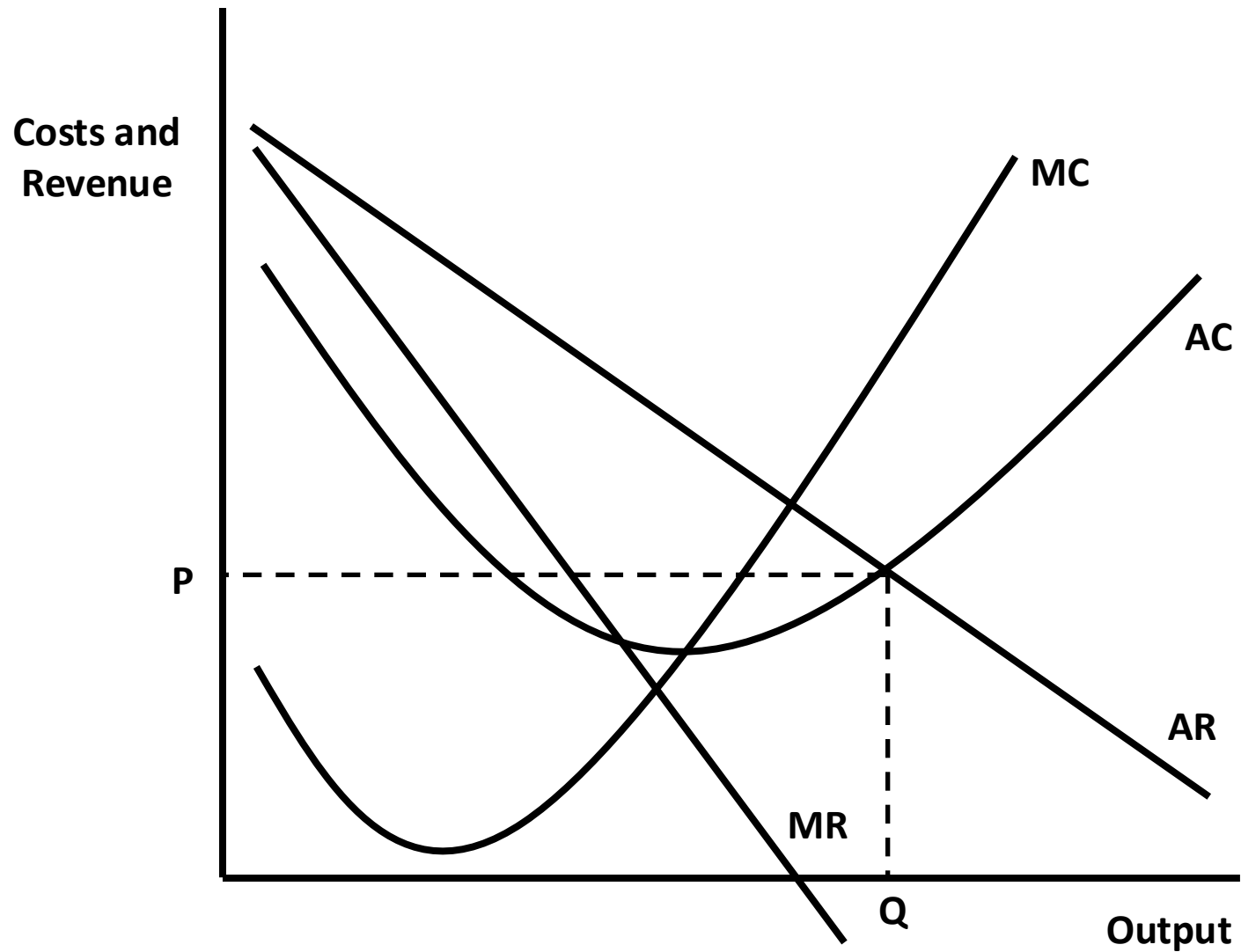
Sales maximising output (while making normal profit $AC=AR$)



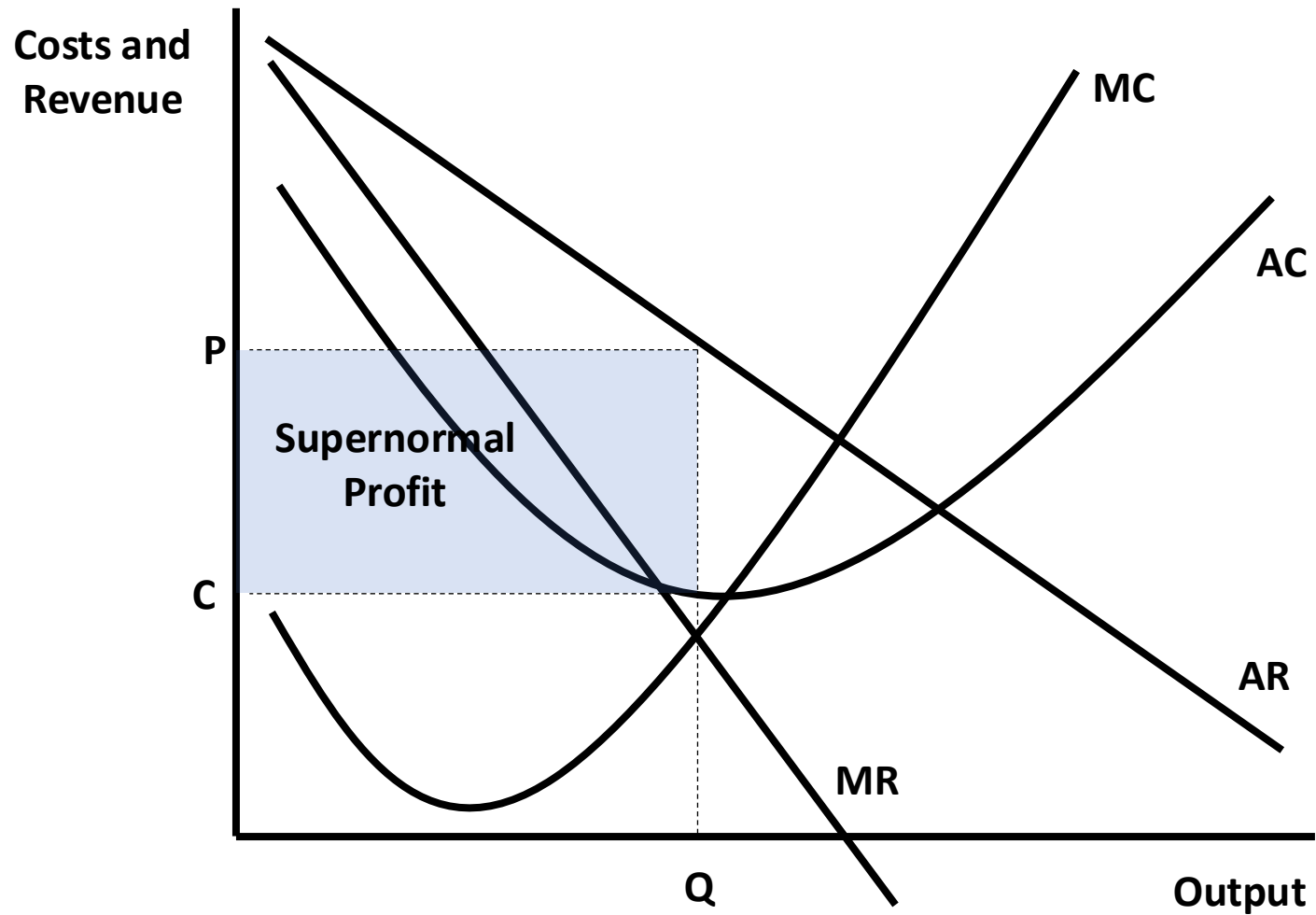
Comparison of profit maximisation to sales maximisation in imperfect competition

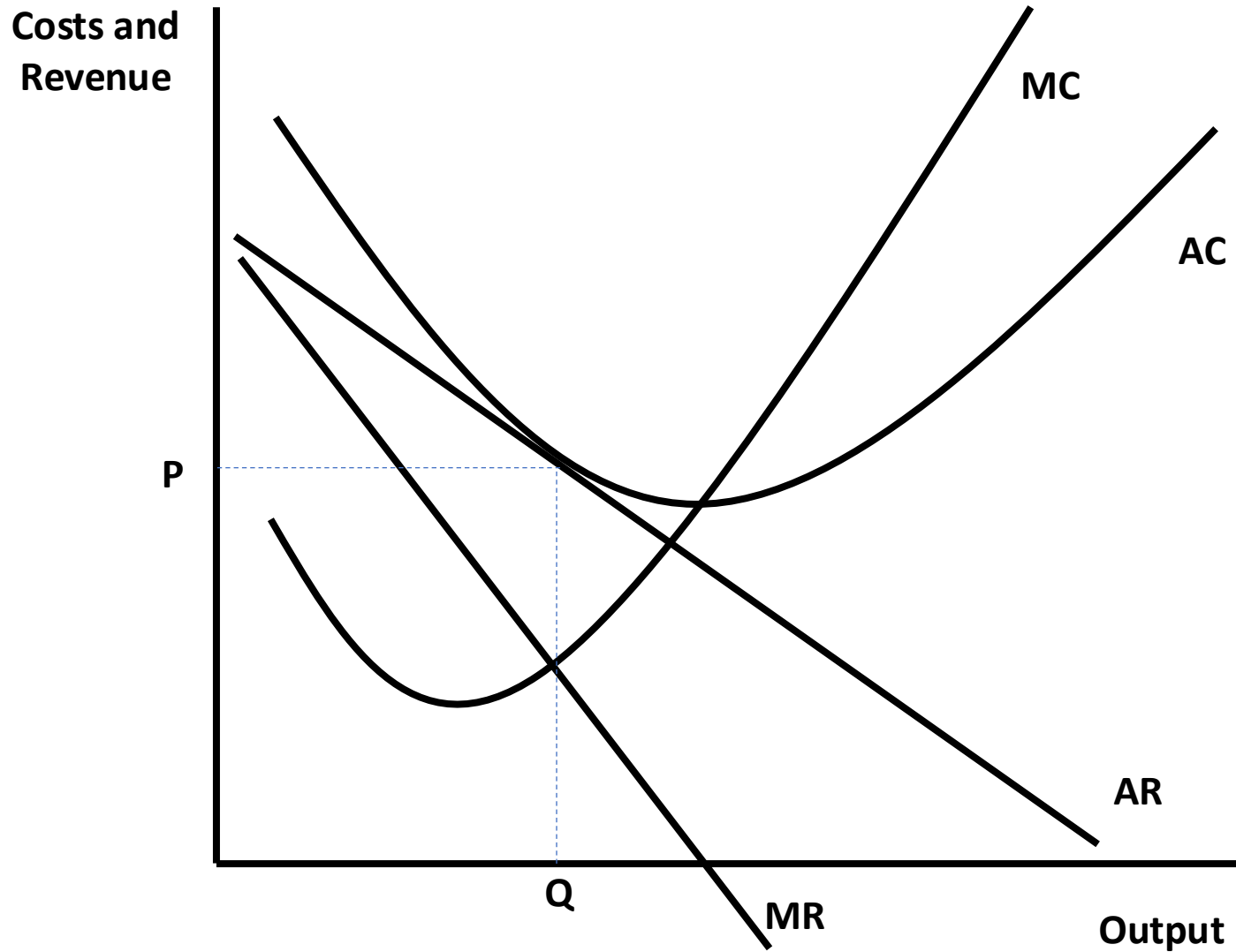


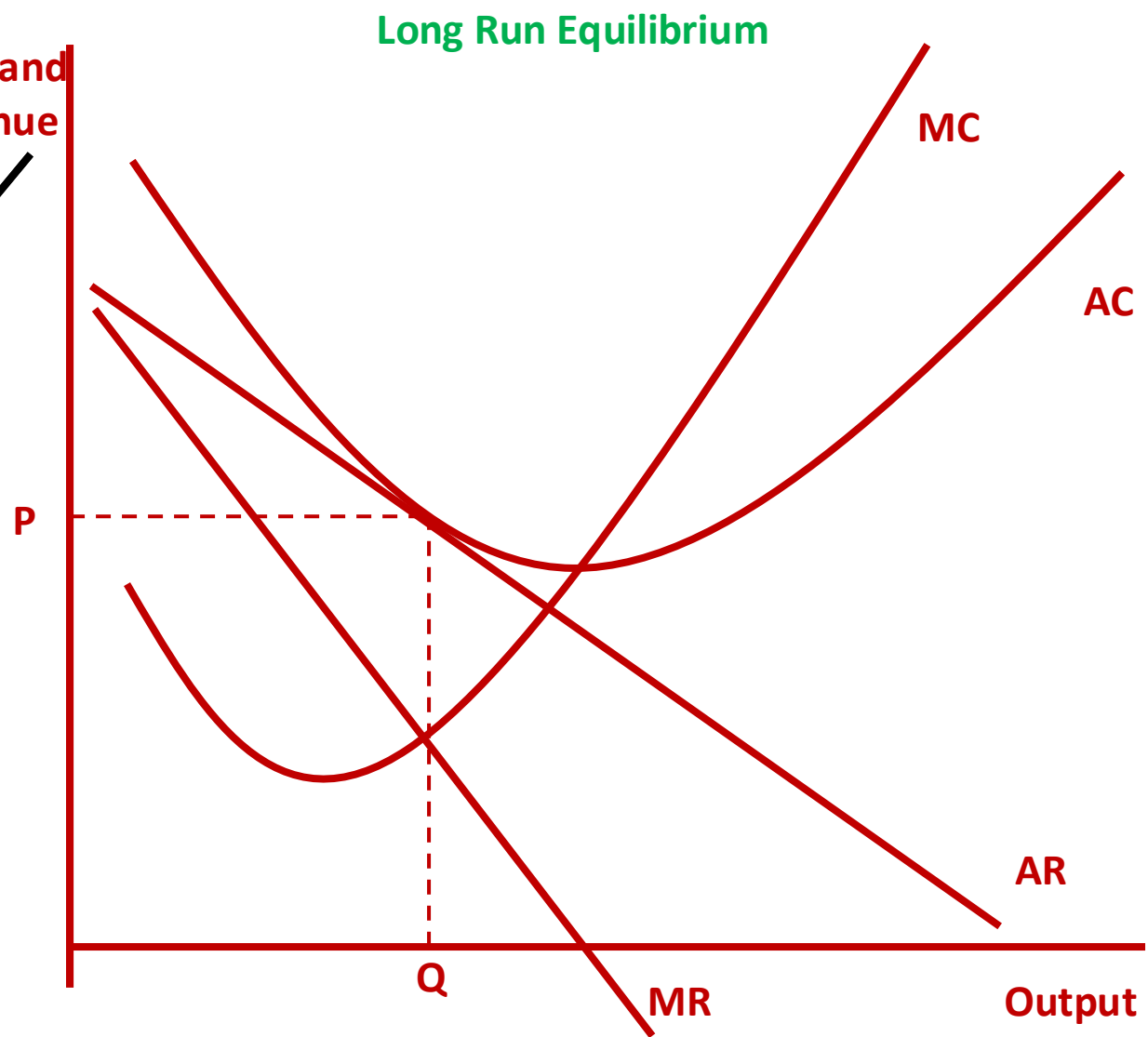
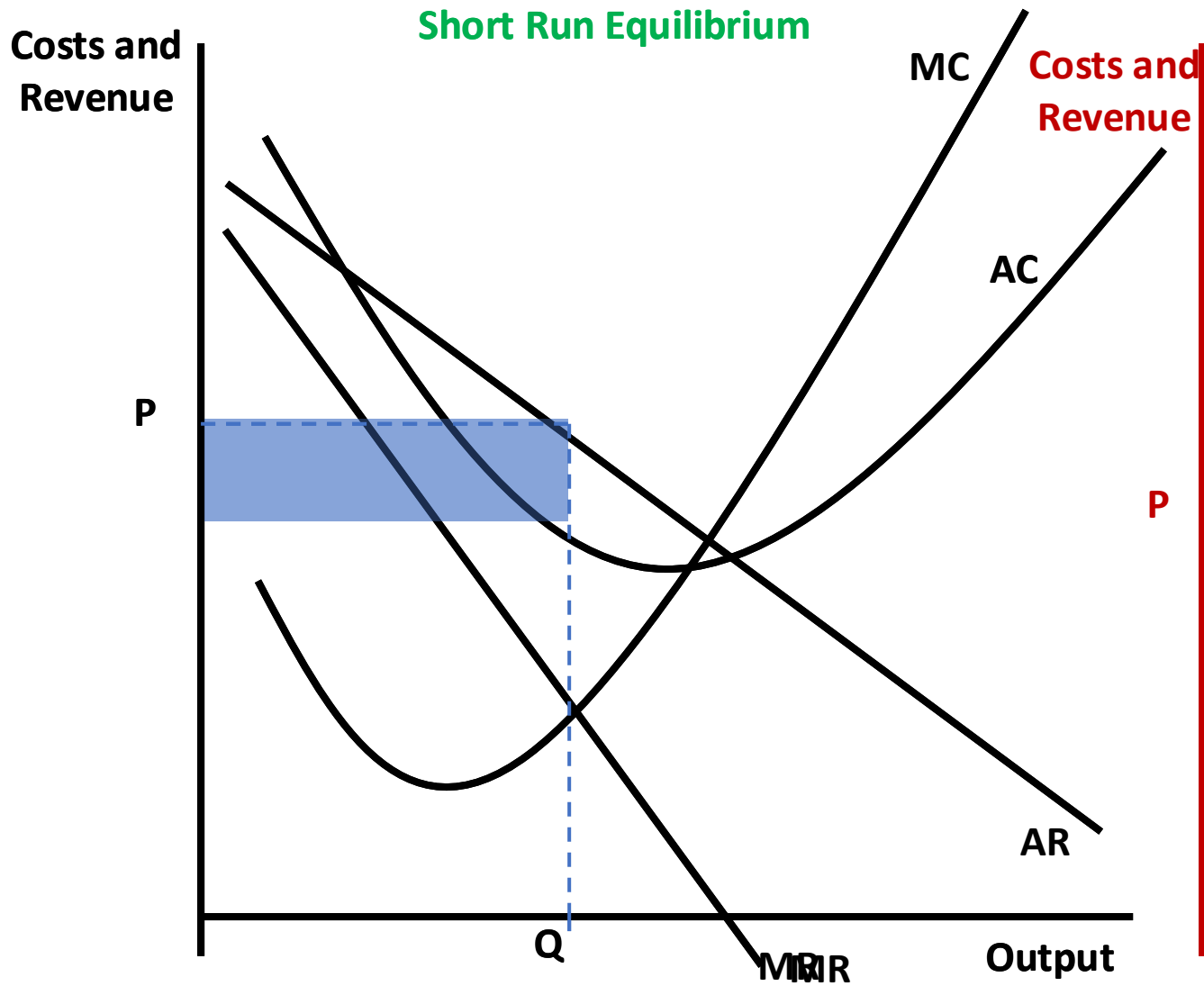
Monopoly operating at productively efficient output (minimum AC)



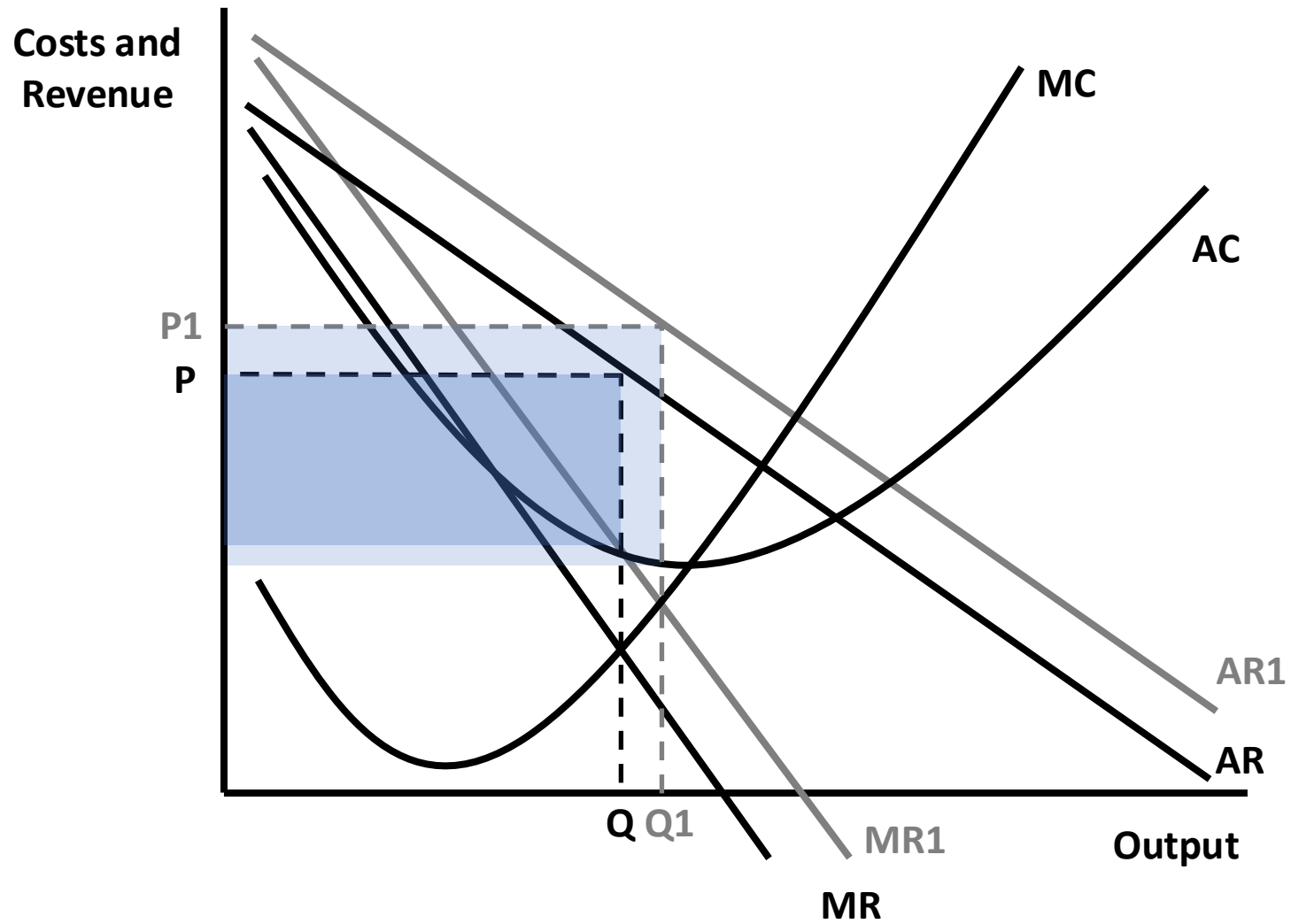
Equilibrium of firm that has sales-maximisation goal (AC=AR and normal profit only)



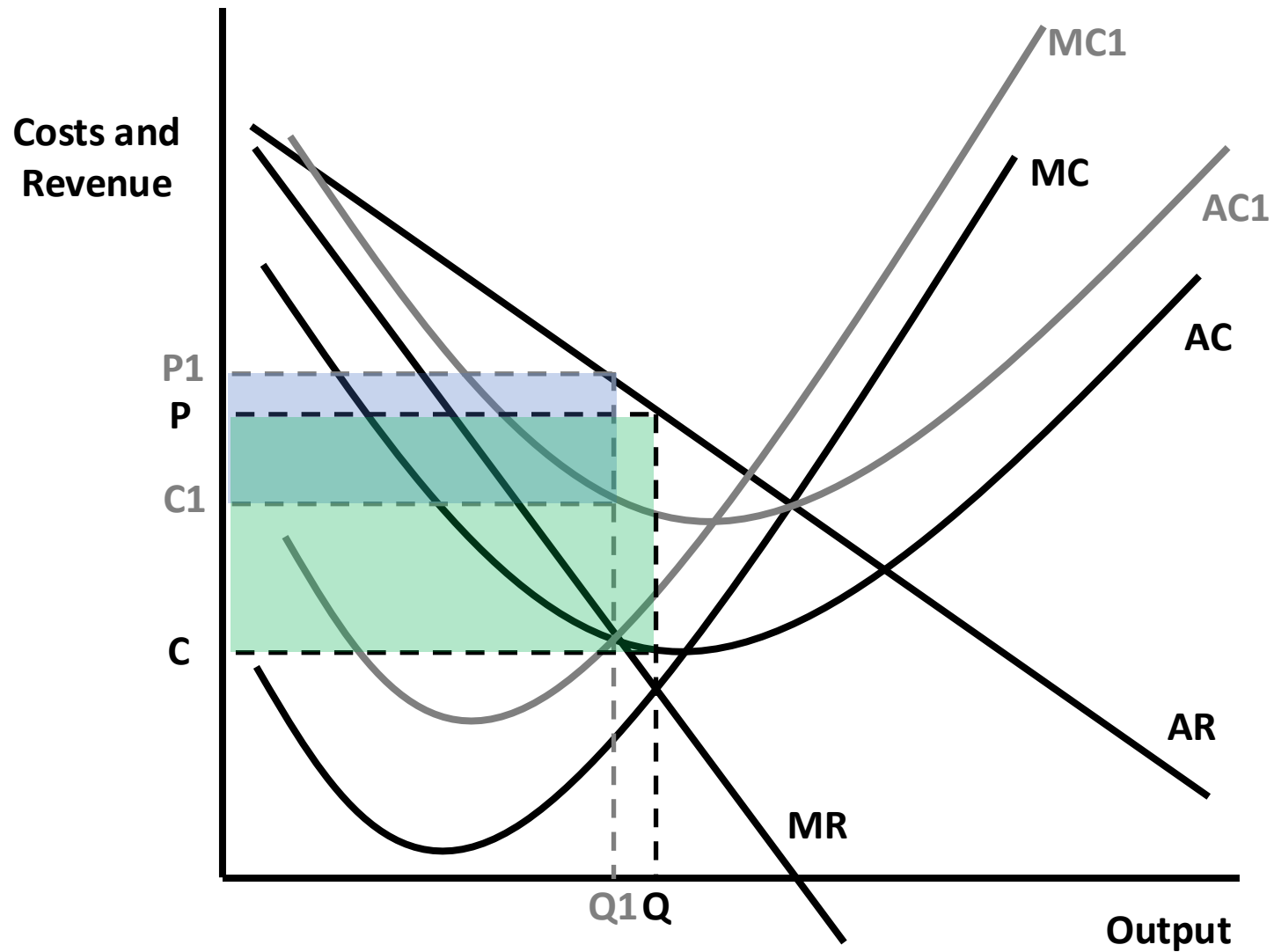




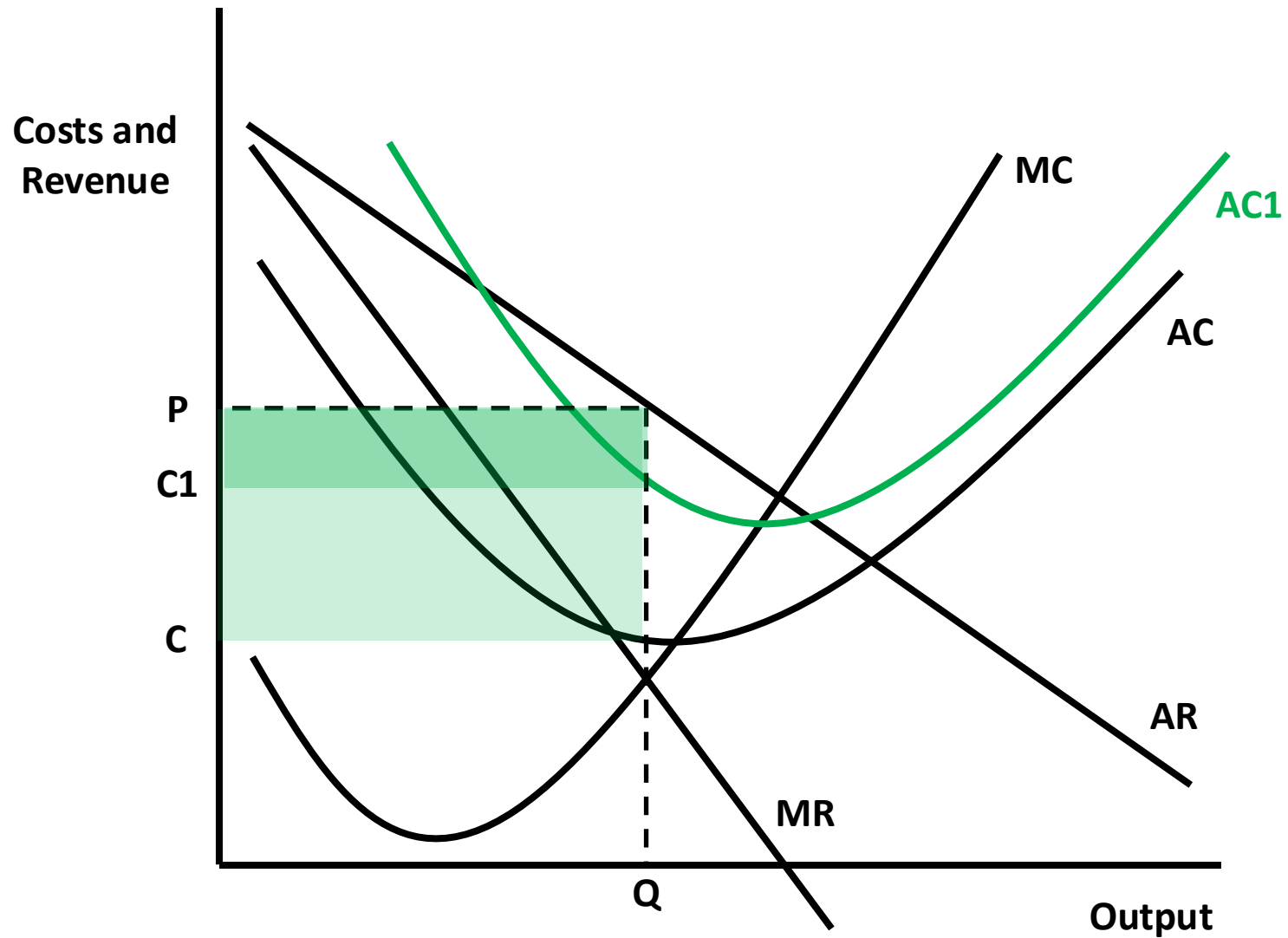
Monopolistic competition short run and long run equilibrium. Supernormal profit in the short run is competed away in the long run



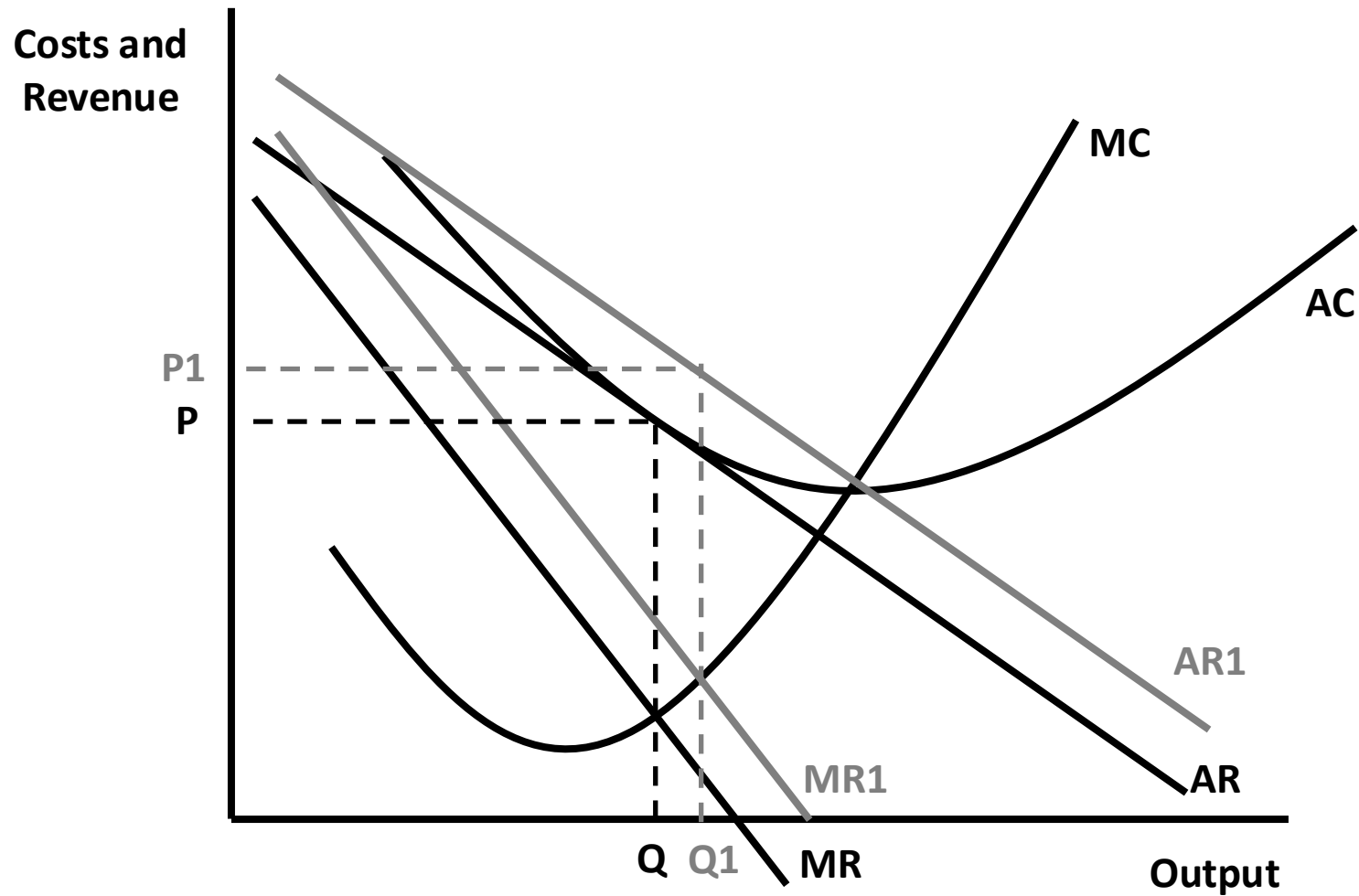
Impact of an increase in demand or revenue on price and output and profits for price maker



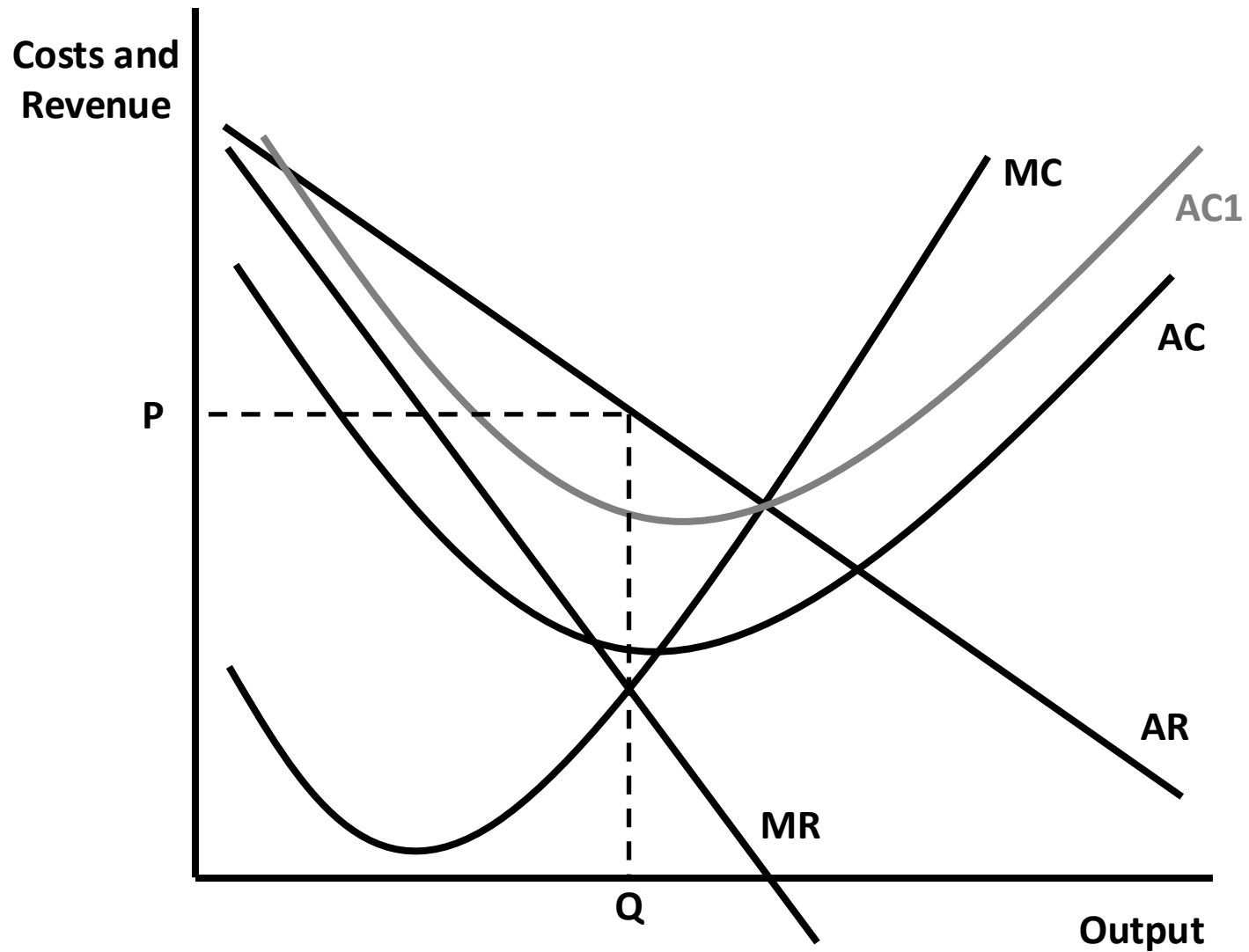
Impact of an increase in variable costs on supernormal profits for price maker
 (Decrease from $PC \times Q$ to $P1C1 \times Q1$)



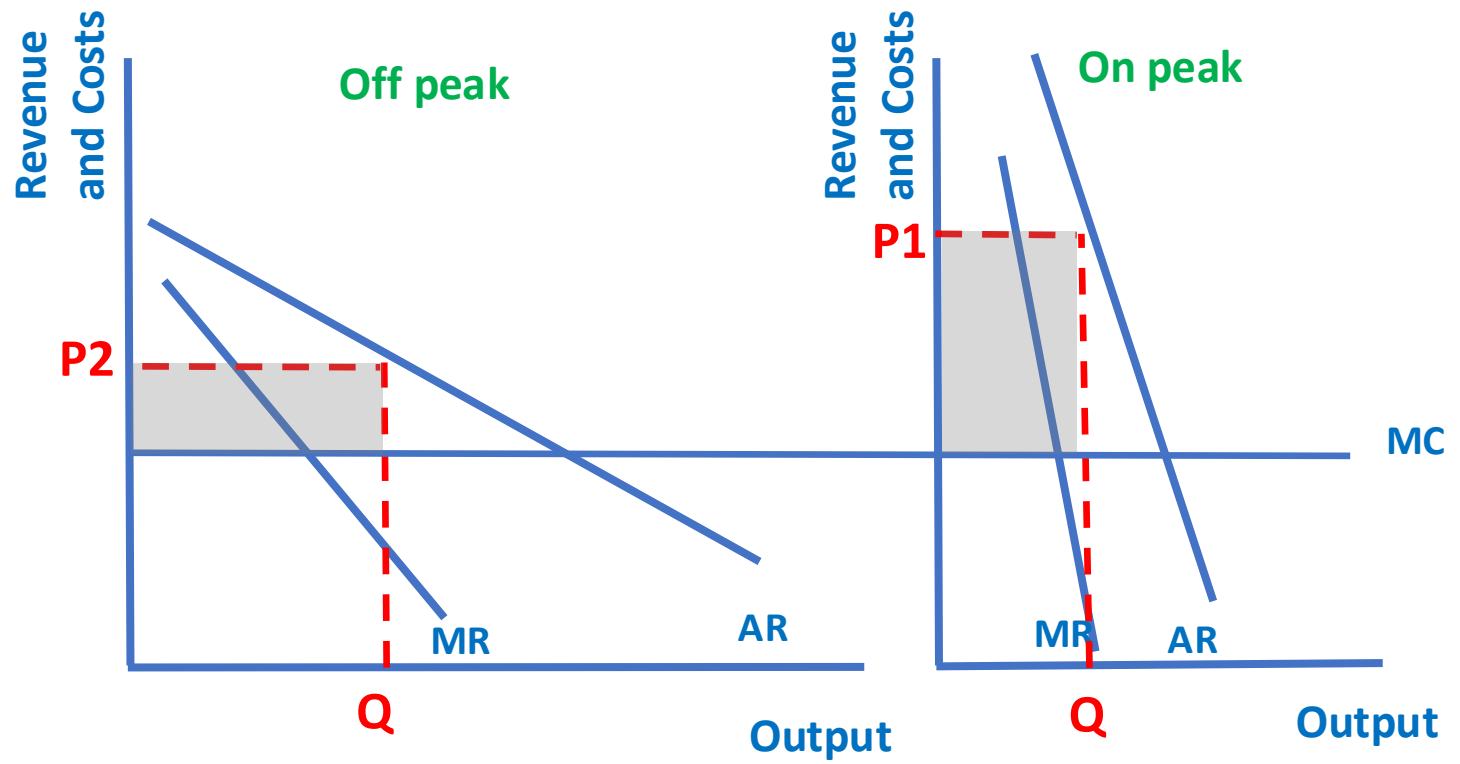
Impact of an increase in fixed costs on supernormal profits for price maker
 (Decrease from $PC \times Q$ to $PC1 \times Q$)



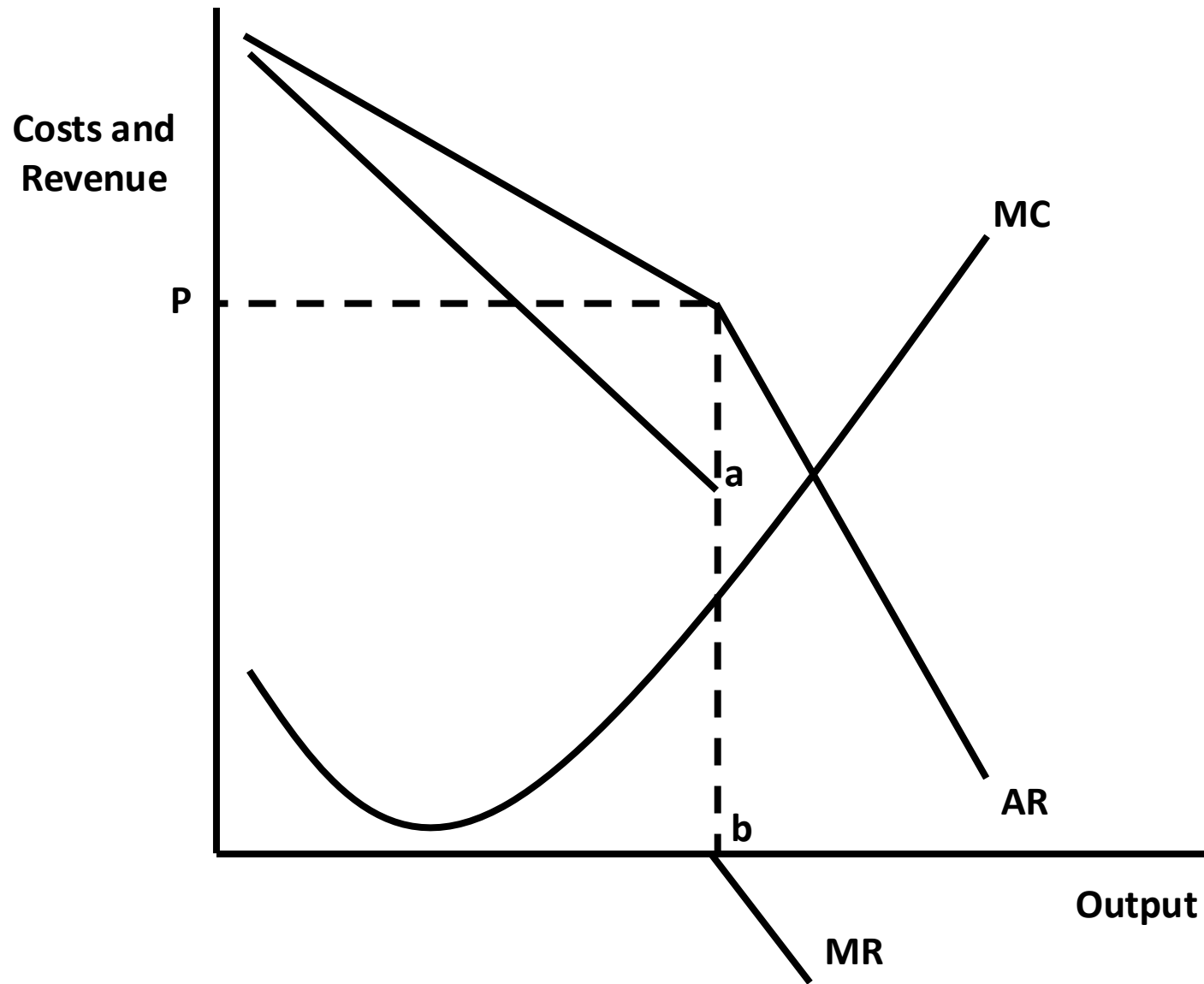
Impact of an increase in demand on price and output for a price maker (imperfect competition)



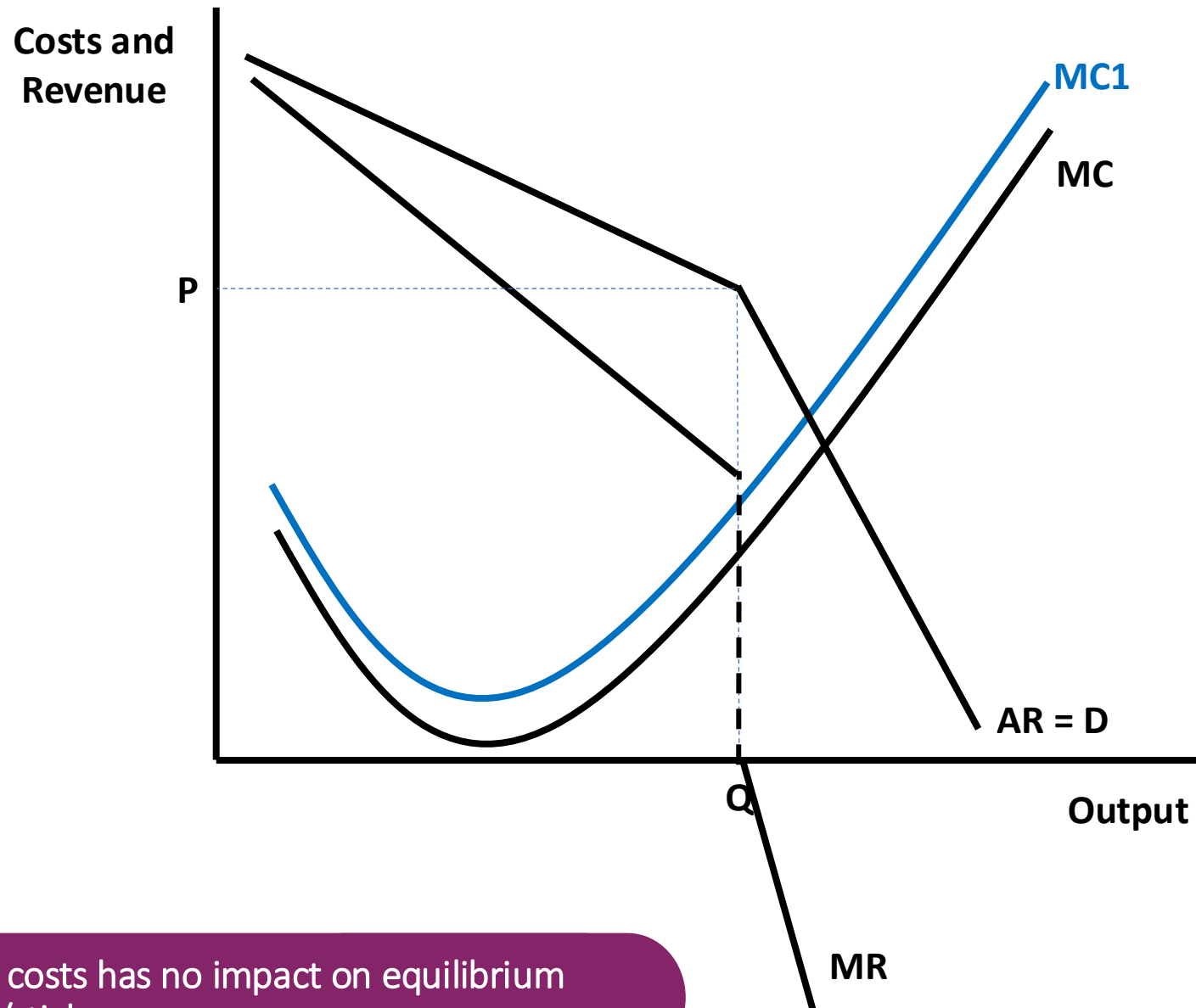
Increase in fixed costs in imperfect competition



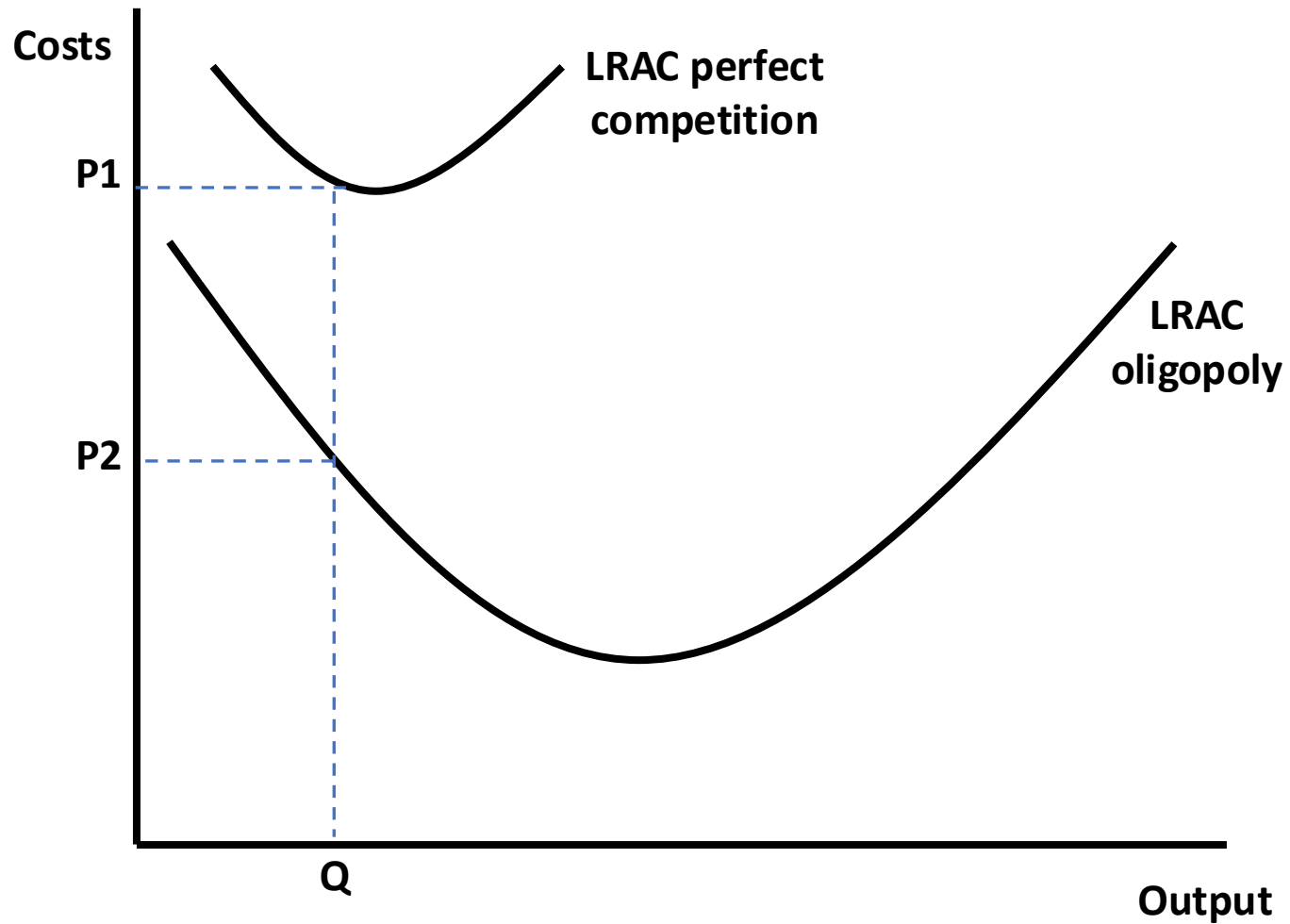
price discrimination for off peak and on peak goods/services



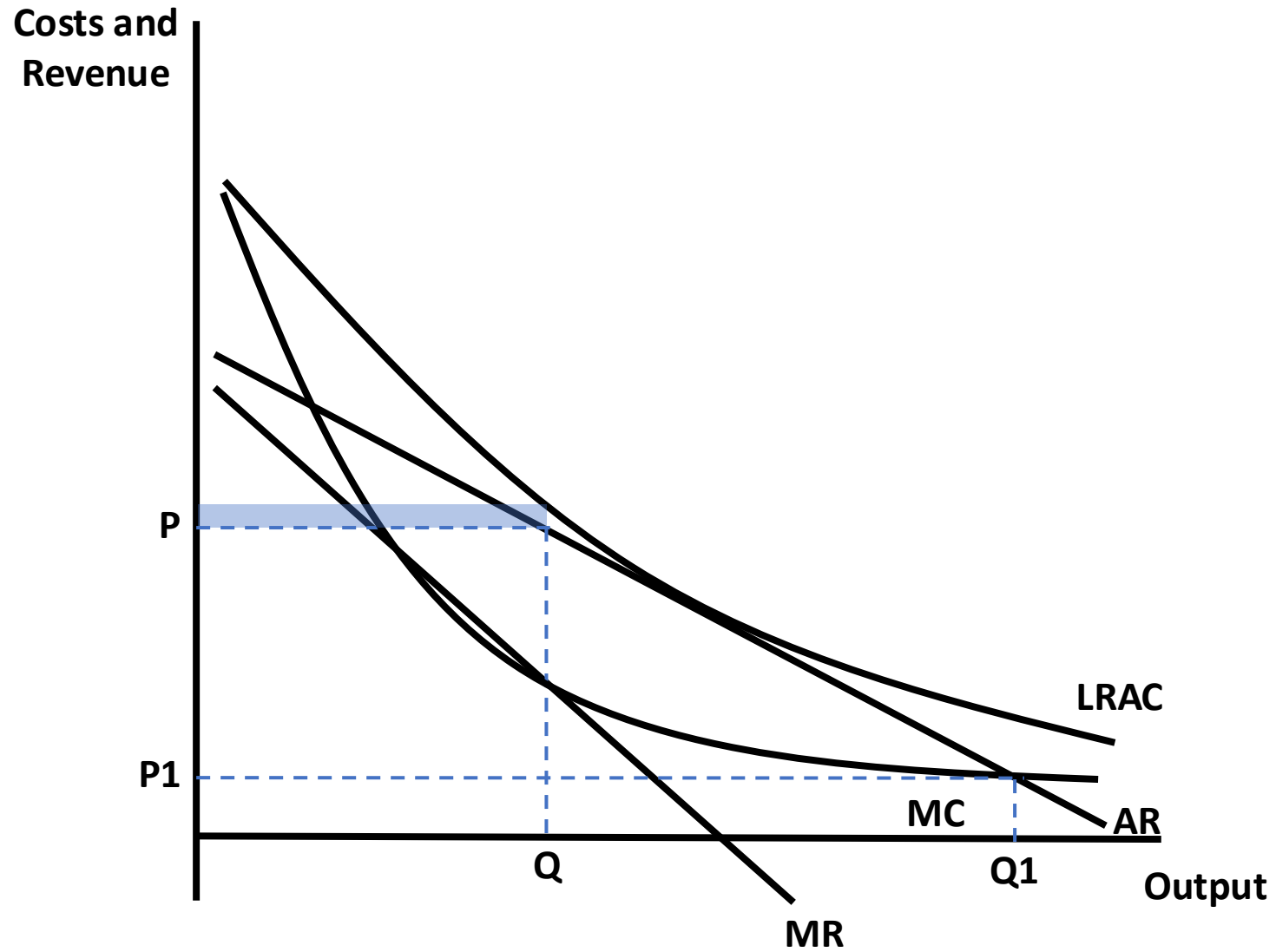
Oligopoly kinked demand equilibrium price and quantity for profit maximiser
 MR is disjointed because of the kink in the demand (AR) curve



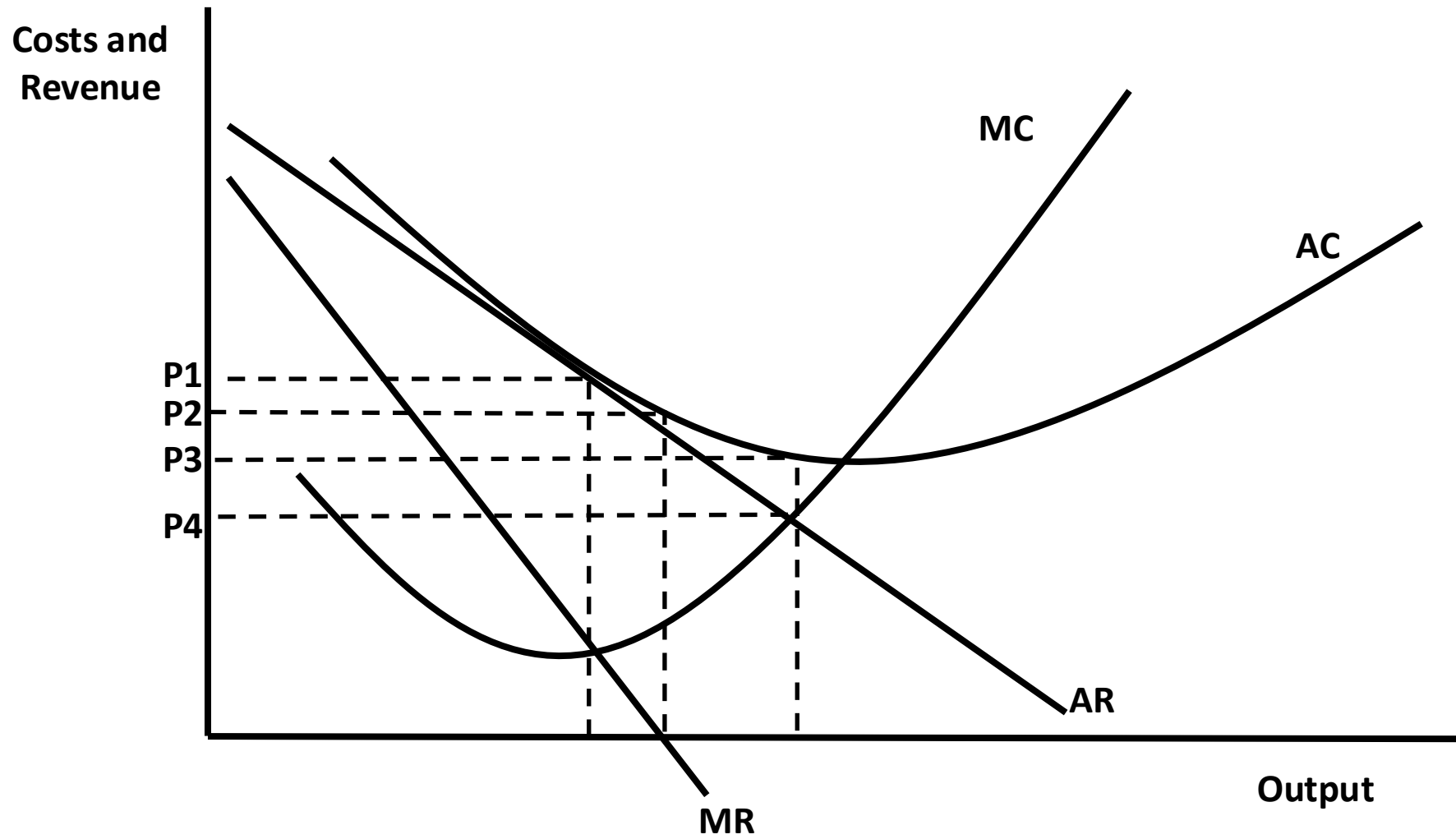
Kinked demand in oligopoly: increase in costs has no impact on equilibrium price and output; prices are rigid/stable/sticky



Lower average costs in oligopoly compared to perfect competition due to greater economies of scale



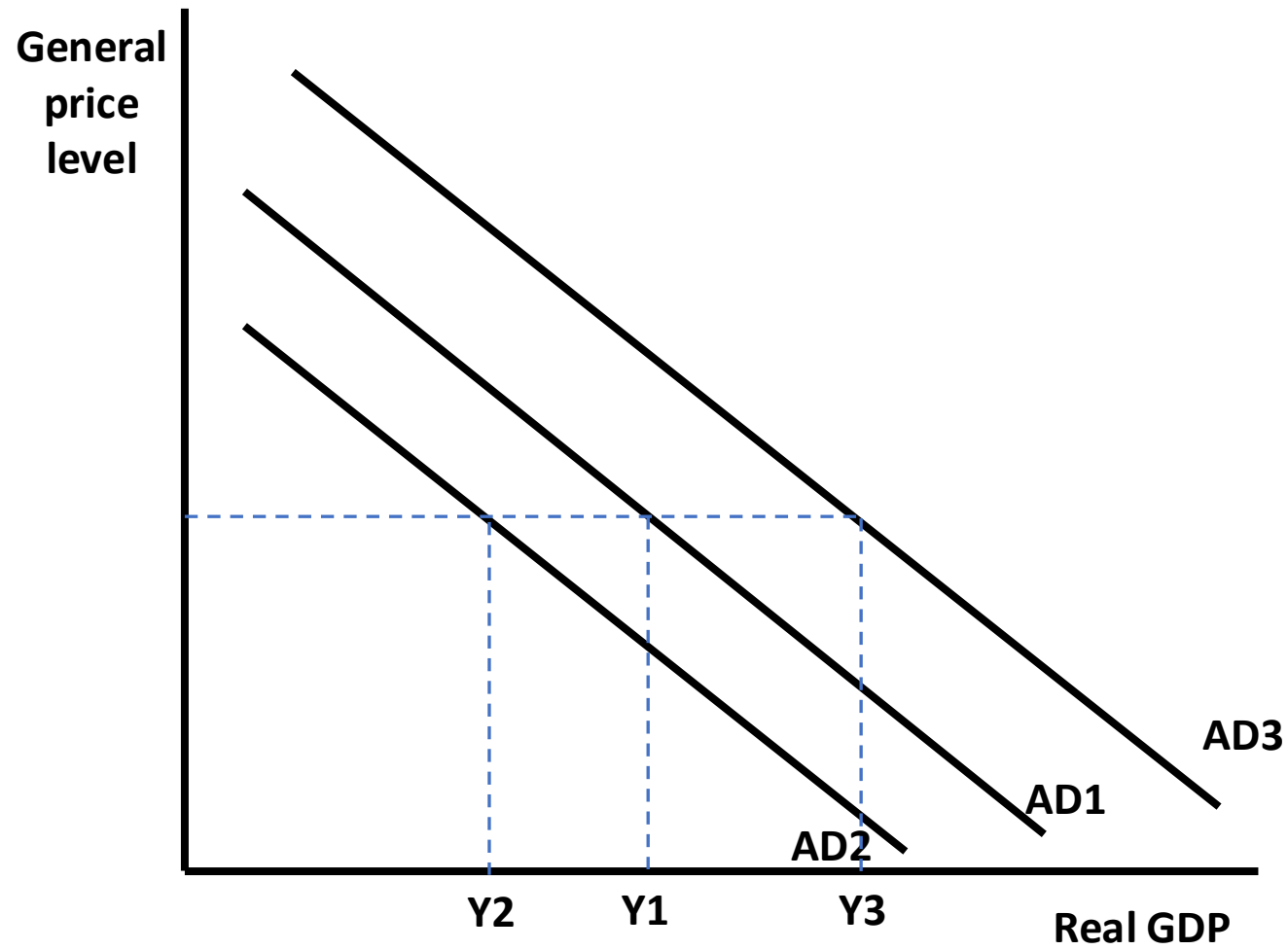
Natural monopoly; profit-maximising output is Q ; if marginal cost pricing output is Q_1 which achieves allocative efficiency but cause firm to run at a loss

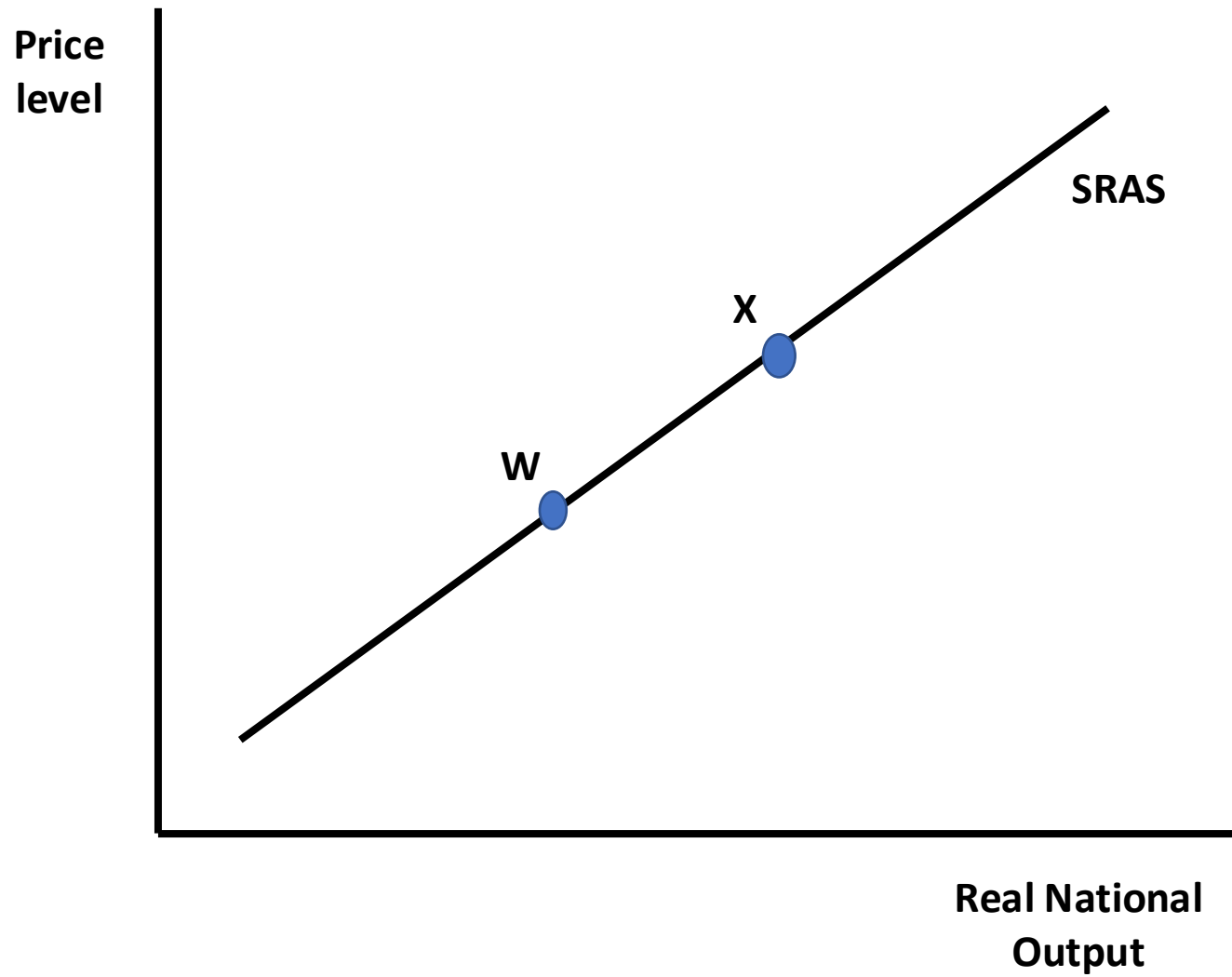


Possible pricing options for a firm in monopolistic competition in the long run

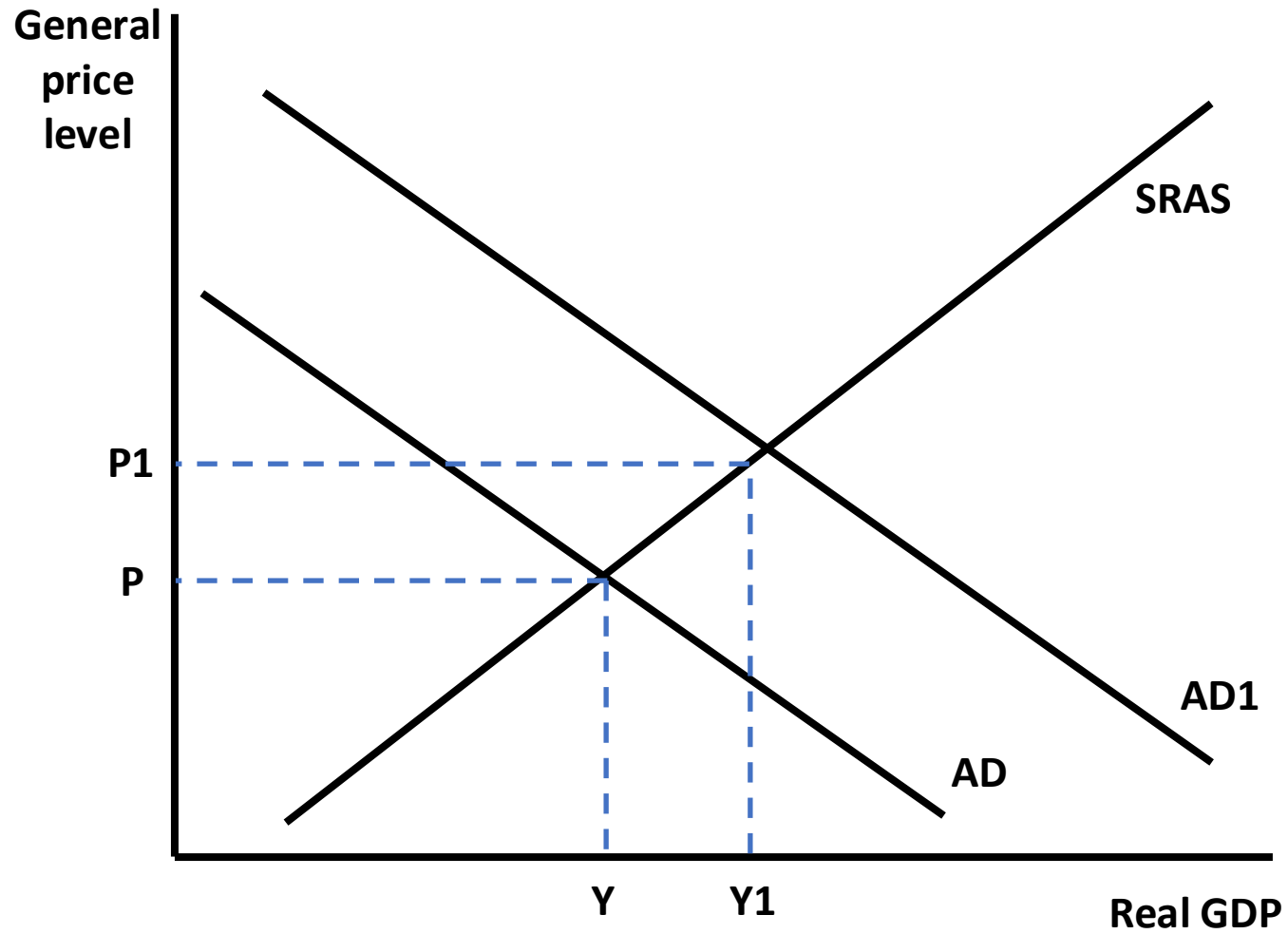
ECONOMICS DIAGRAMS

AD AND AS DIAGRAMS

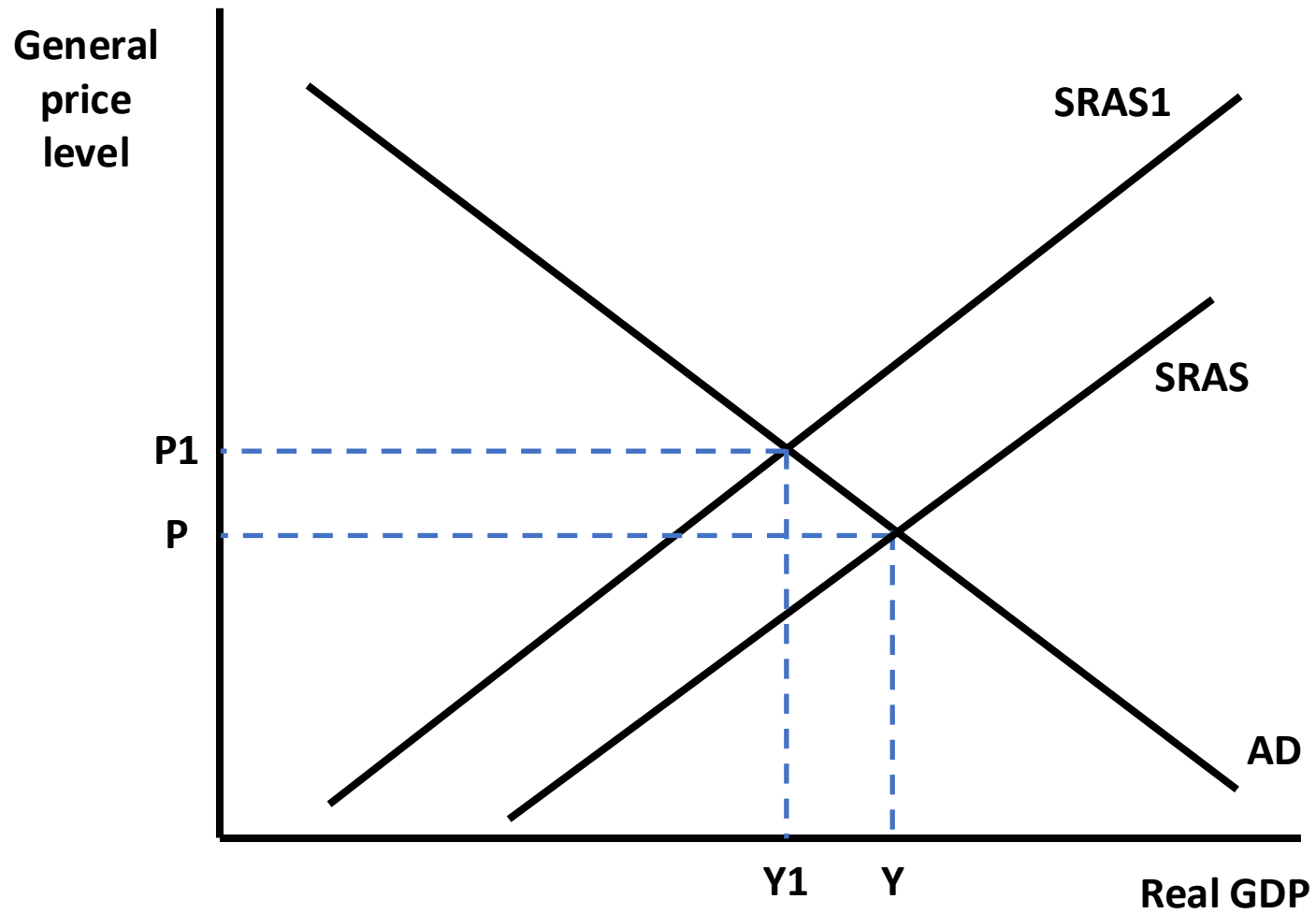




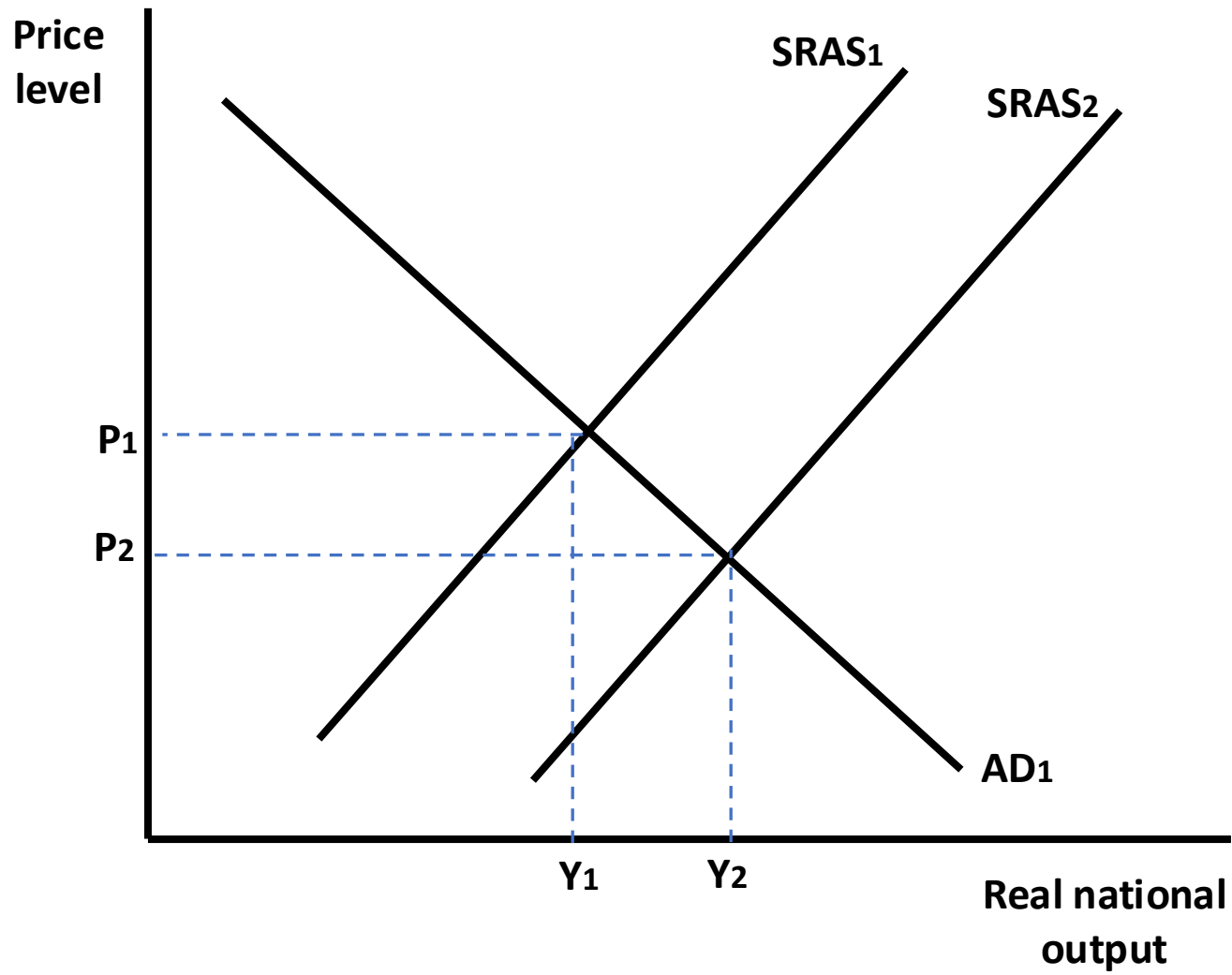
Short run aggregate supply – a change in the price level causes a movement along from W to X



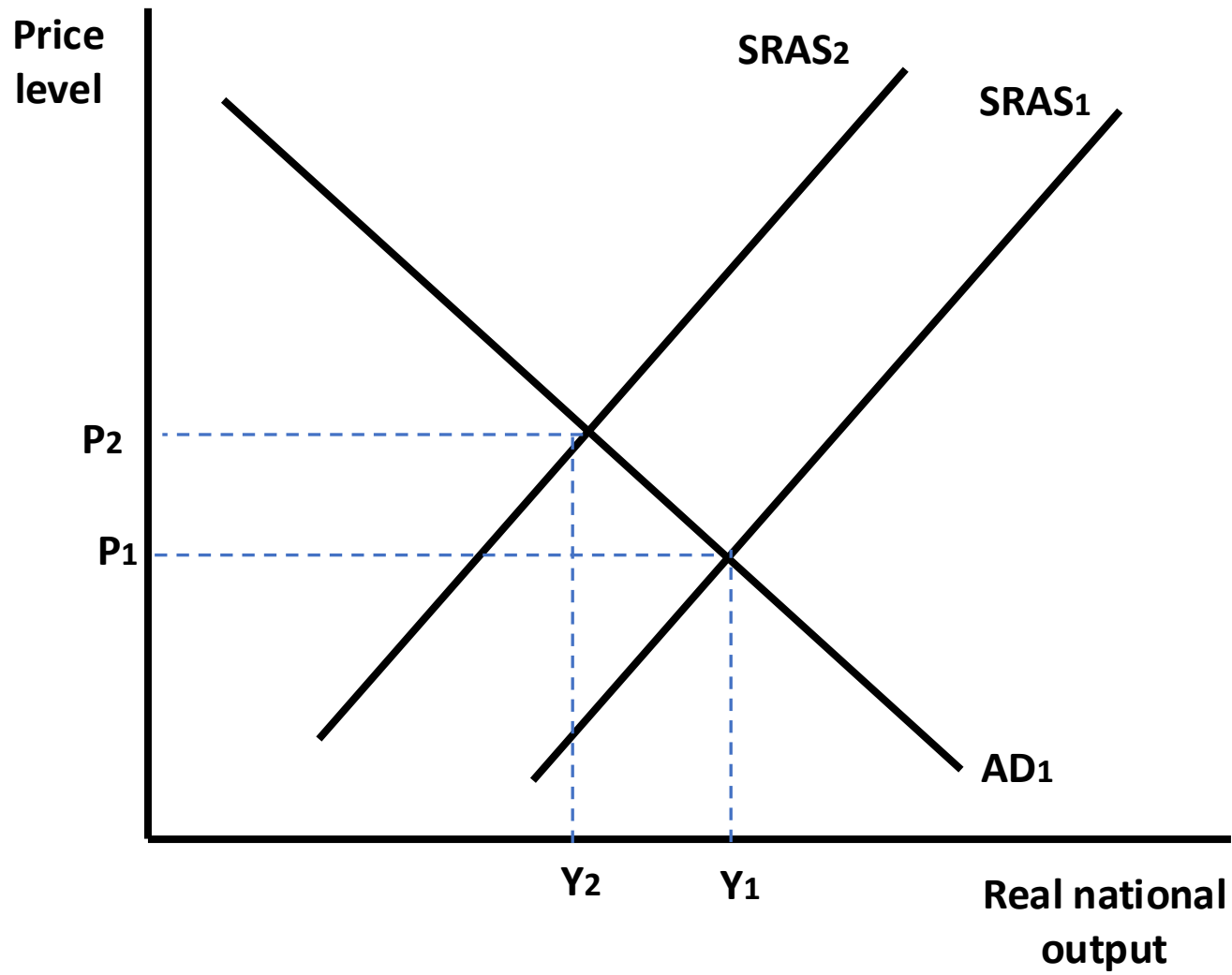
Increase in aggregate demand (AD), and the impact on macro equilibrium



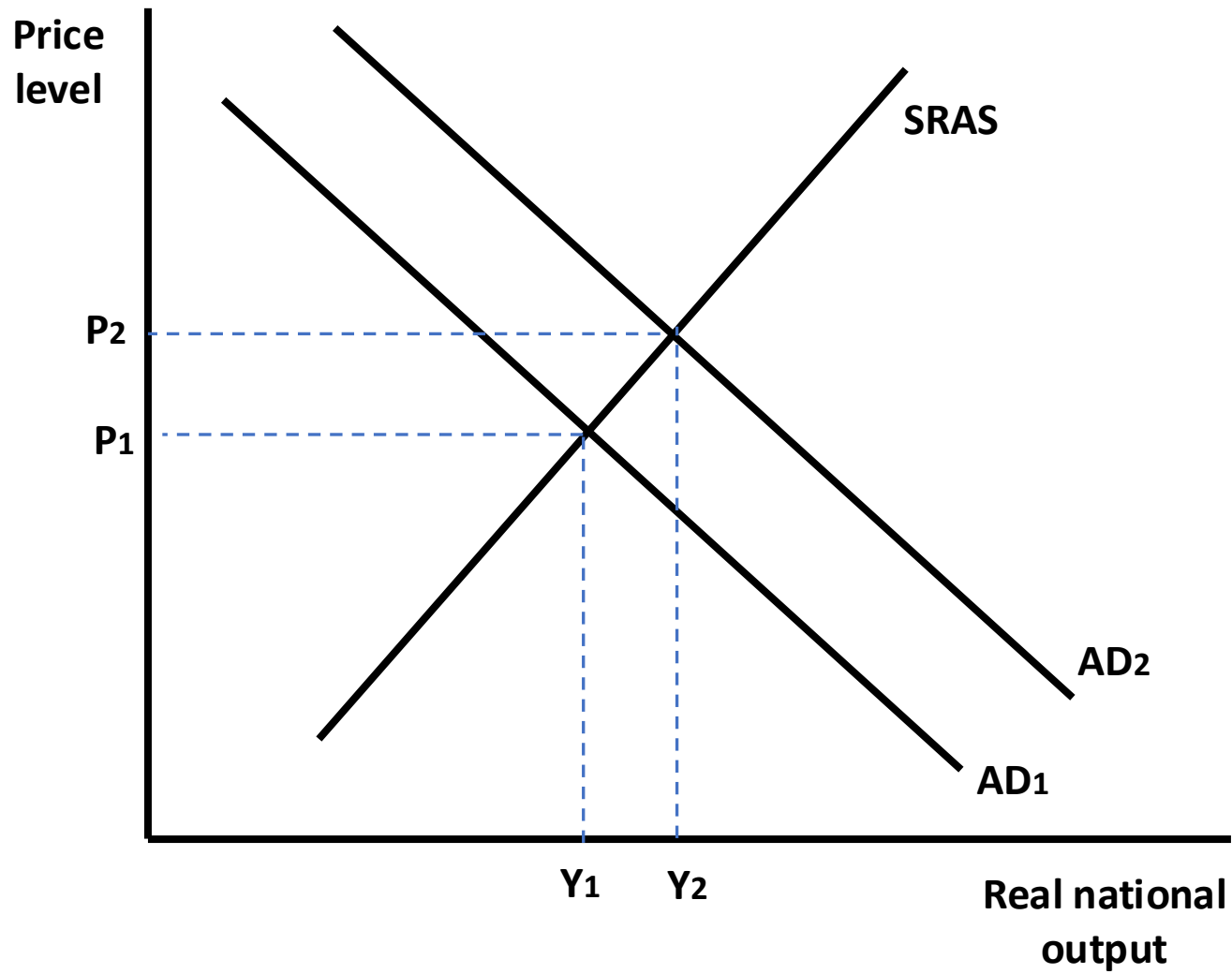
Decrease in short run aggregate supply (SRAS), and the impact on macro equilibrium



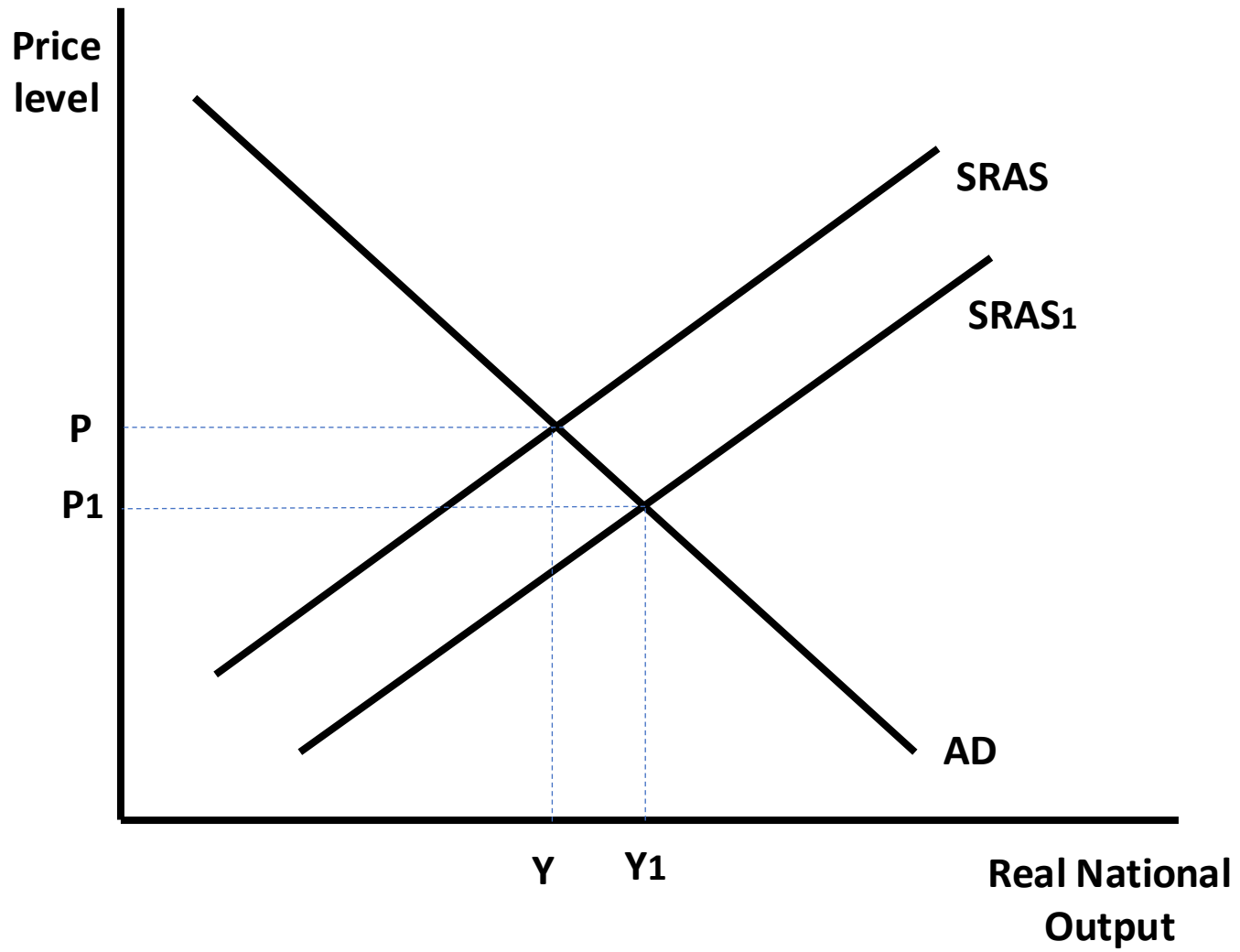
Increase in short run aggregate supply (Classical model), and the impact on macro equilibrium



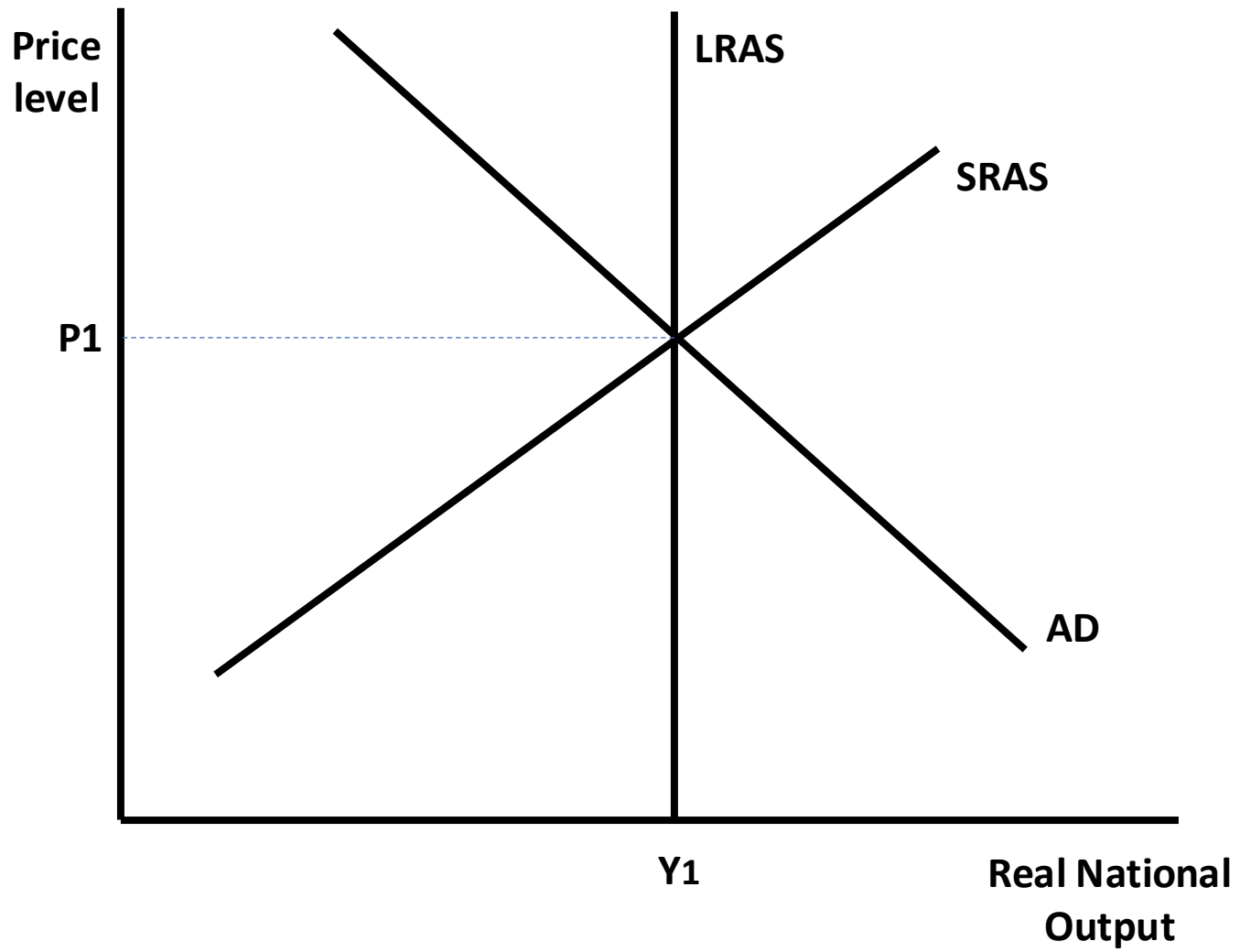
Decrease in short run aggregate supply (Classical model); shows cost-push inflation



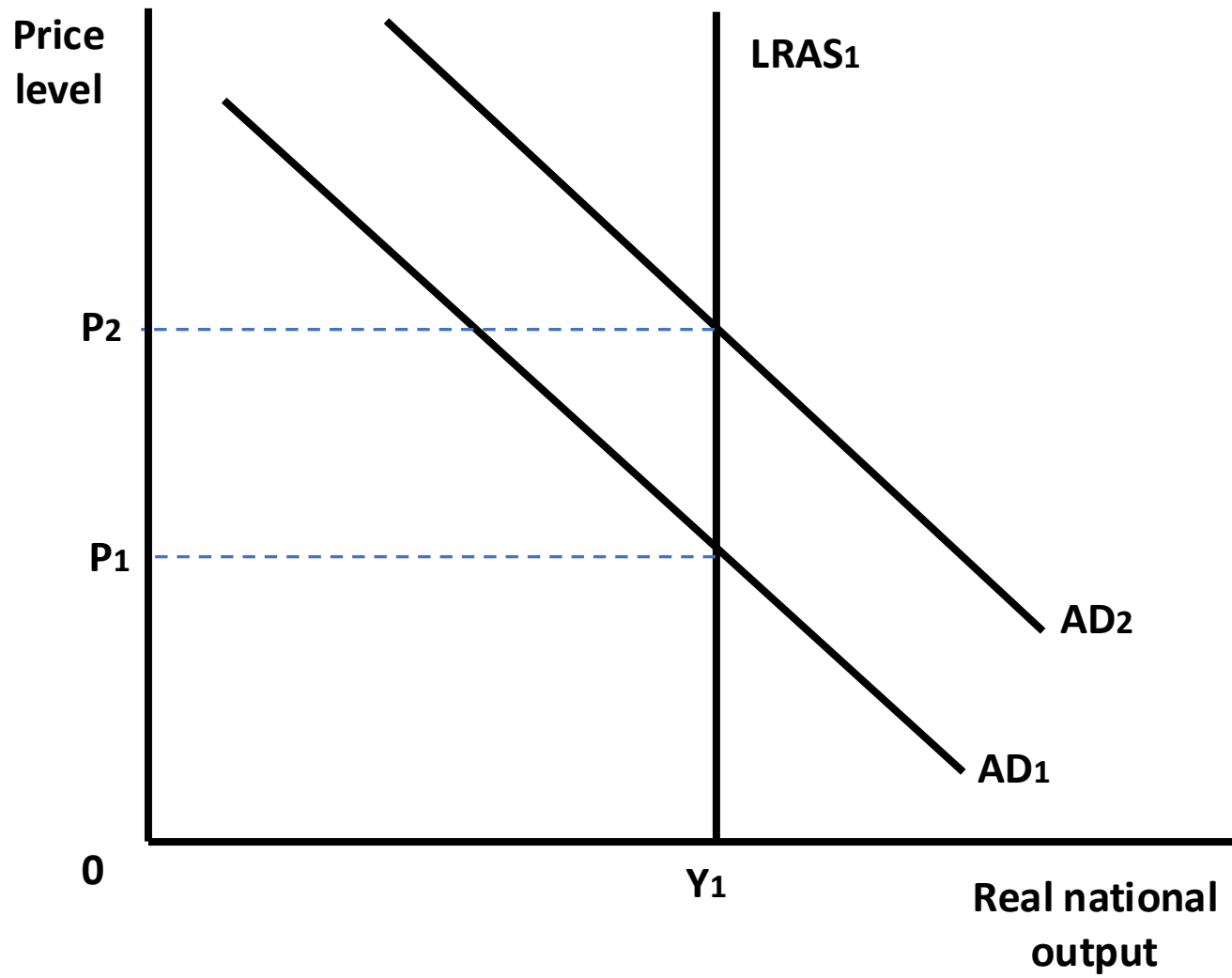
Increase in aggregate demand (Classical model); shows demand-pull inflation



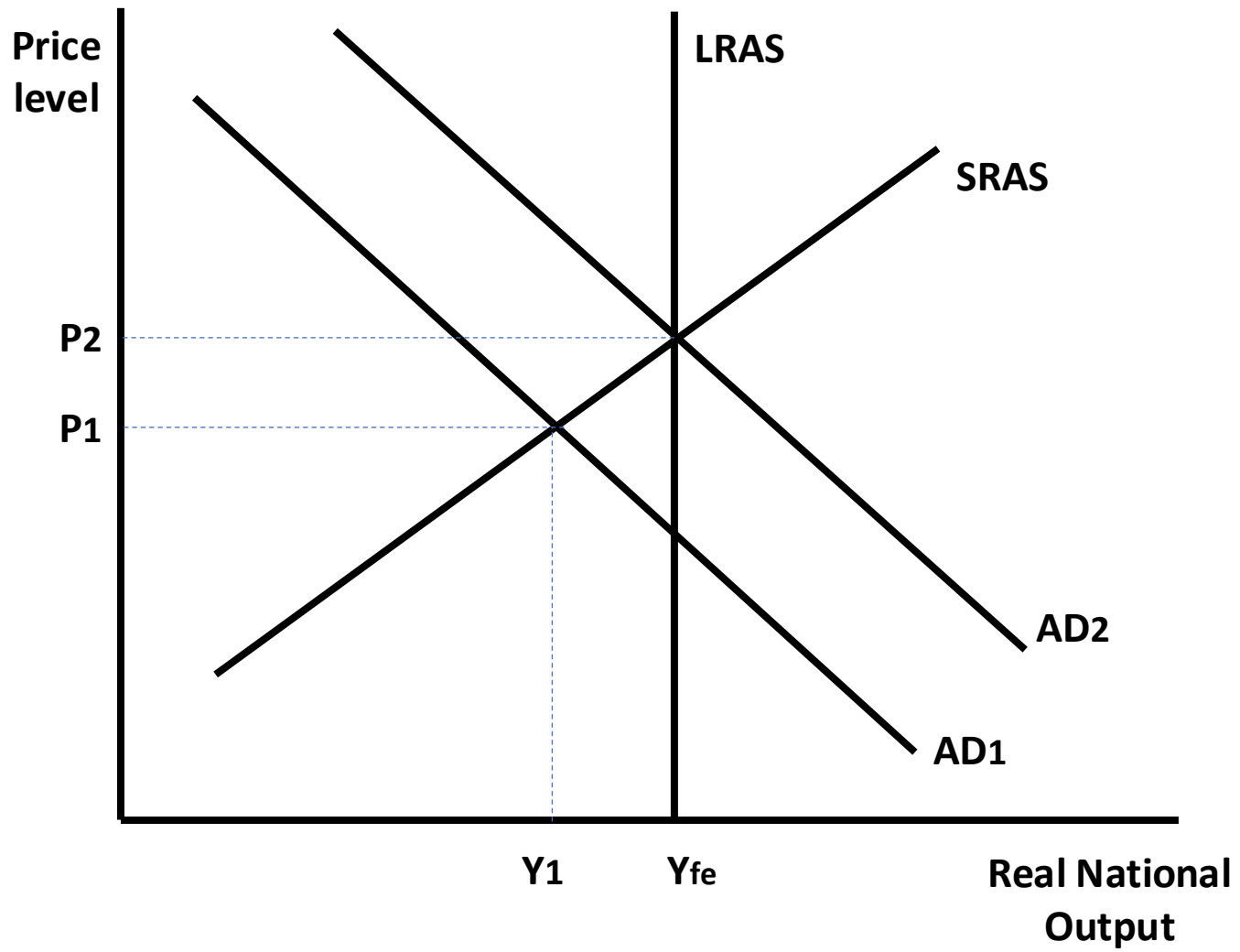
Increase in short run aggregate supply (classical model), showing disinflation or deflation due to falling costs in economy, eg lower oil prices



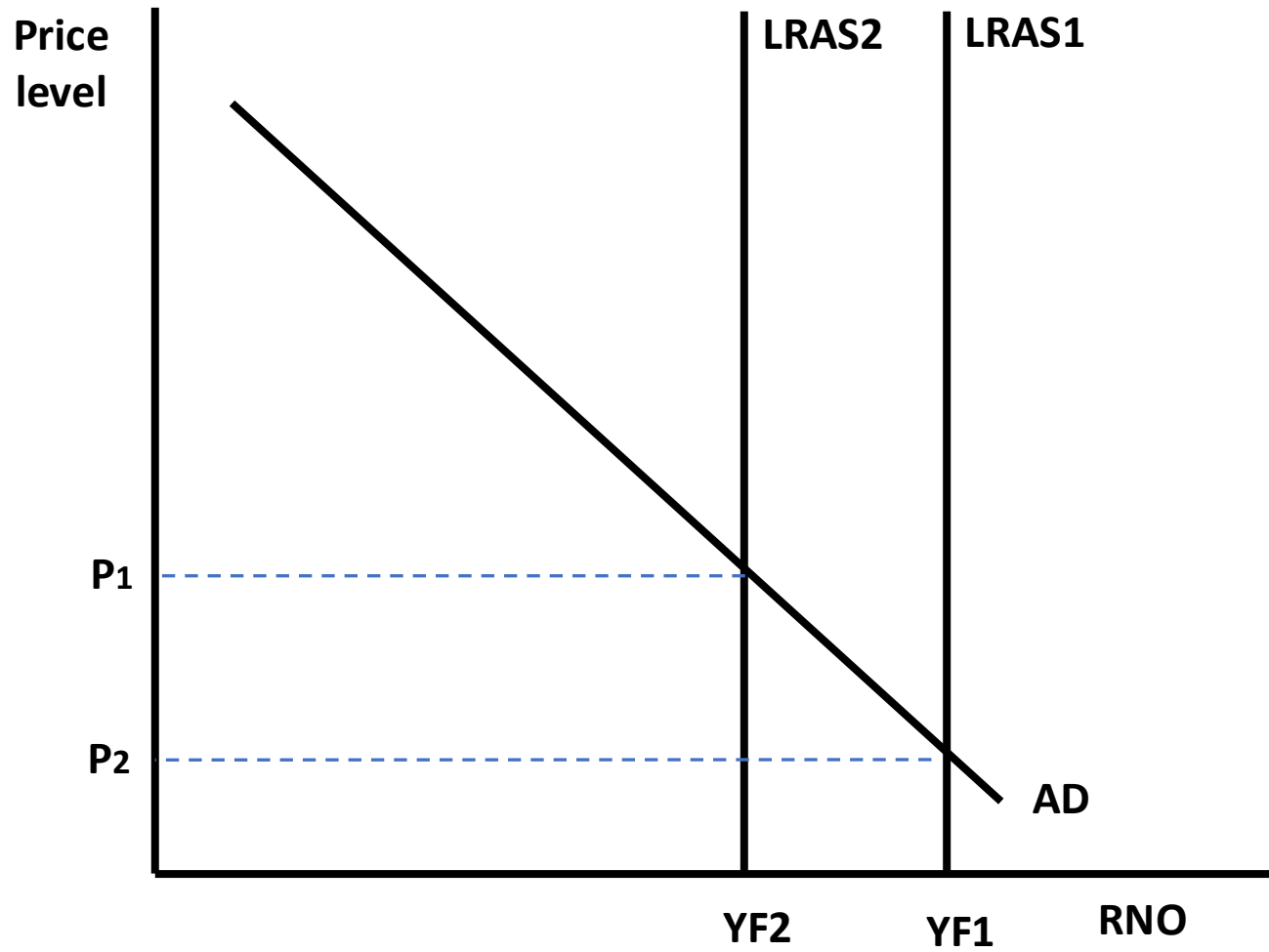
Long run equilibrium real national output and price level in the classical model



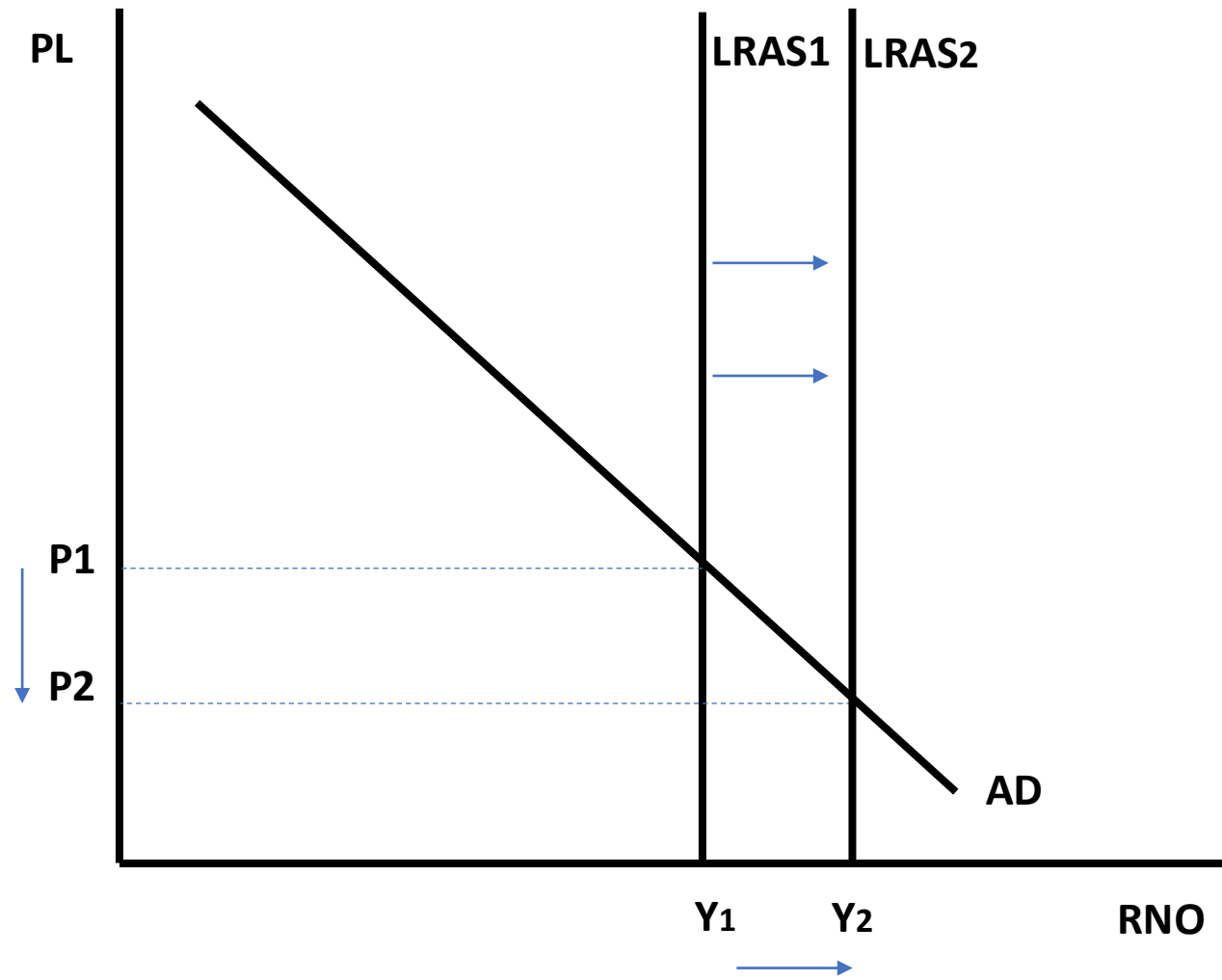
Long run effect of an increase in aggregate demand (Classical model)



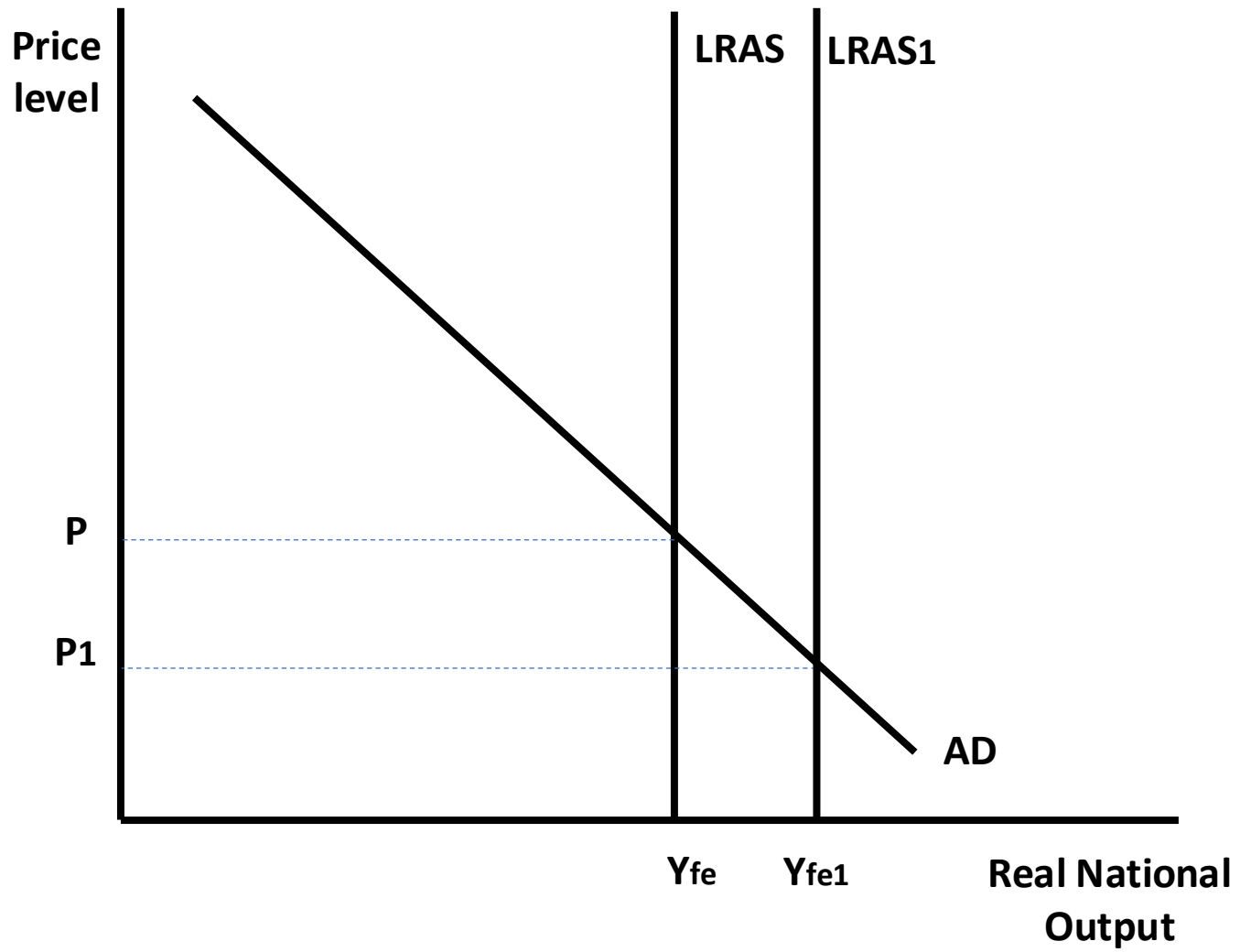
Increase in aggregate demand (Classical model)



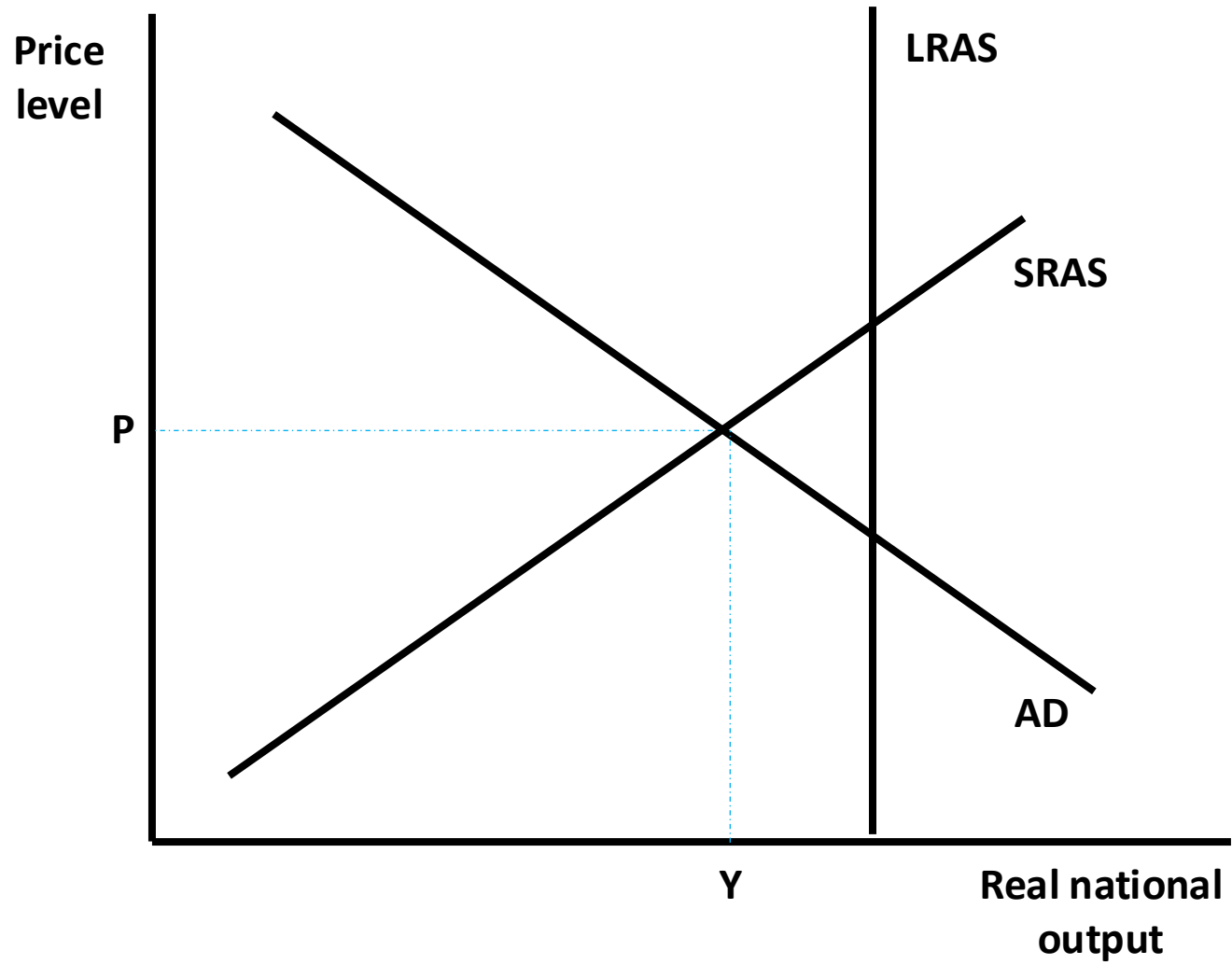
Decrease in long run aggregate supply (classical model)



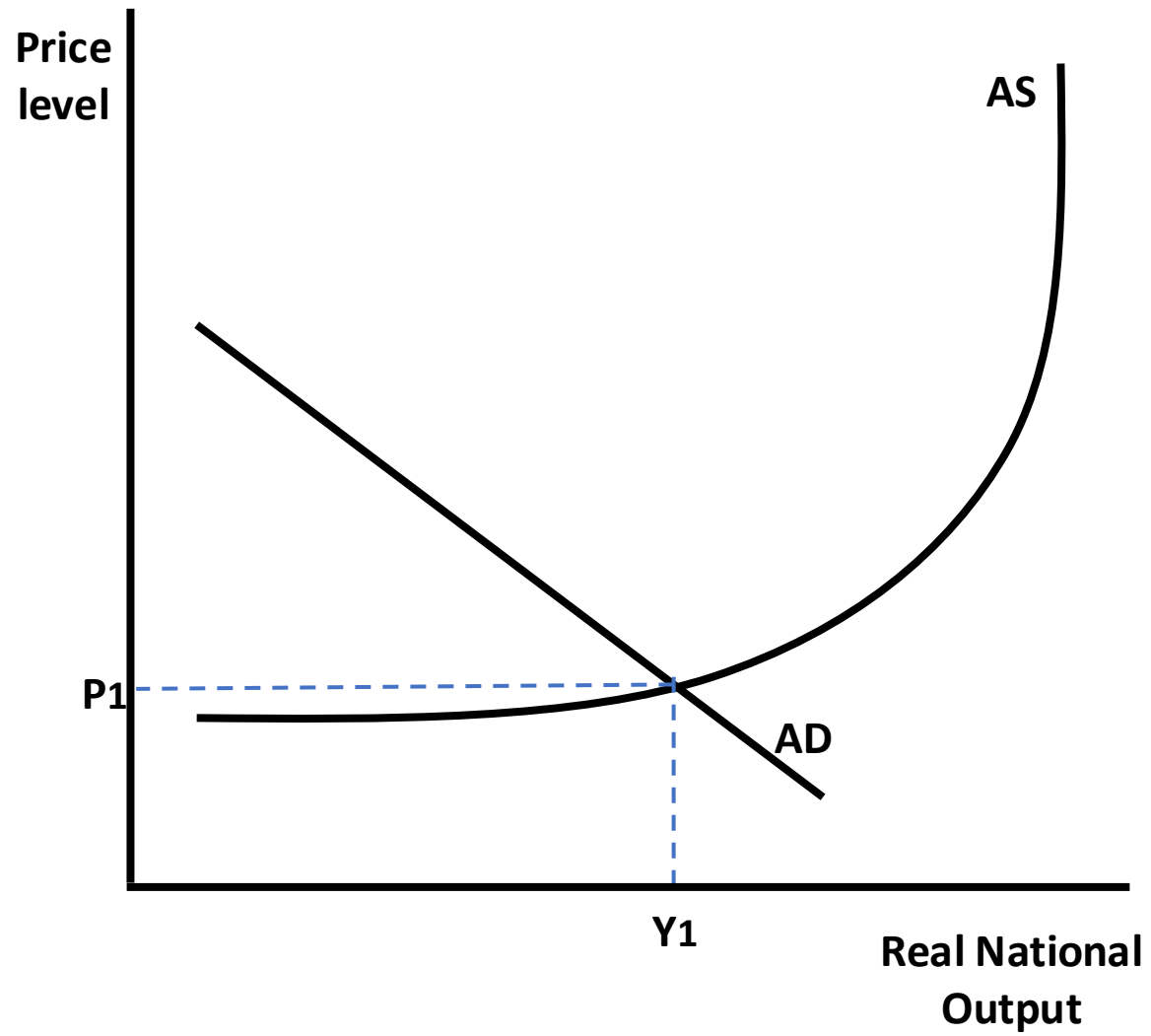
Increase in long run aggregate supply (Classical model)



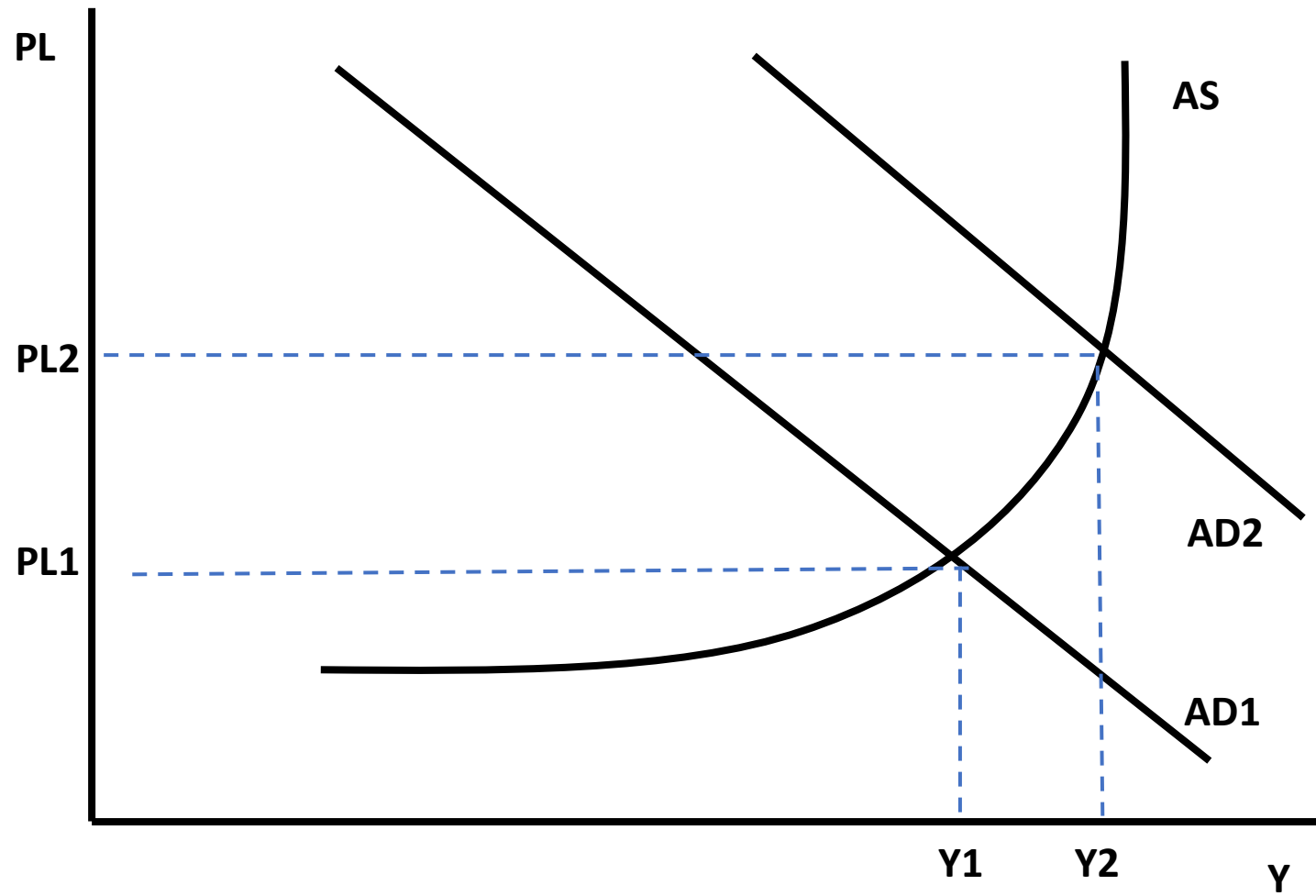
Increase in economy's productive potential; increase in long run aggregate supply (classical model) increasing the full employment level of real national output



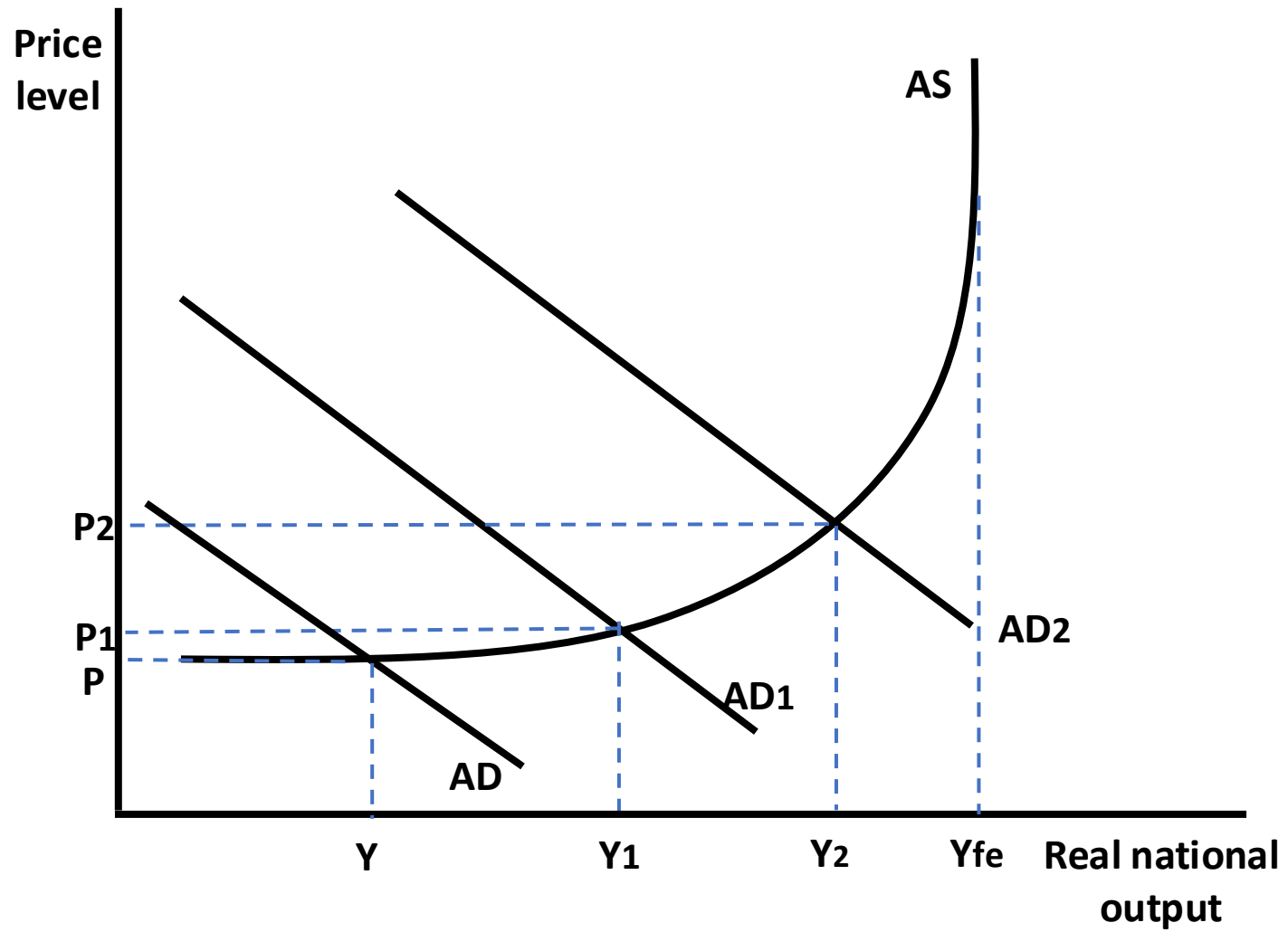
Negative output gap (Classical model)



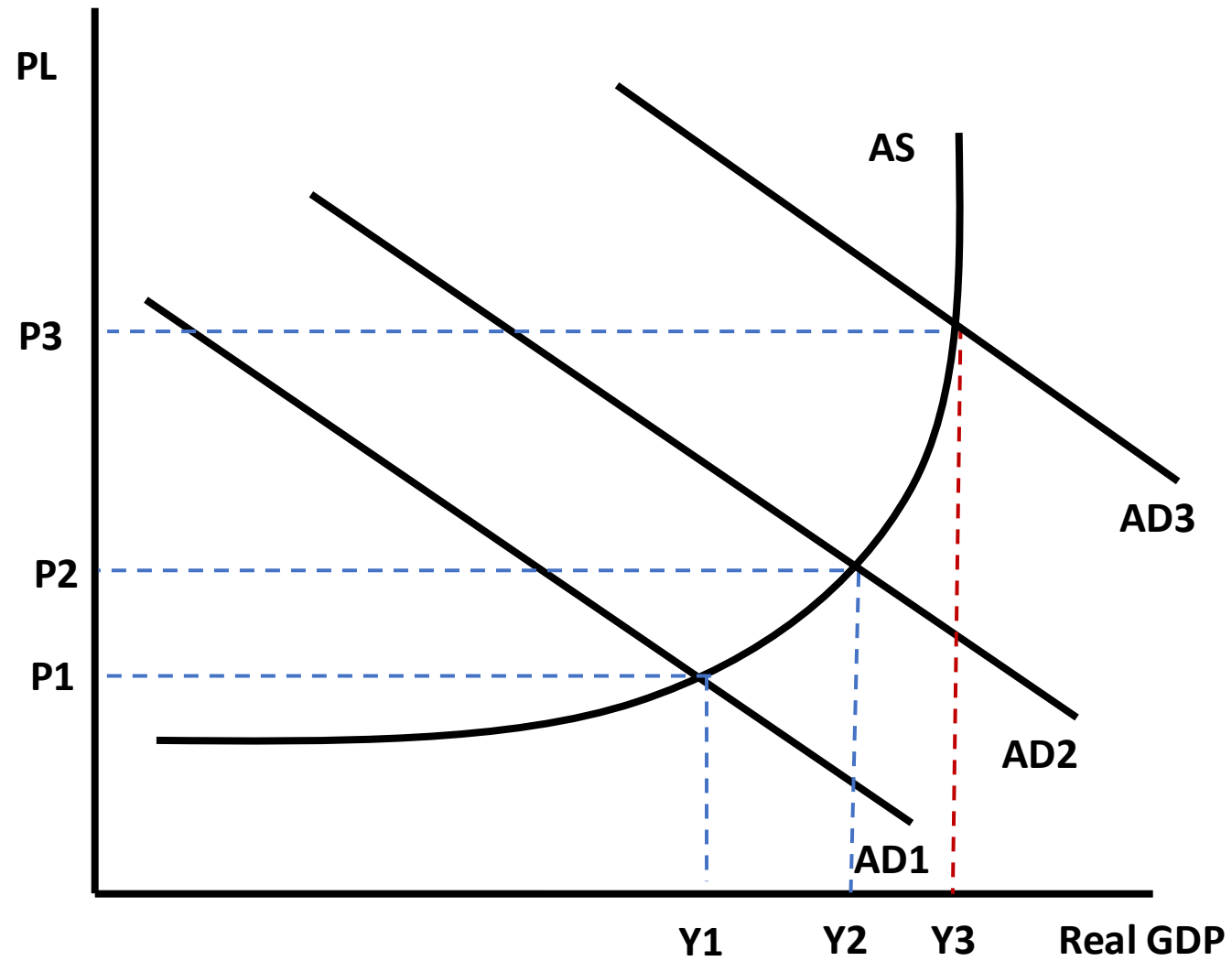
Macroeconomic Equilibrium (Keynesian model) with a large negative output gap



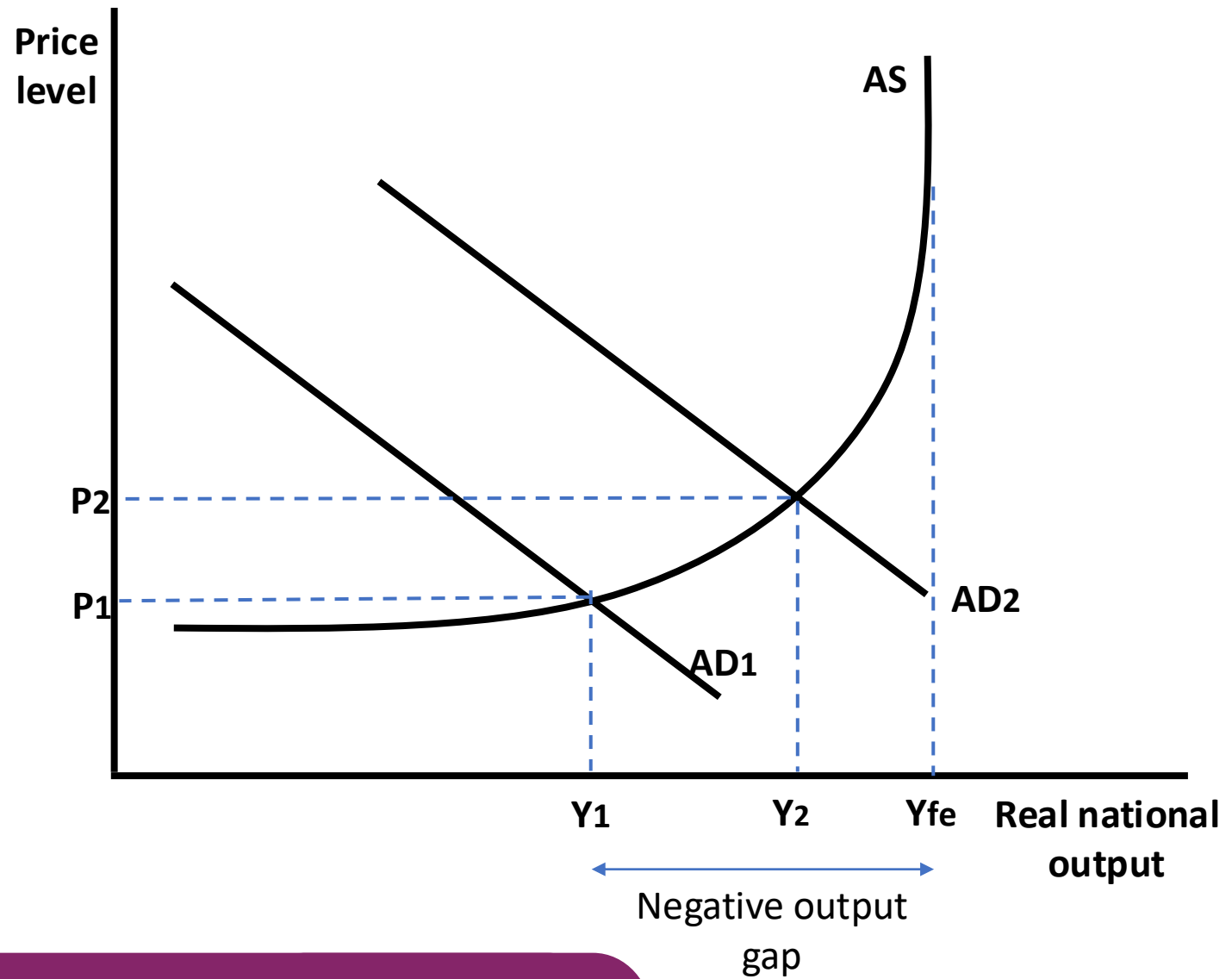
Increase in aggregate demand, Keynesian model



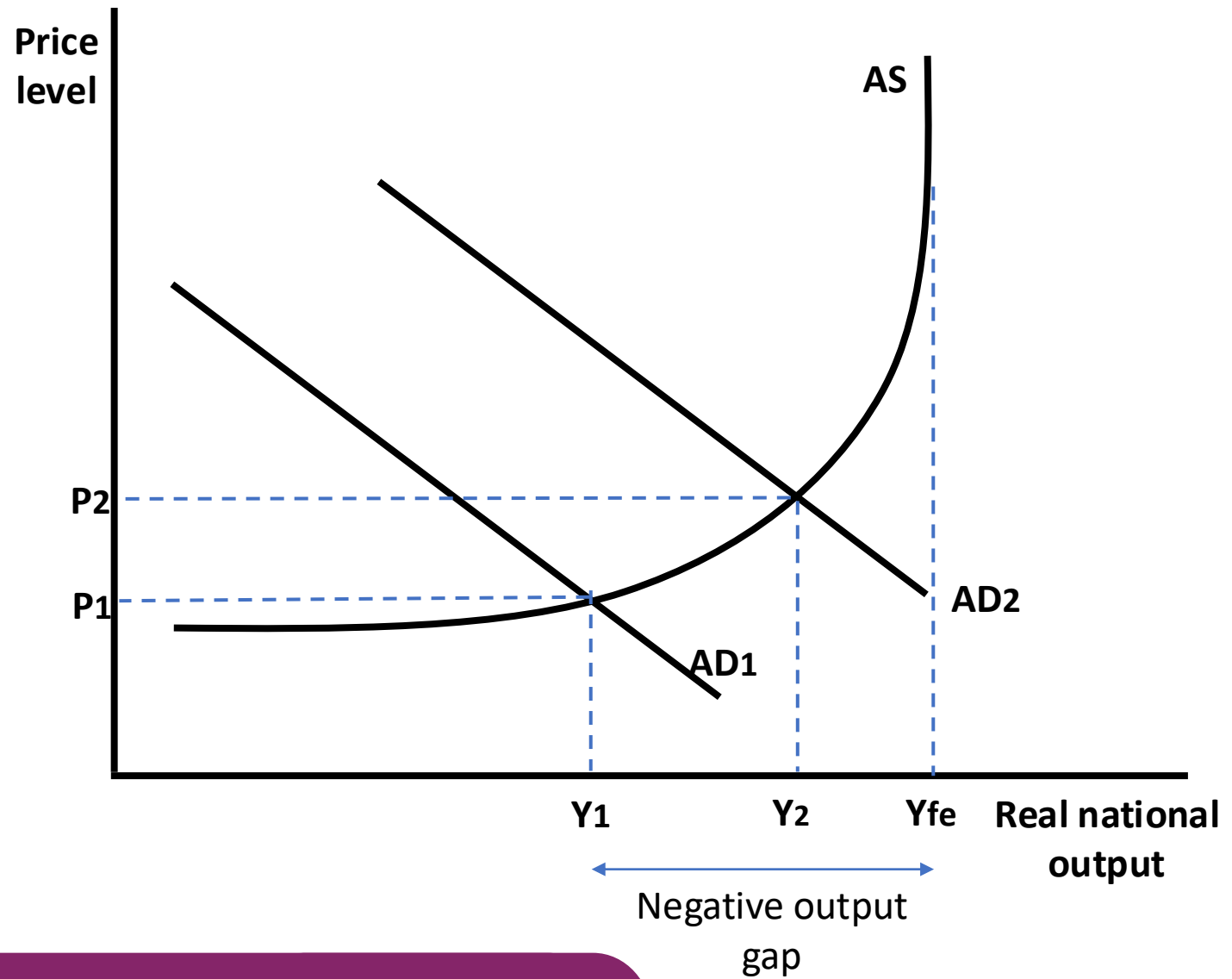
Increases in aggregate demand (Keynesian model), with additional multiplier effect

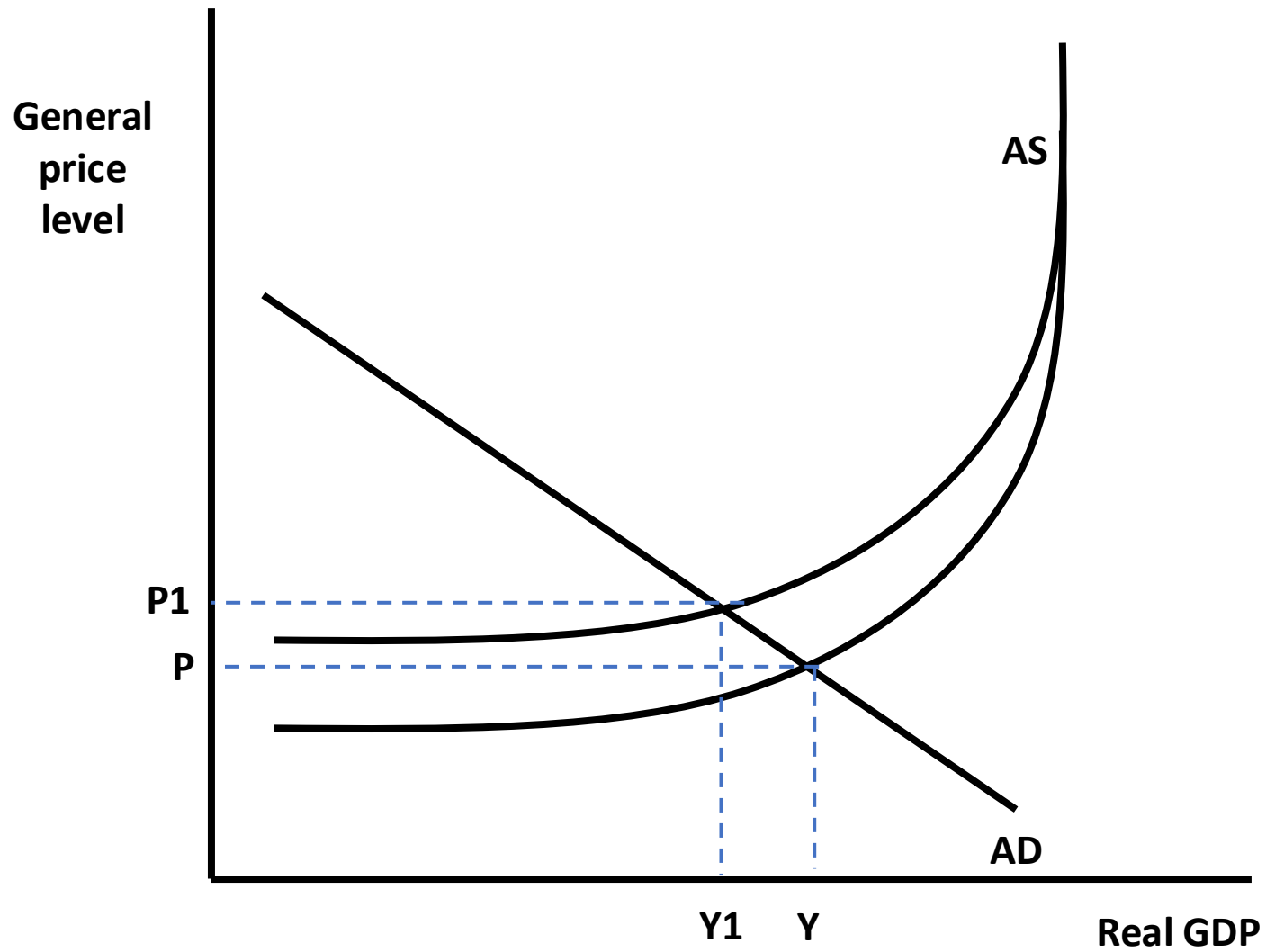


Increase in aggregate demand with multiplier effect (Keynesian model, leading to demand-pull inflation)

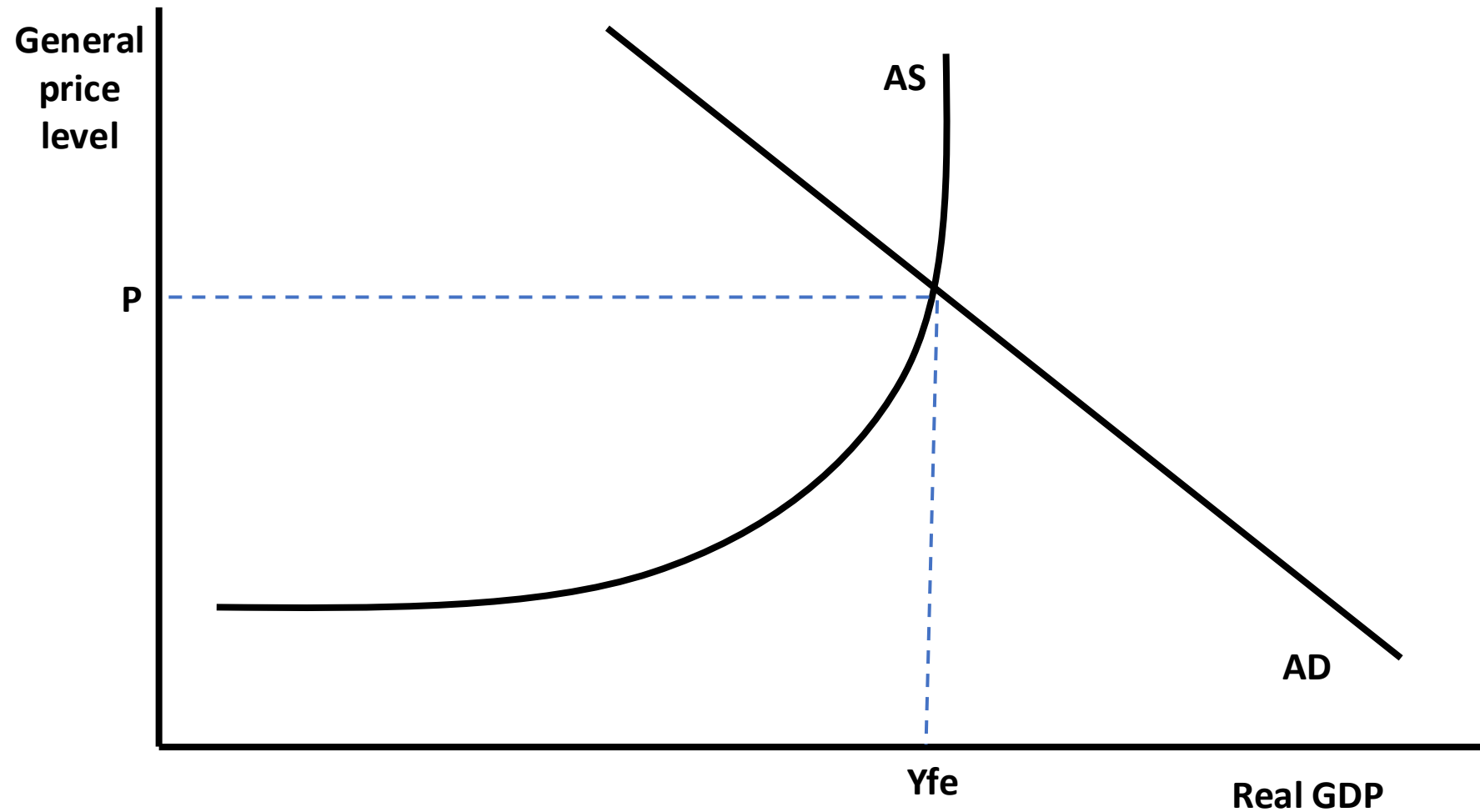


Negative output gap between Y_1 and Y_{fe} (Keynesian model); increase in AD to AD2 starts to close the gap

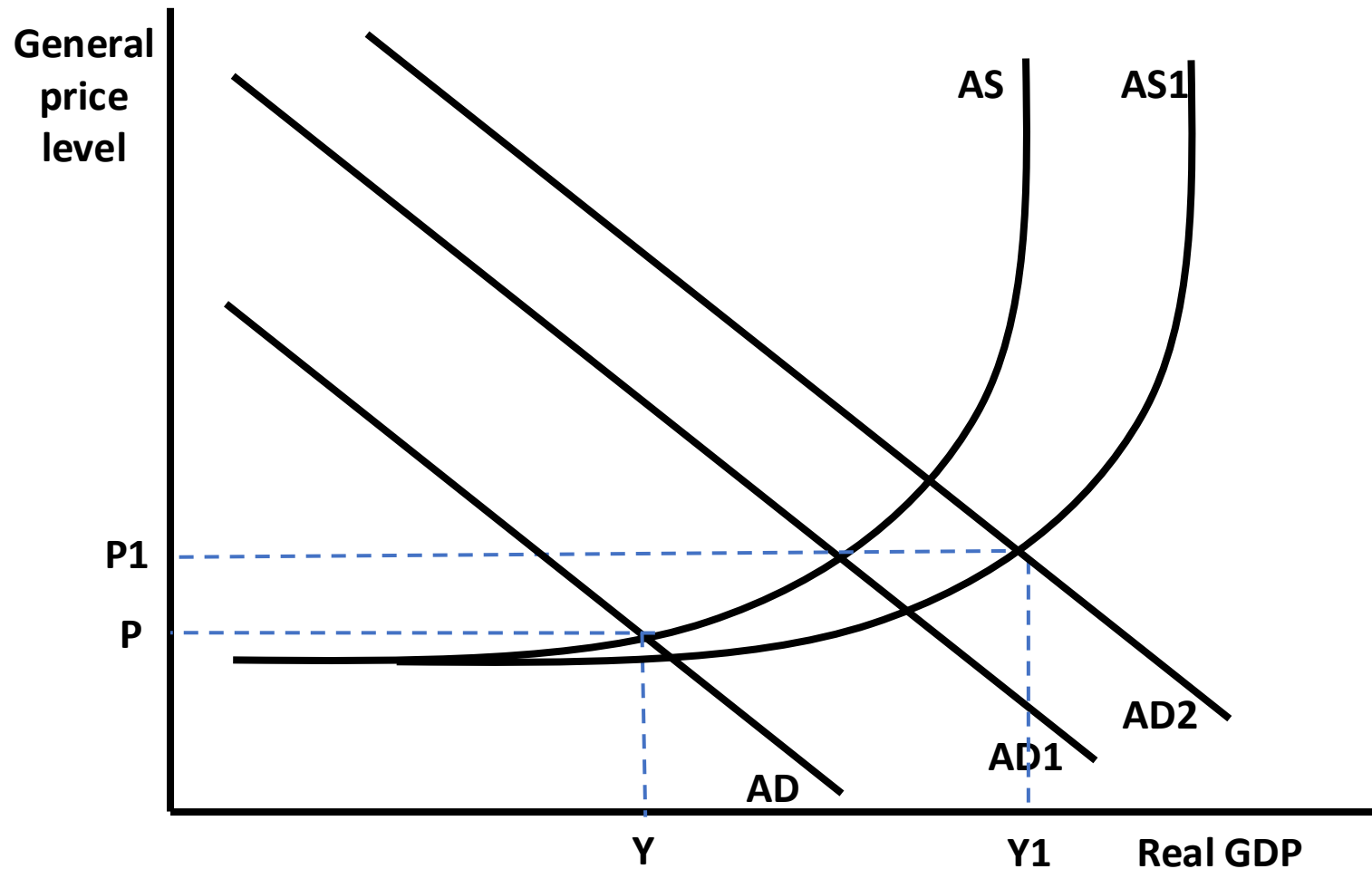




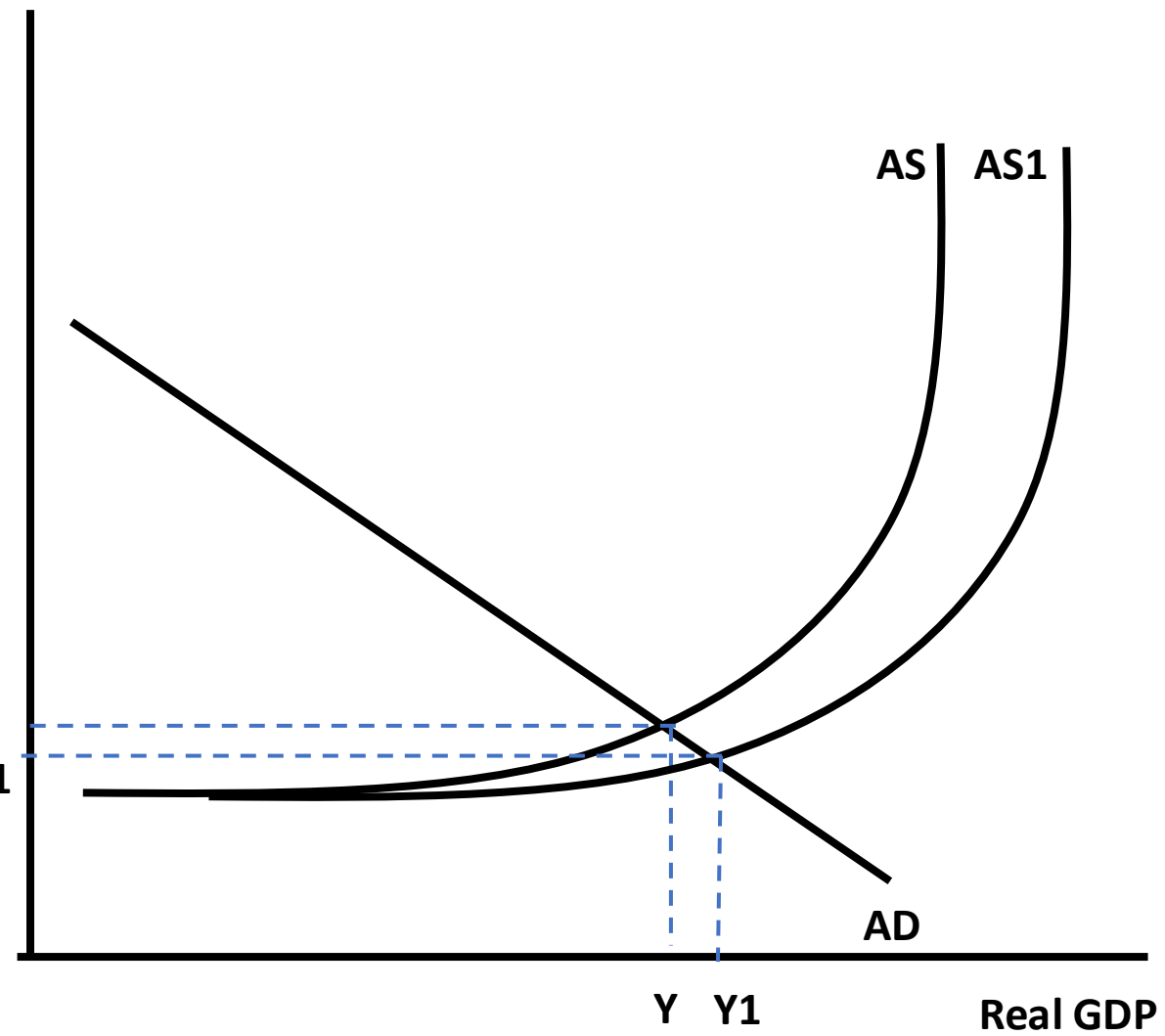
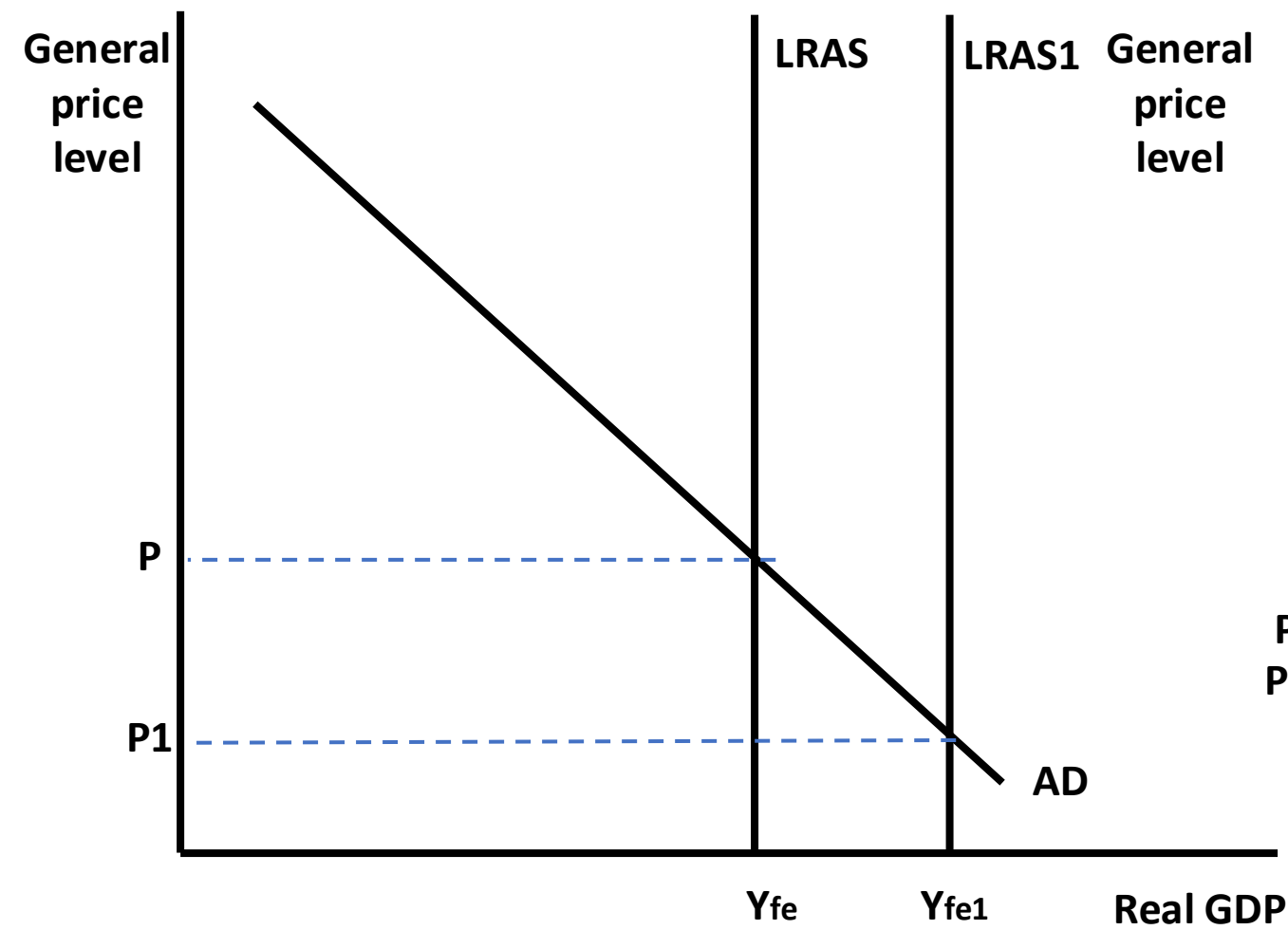
Impact of decrease in aggregate supply caused by short run factors (no change in productive capacity of economy)



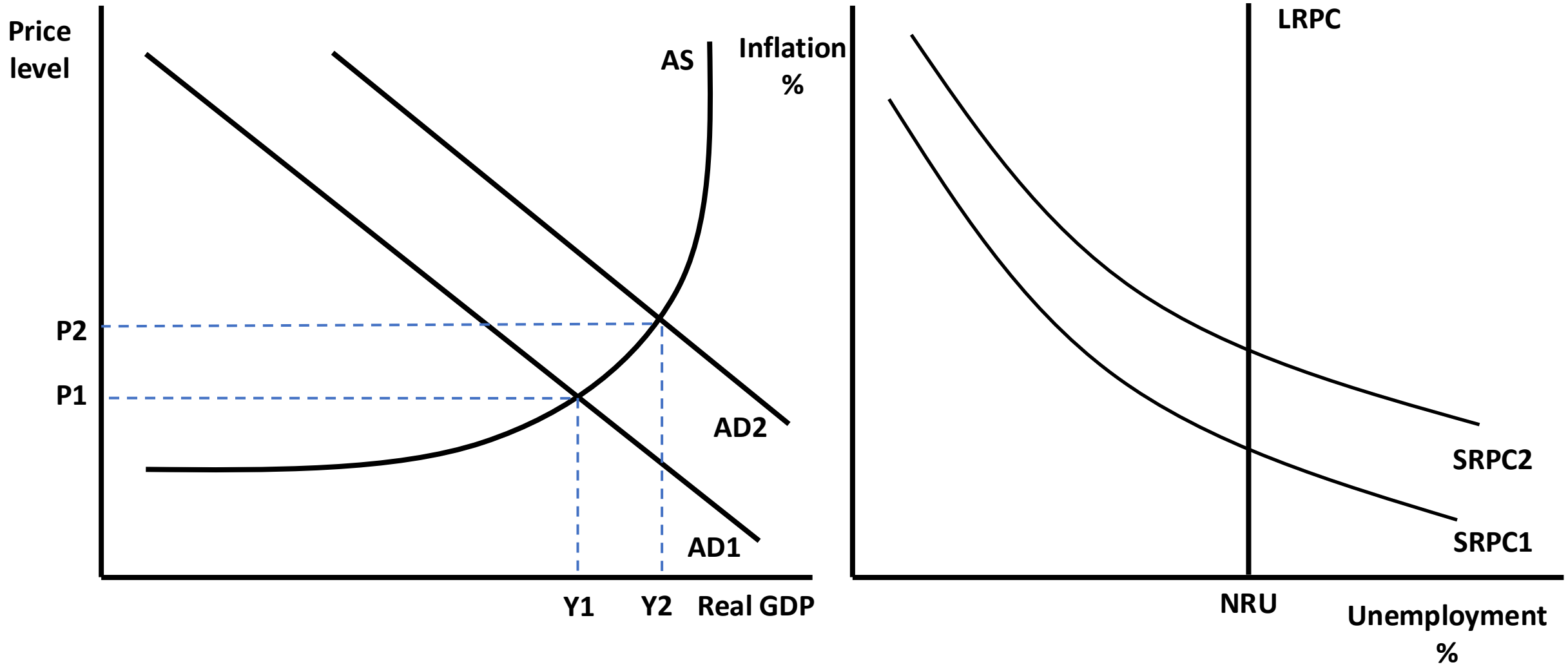
Aggregate demand required for economy to operate at full employment output



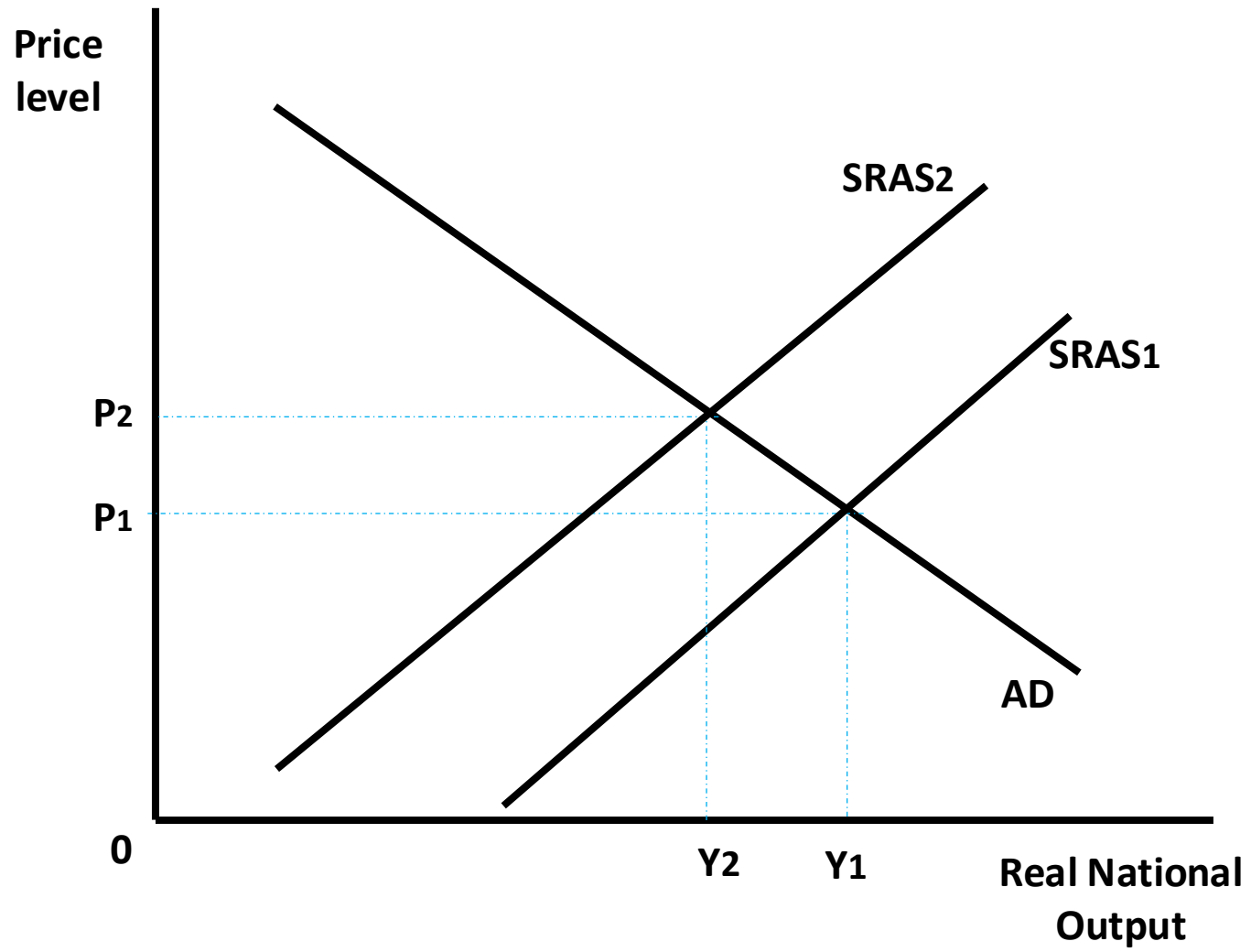
Impact of an increase in capital investment with multiplier effect on economy
(Keynesian model)

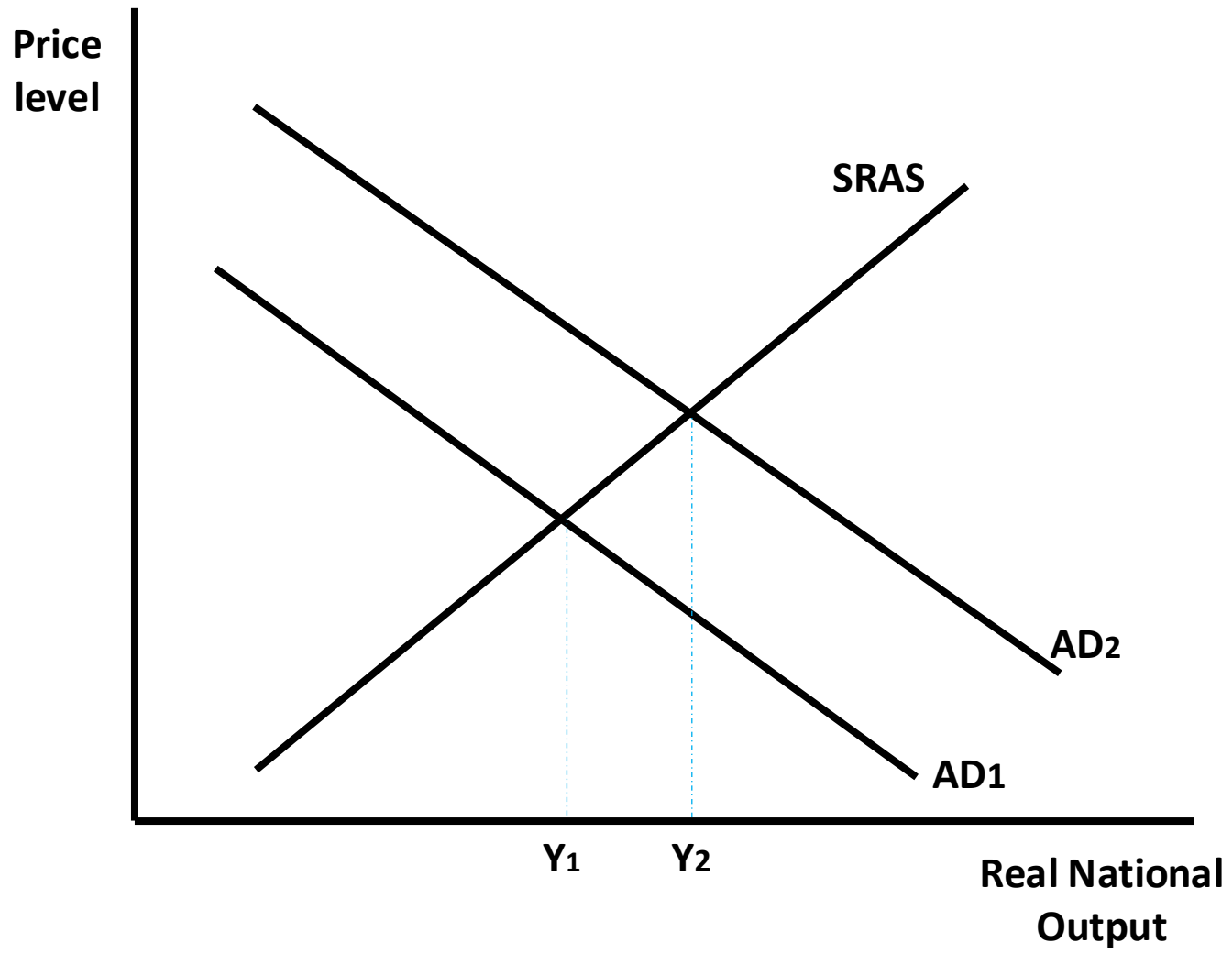


Increase in productive potential of economy (i) in classical model and (ii) in Keynesian model)



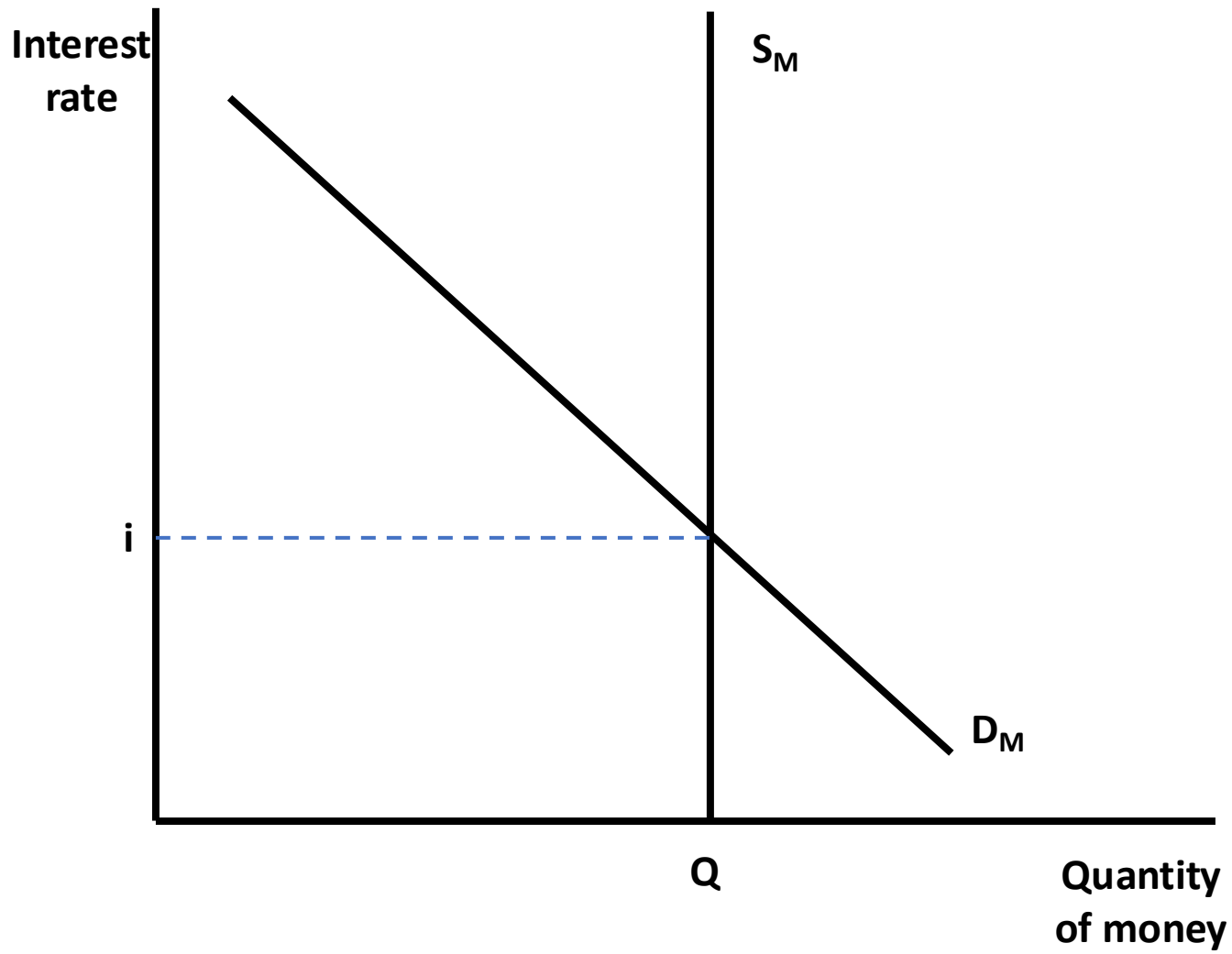
Relationship between AD/AS model and Phillips curve; increase in price level raises expectation of inflation shifting short run Phillips curve outwards

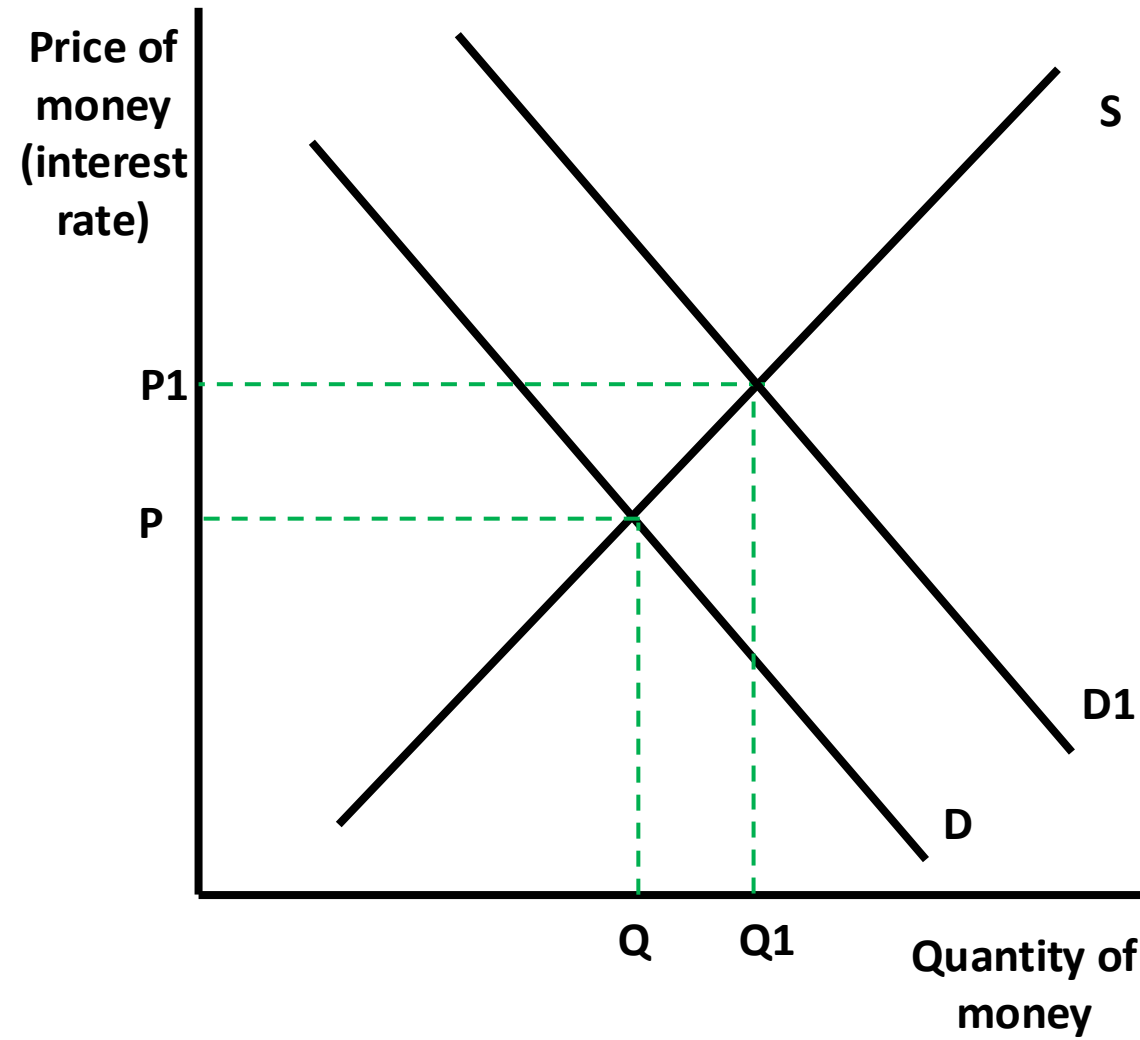


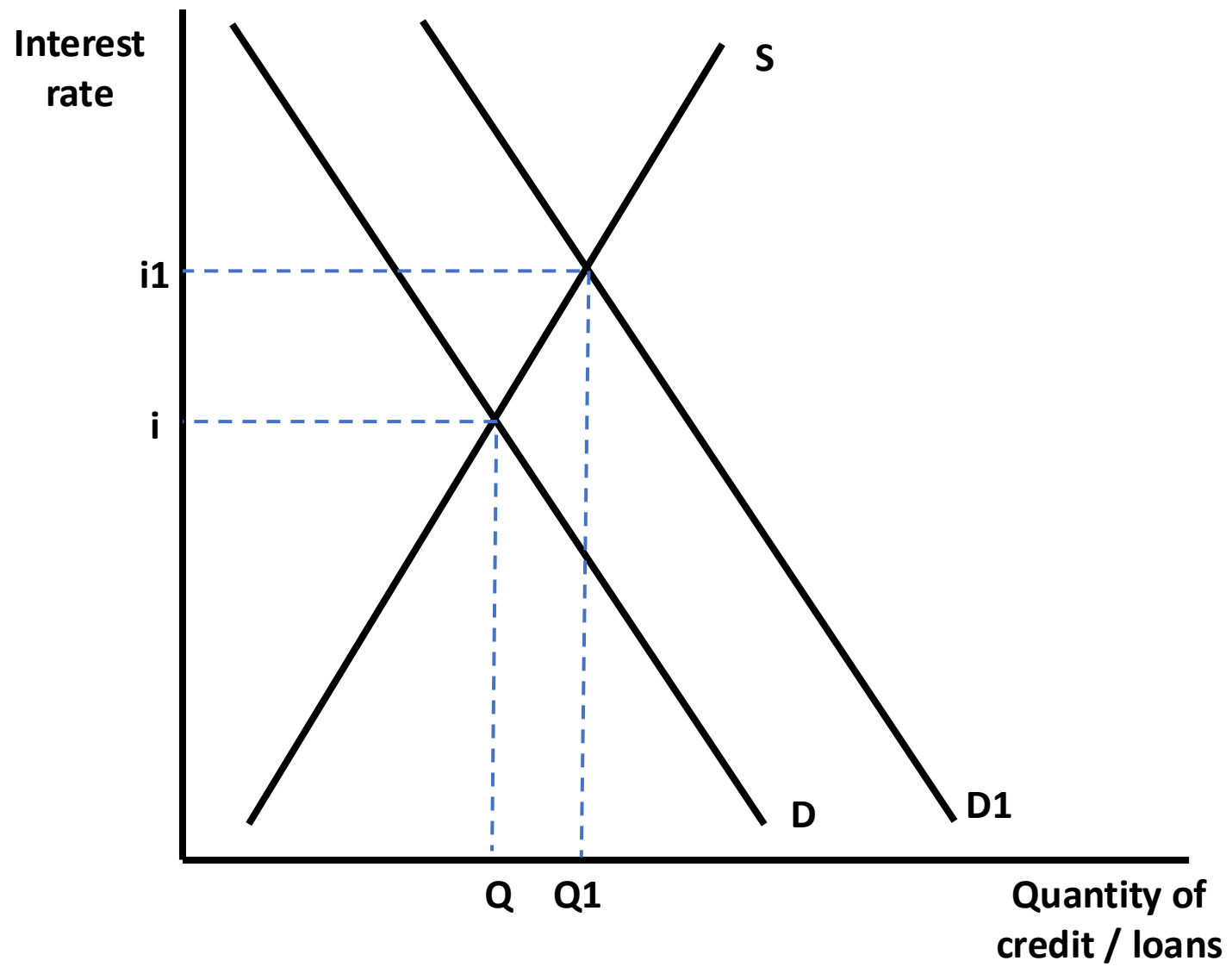


ECONOMICS DIAGRAMS

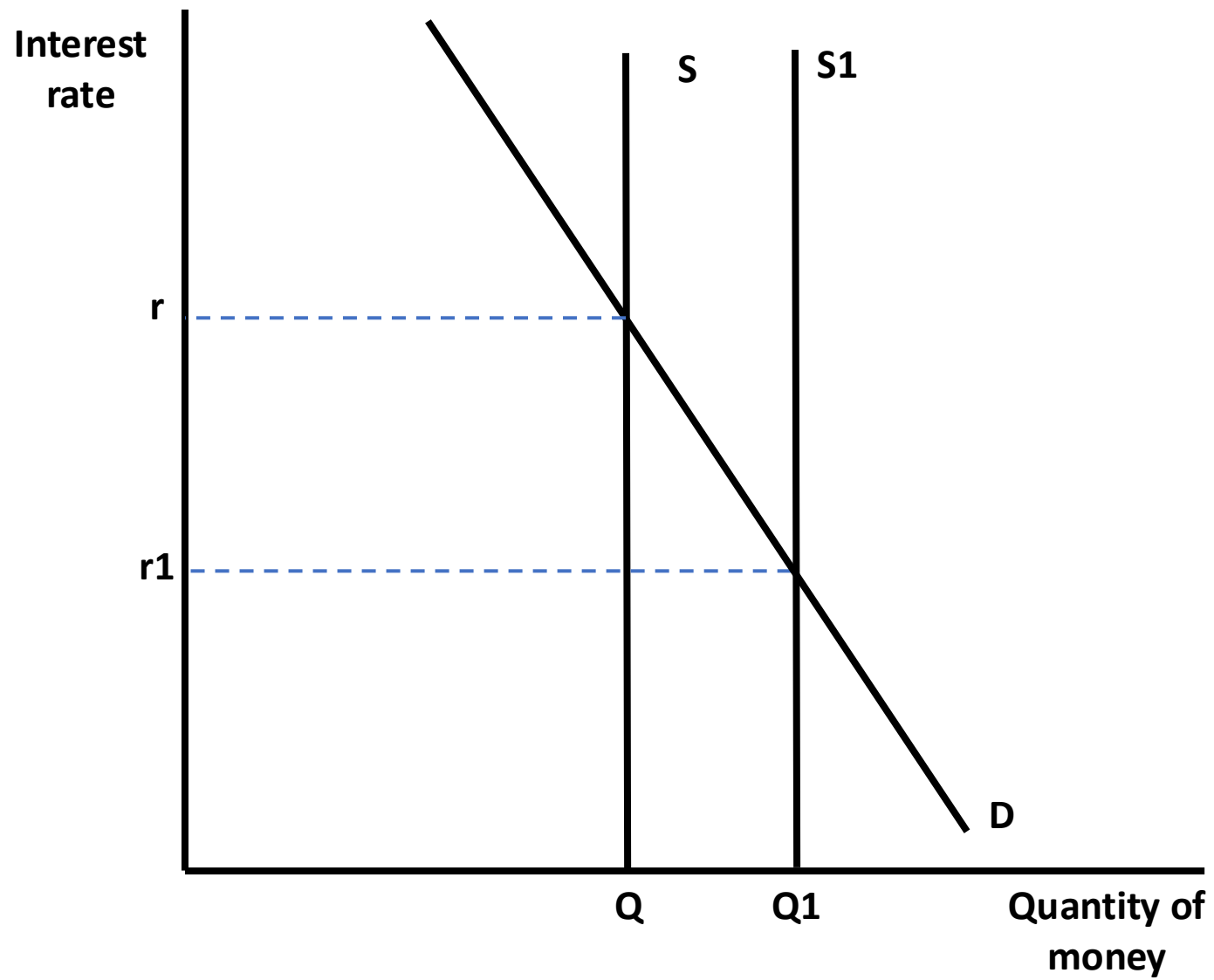
FINANCIAL MARKETS DIAGRAMS

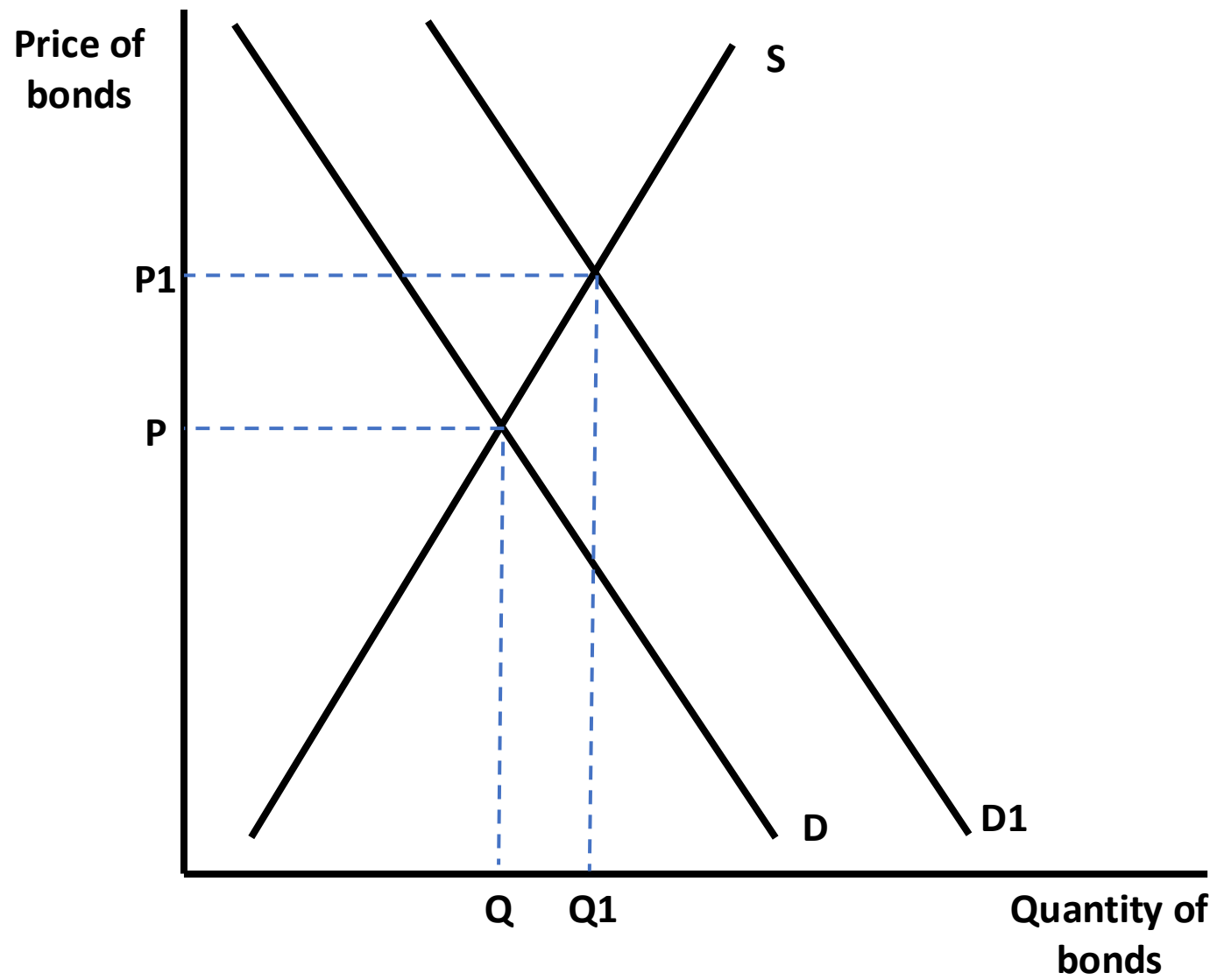




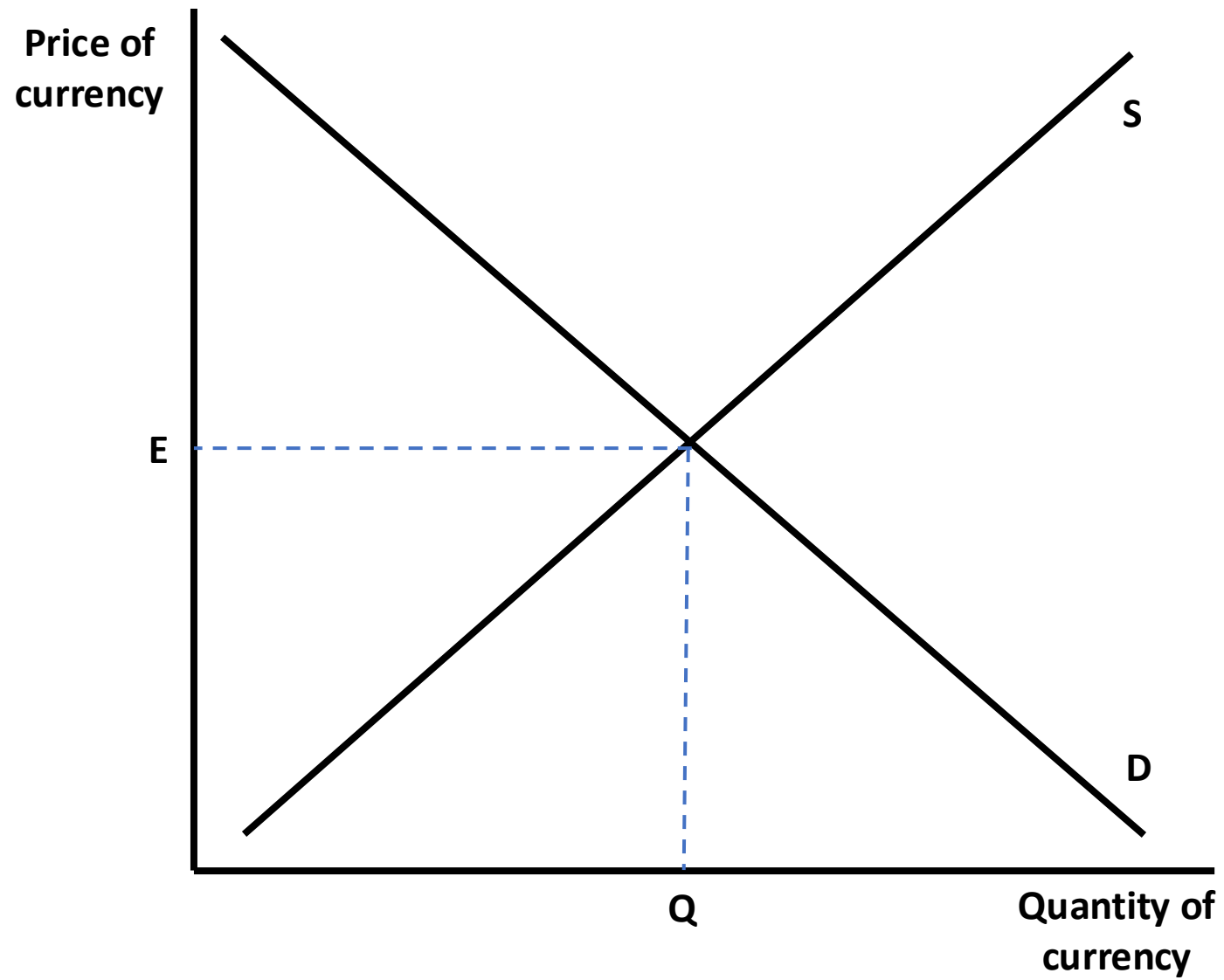


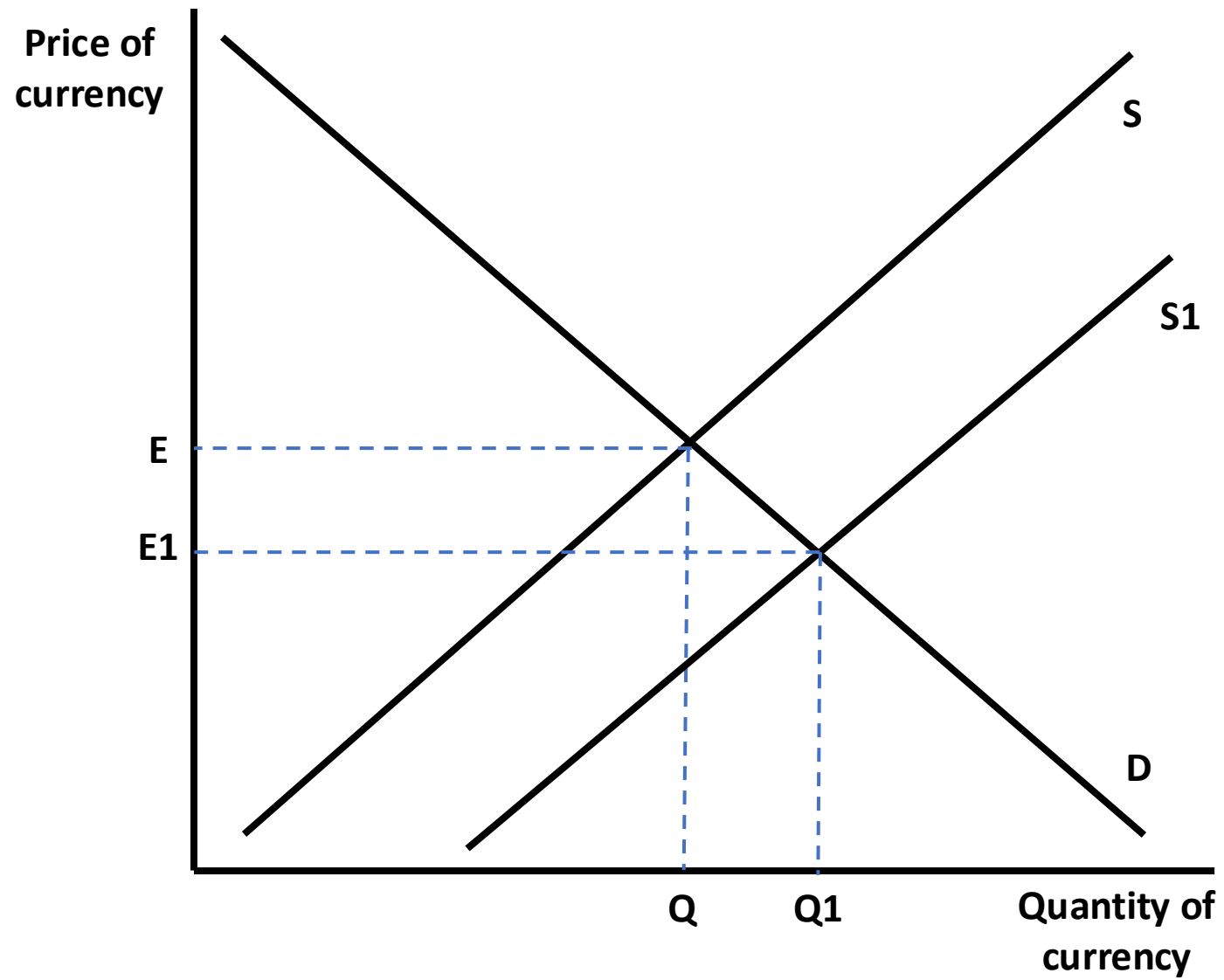
Money market: Increase in demand for money (credit/loans)



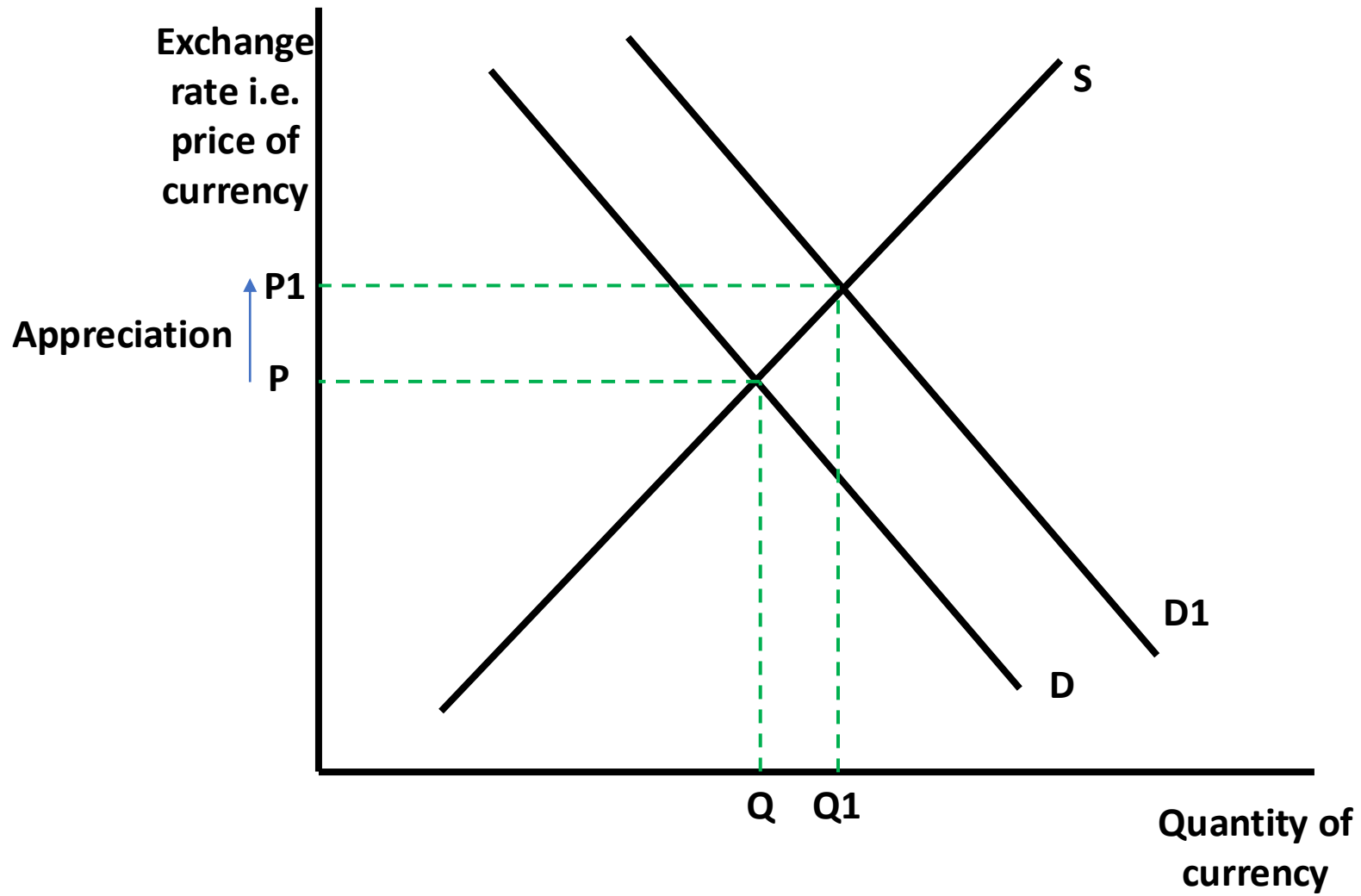


Bond market: Increase in the demand for bonds

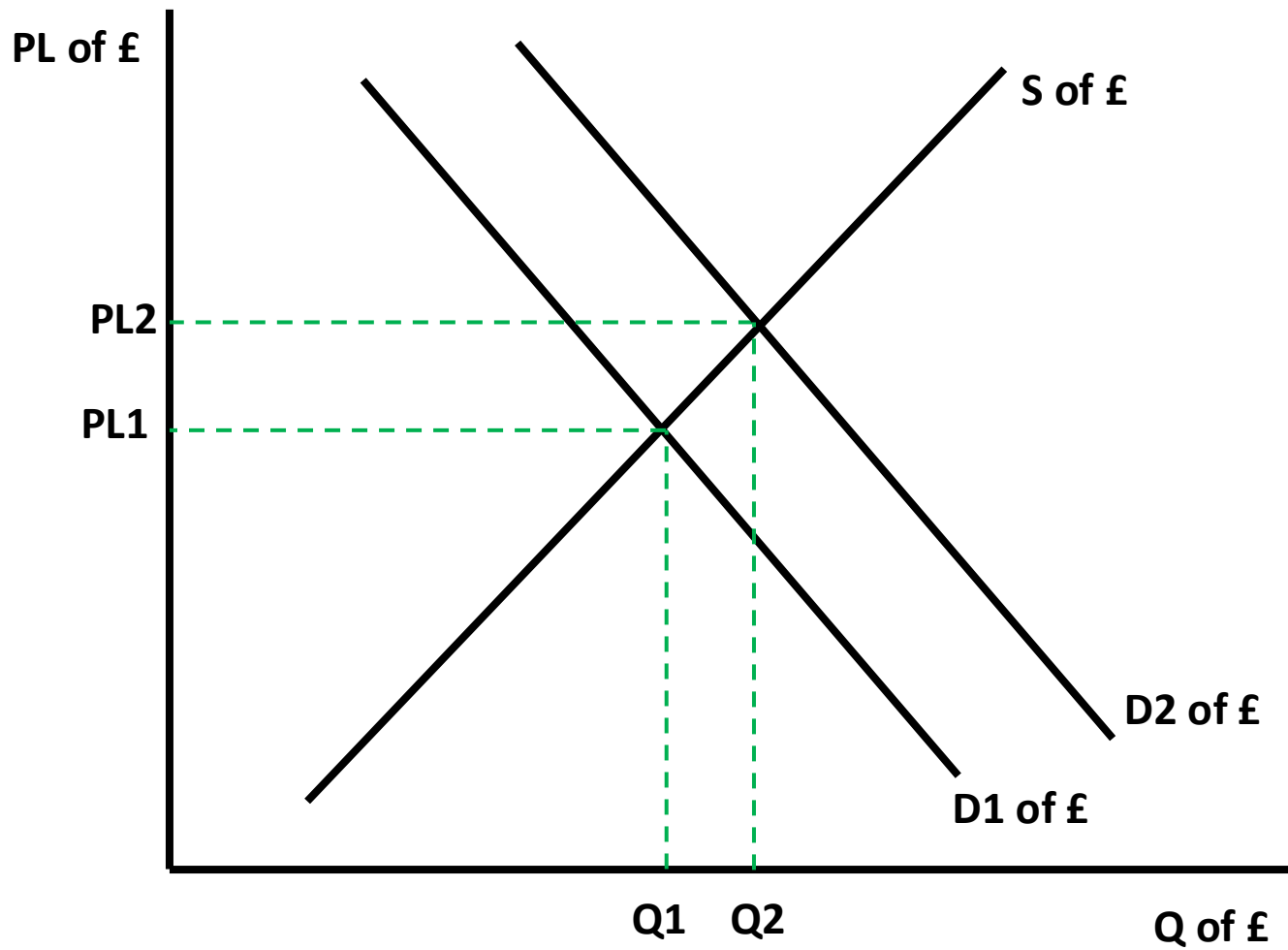




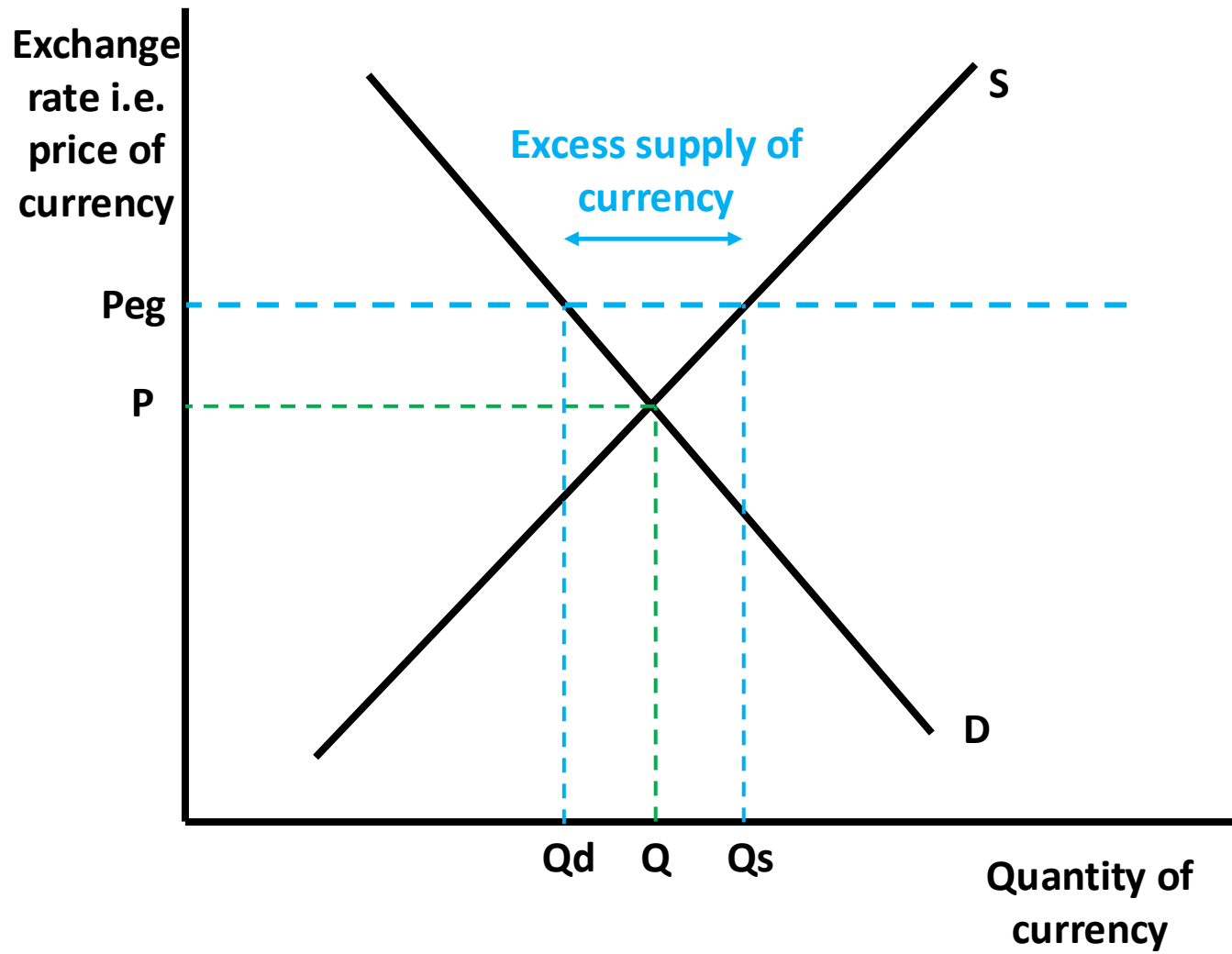
Increase in supply in a foreign exchange market



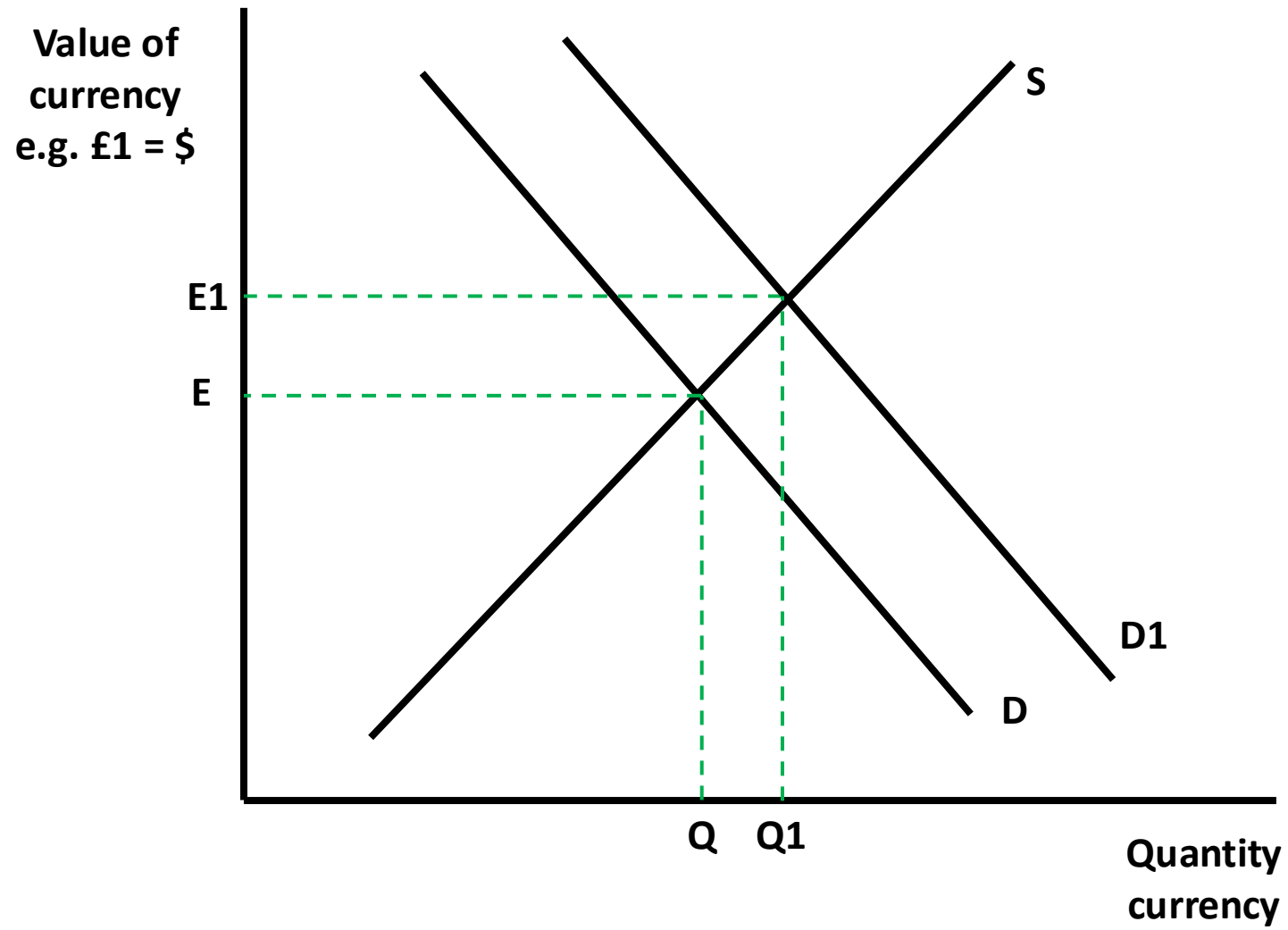
Foreign exchange market: increase in demand for a currency causing an appreciation



Foreign exchange market: increase in demand for £s causing a Sterling appreciation



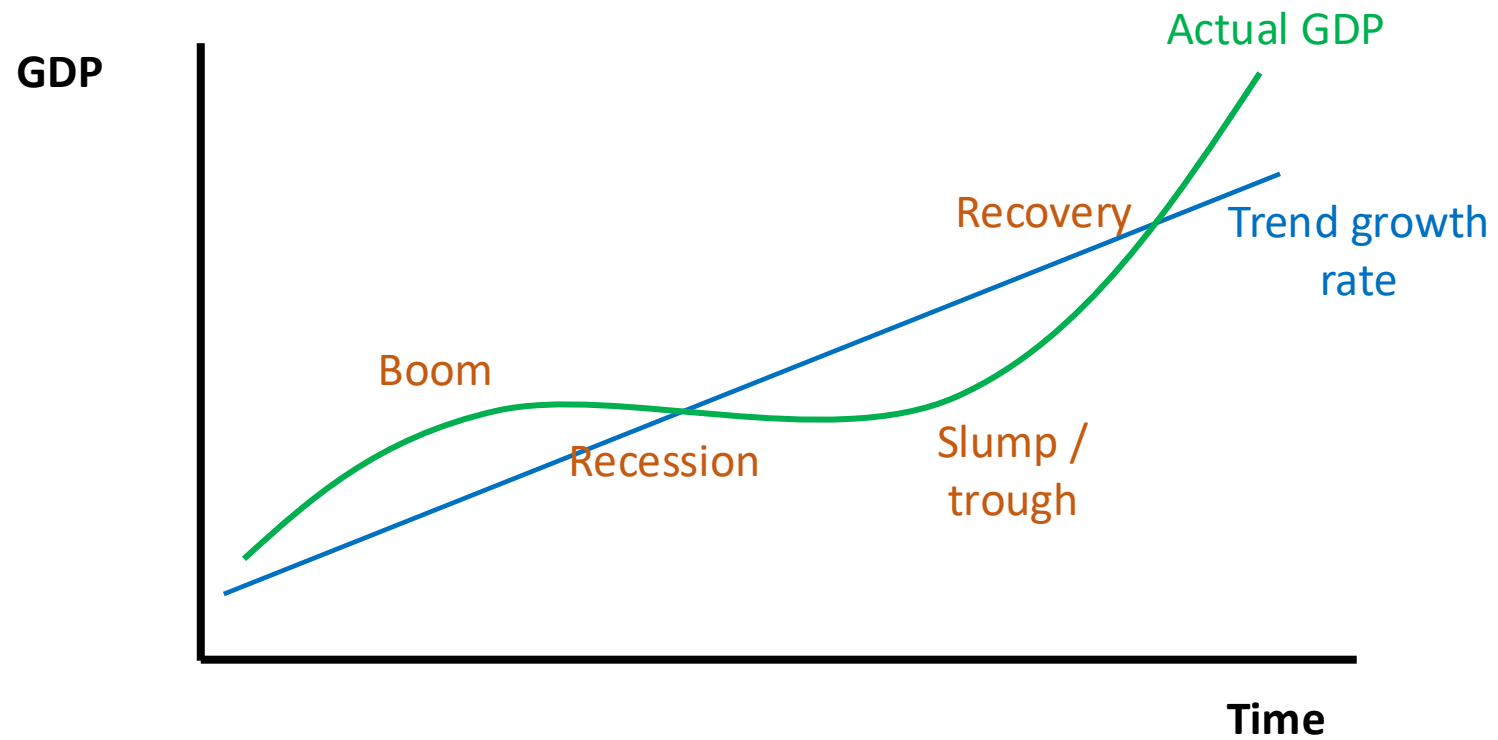
Foreign exchange market: Excess supply of currency when price is above the market equilibrium

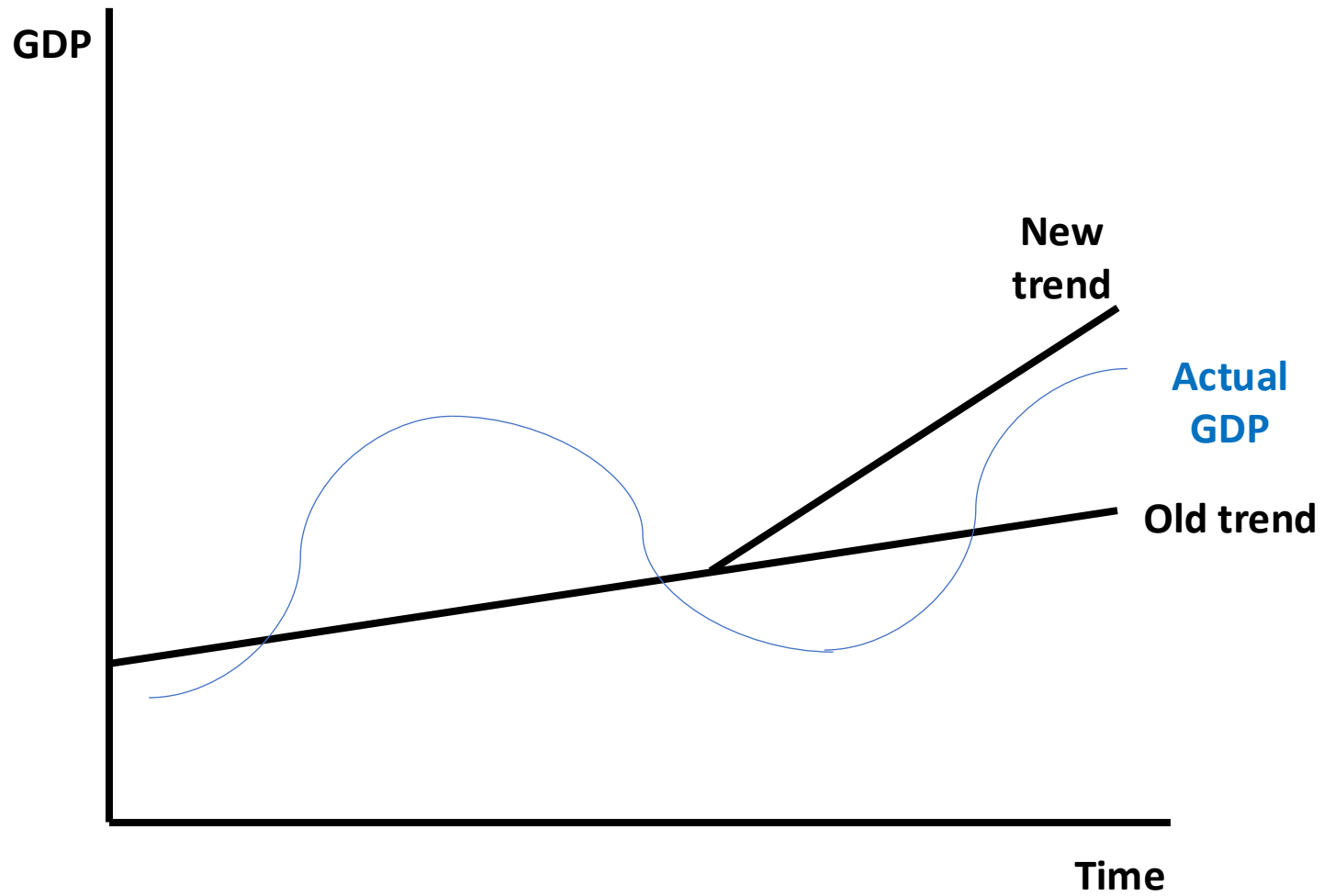


Foreign exchange market: increase in market demand for a currency

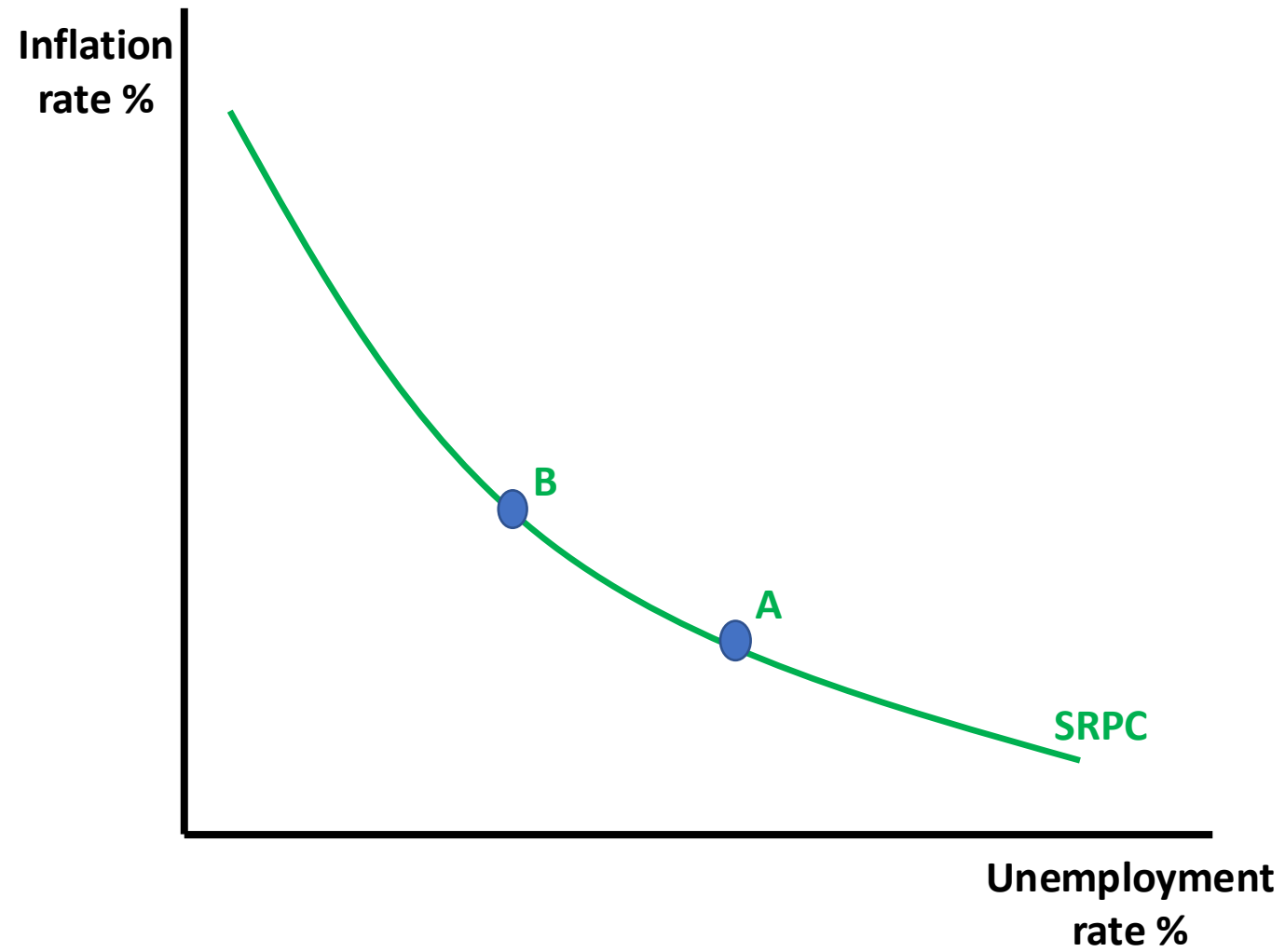
ECONOMICS DIAGRAMS

GENERAL MACRO DIAGRAMS

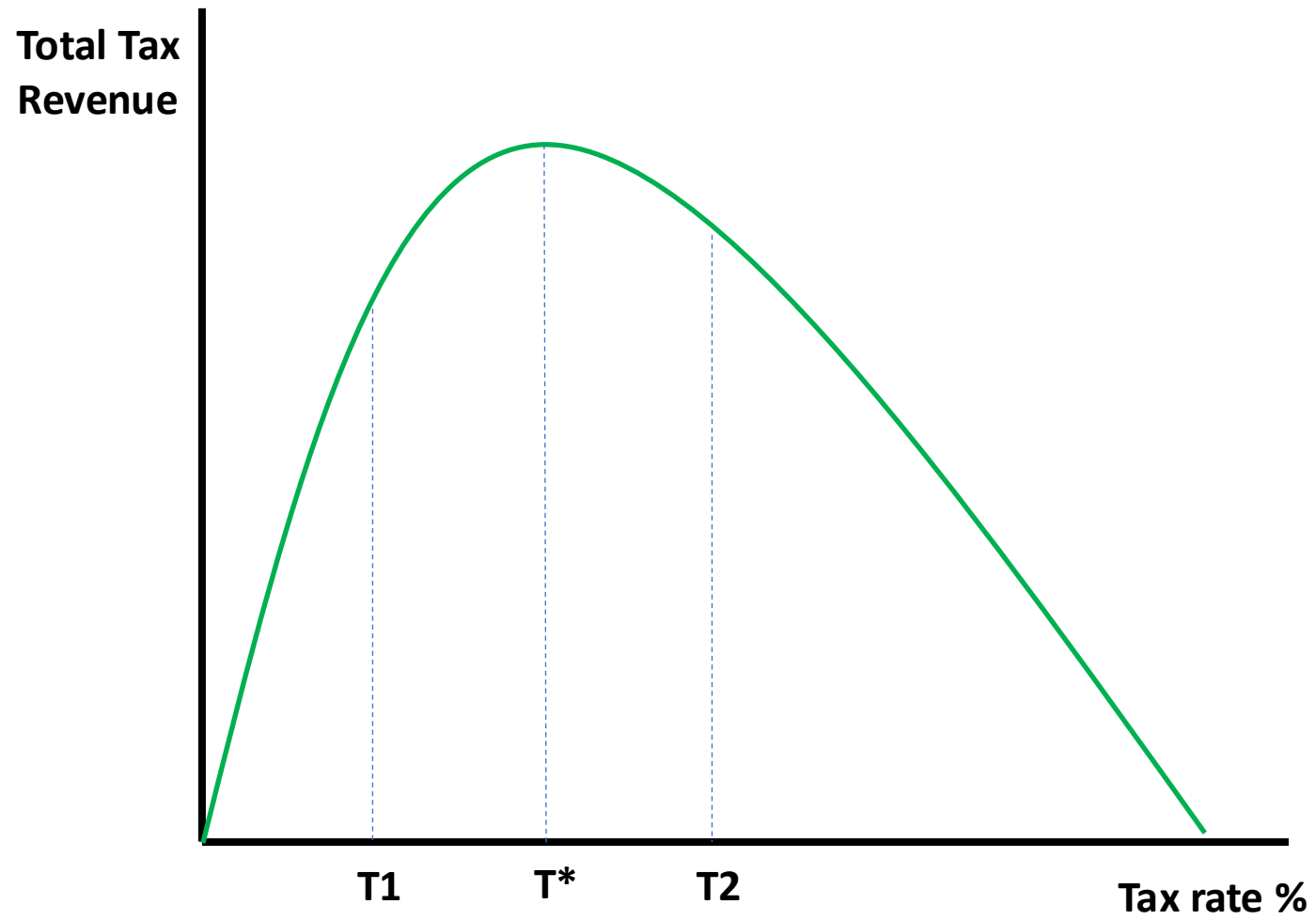


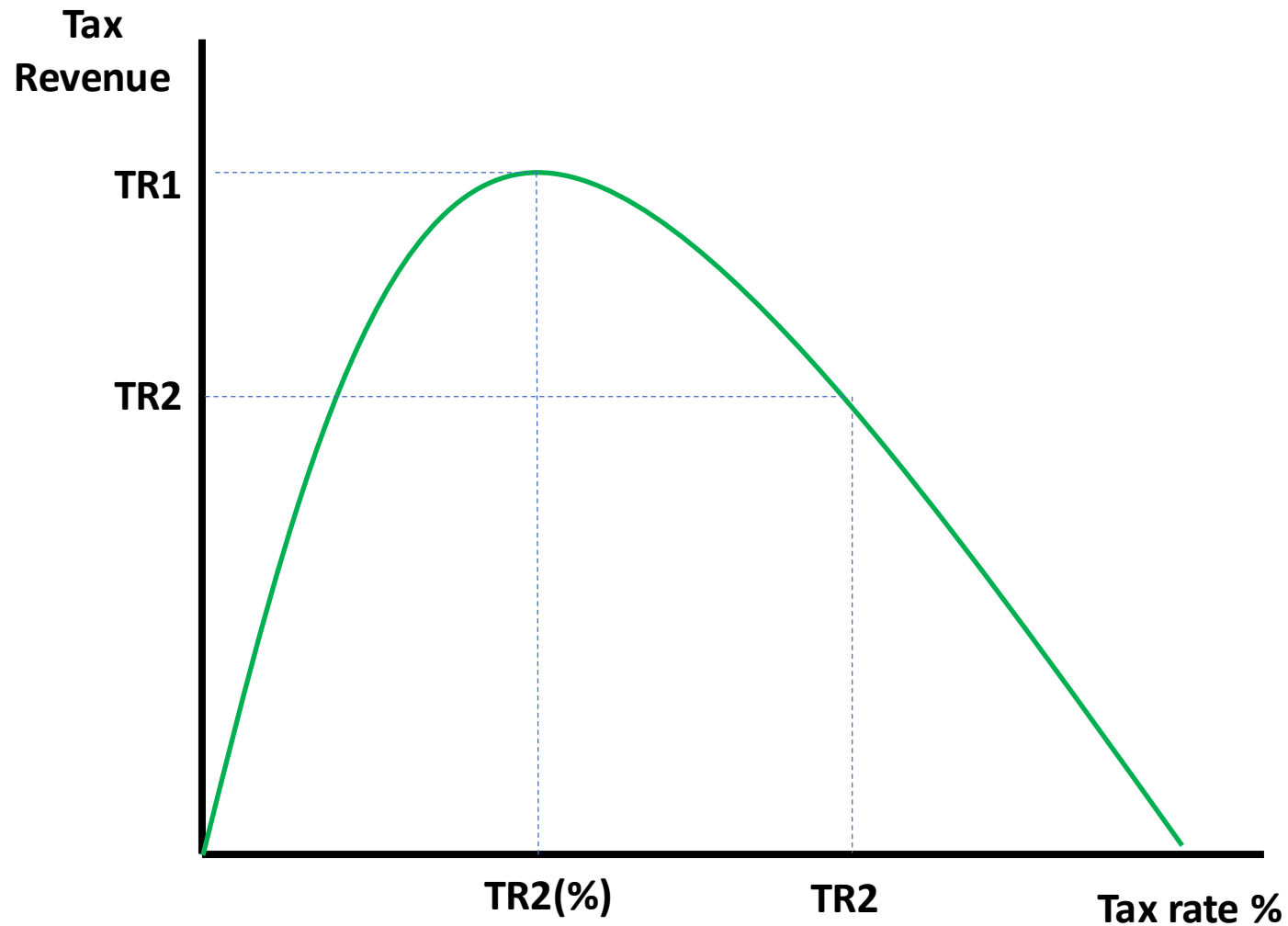


Impact of an increase in productive potential on trend GDP growth

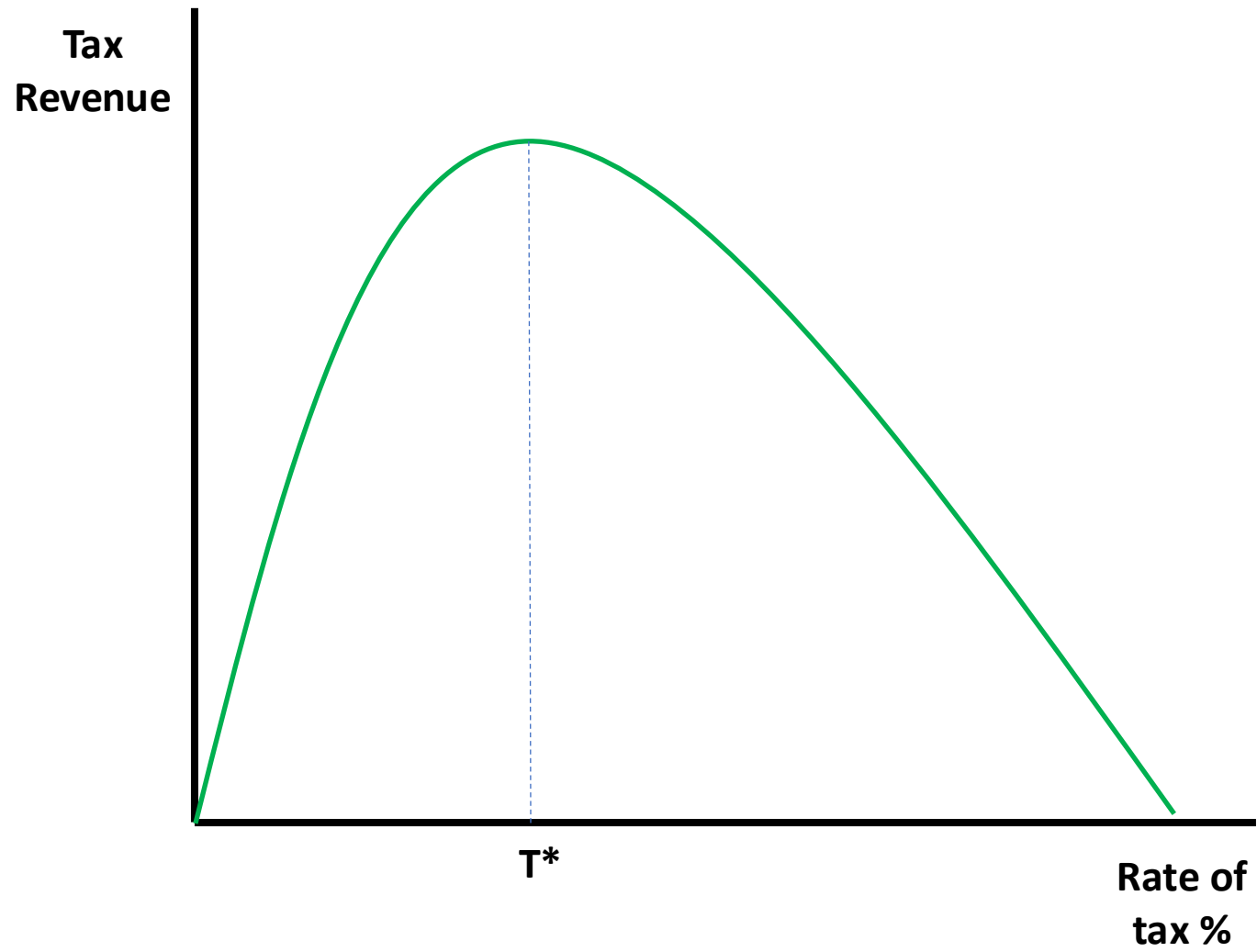


Short run Phillips curve (trade-off between inflation and unemployment)

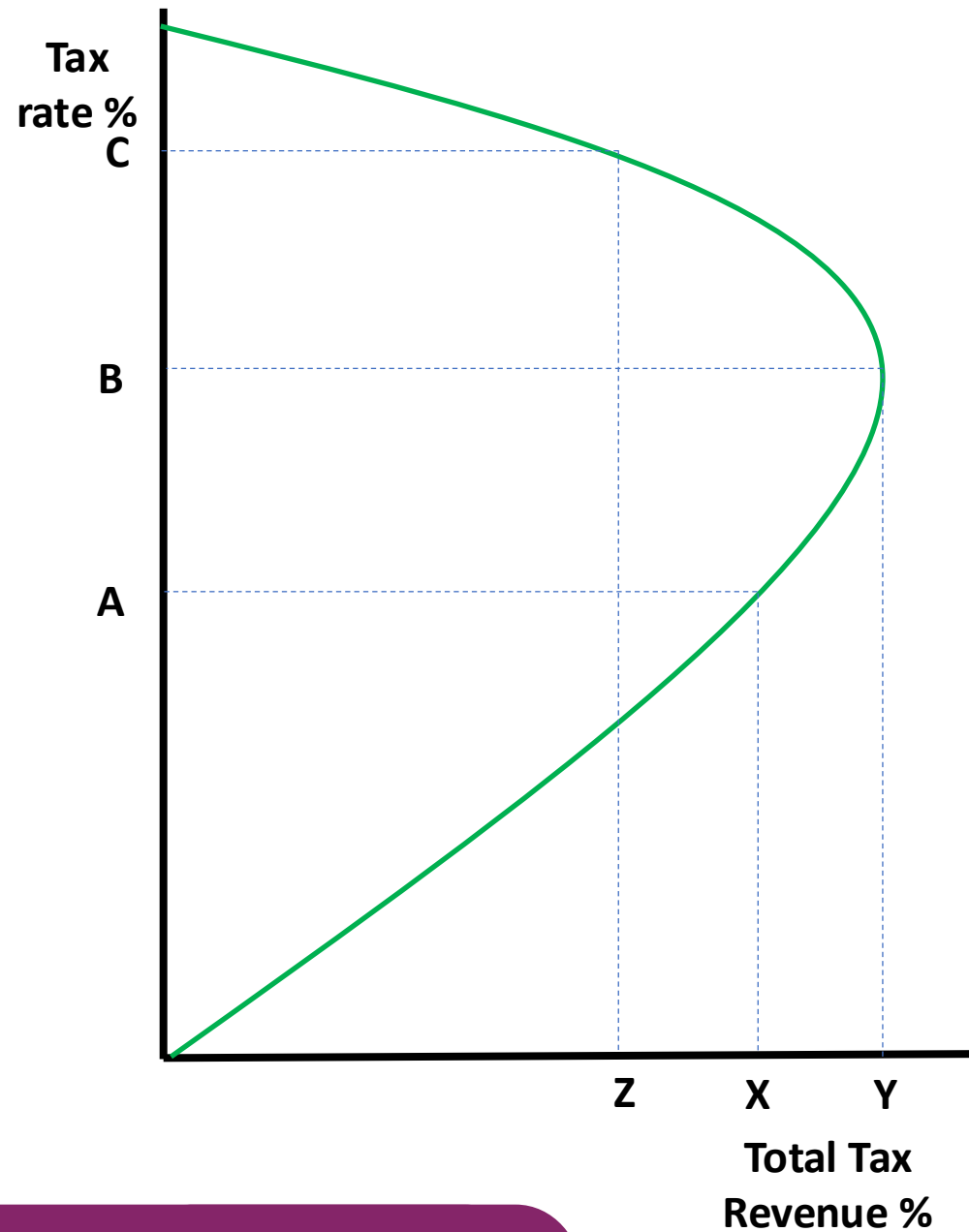


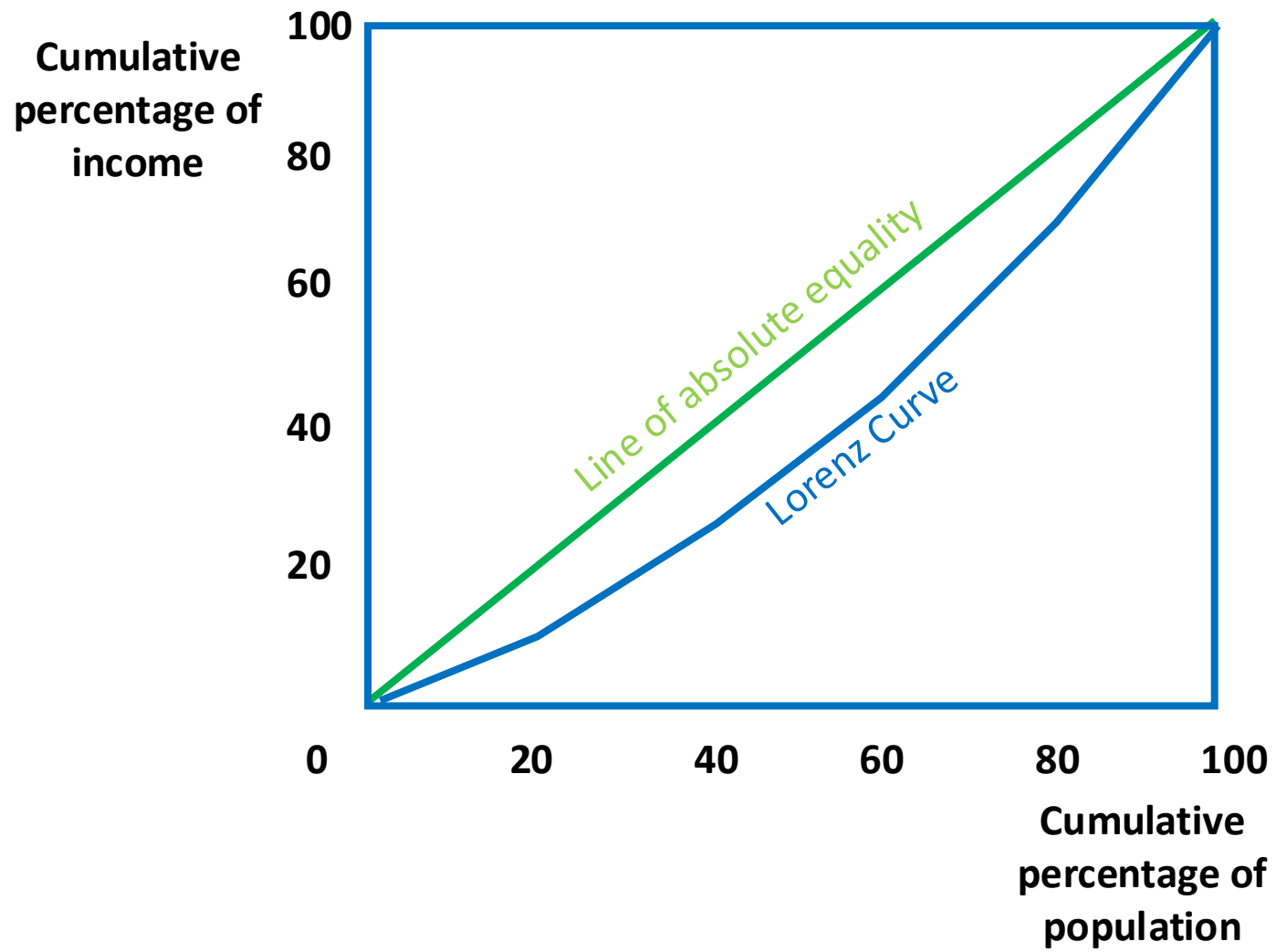


Laffer curve showing how a reduction in the tax rate could increase total tax revenue

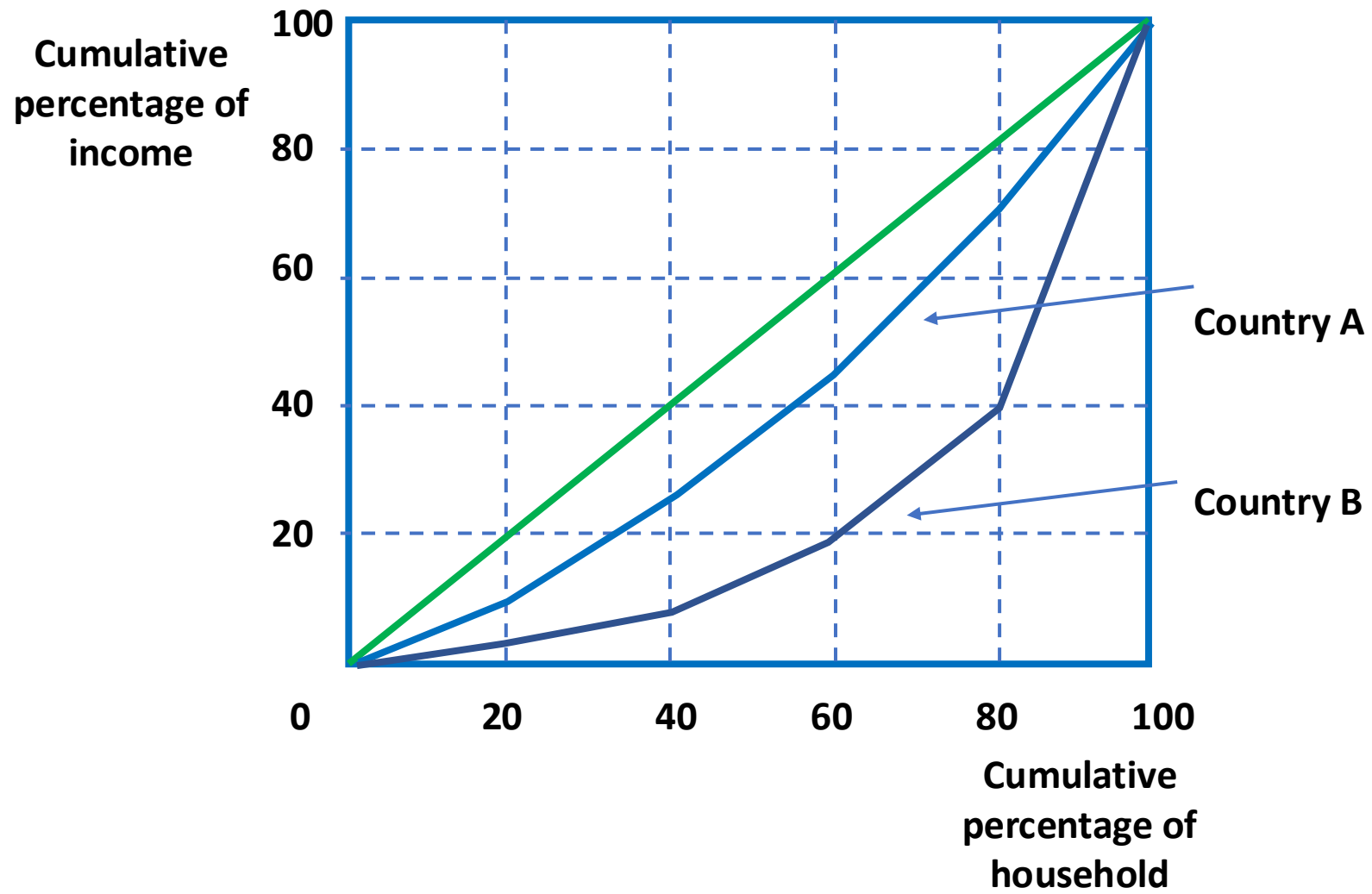


Laffer curve showing tax rate that creates maximum tax revenue

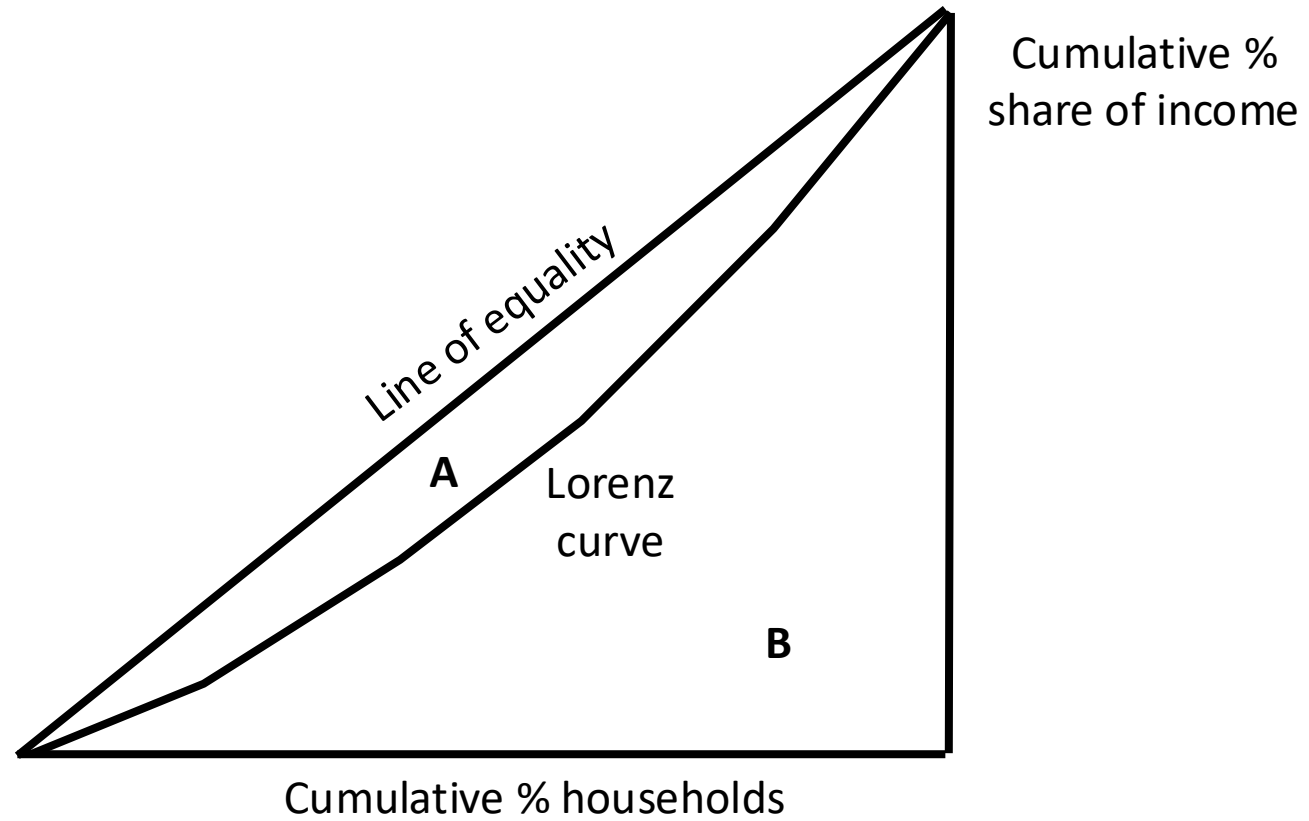




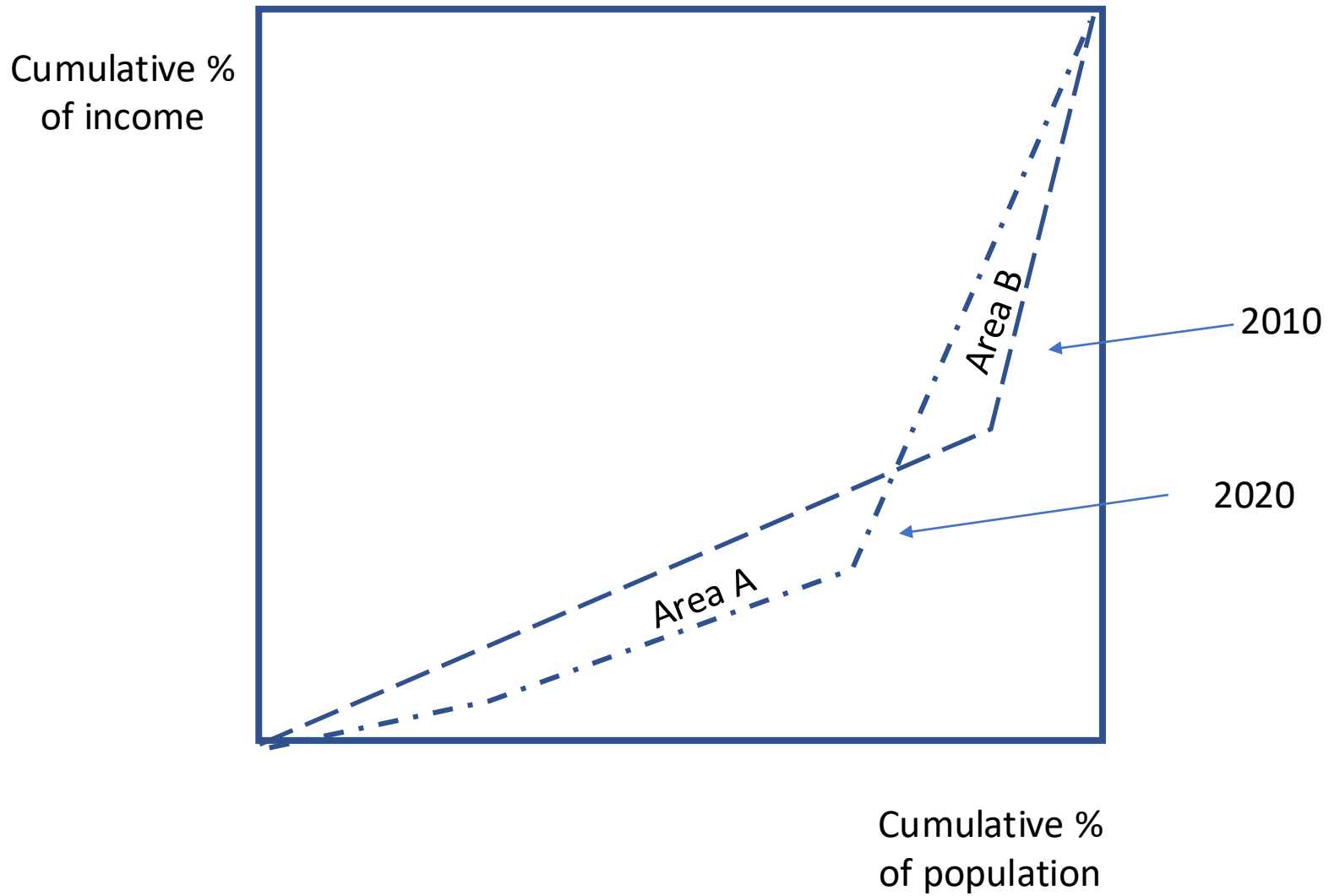
Income inequality: Lorenz curve used to find out Gini coefficient



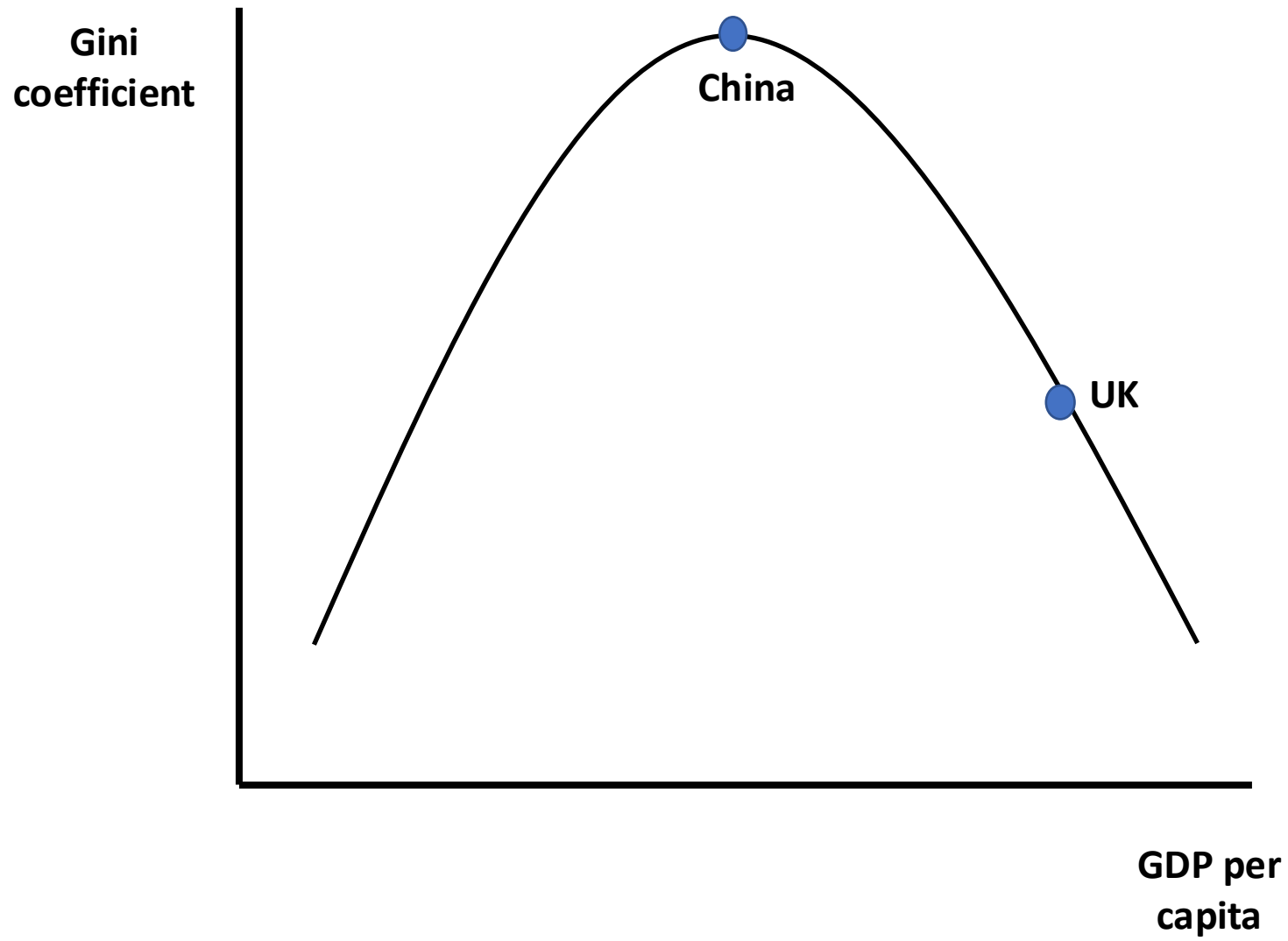
Income inequality: Lorenz curves used to find out Gini coefficient; Country A has less income inequality than Country B



Income inequality: Gini coefficient is $\text{area A} / (\text{areas A+B})$

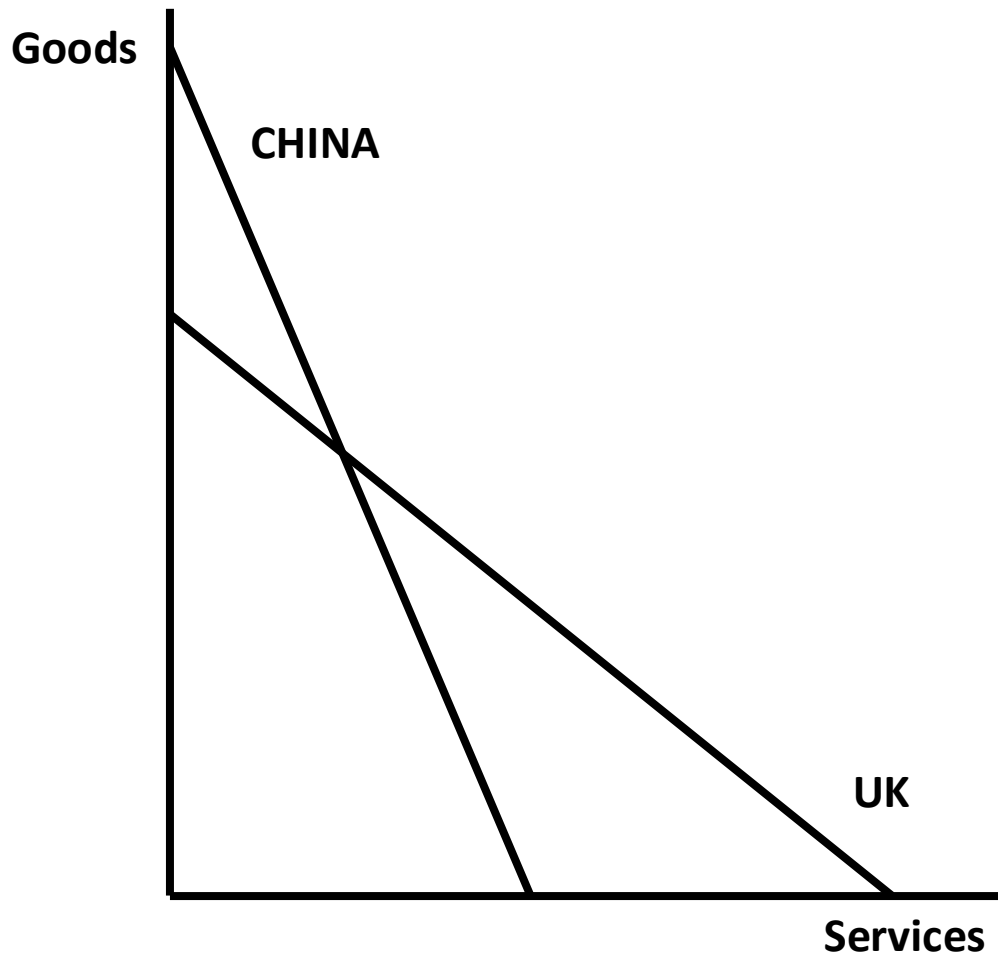


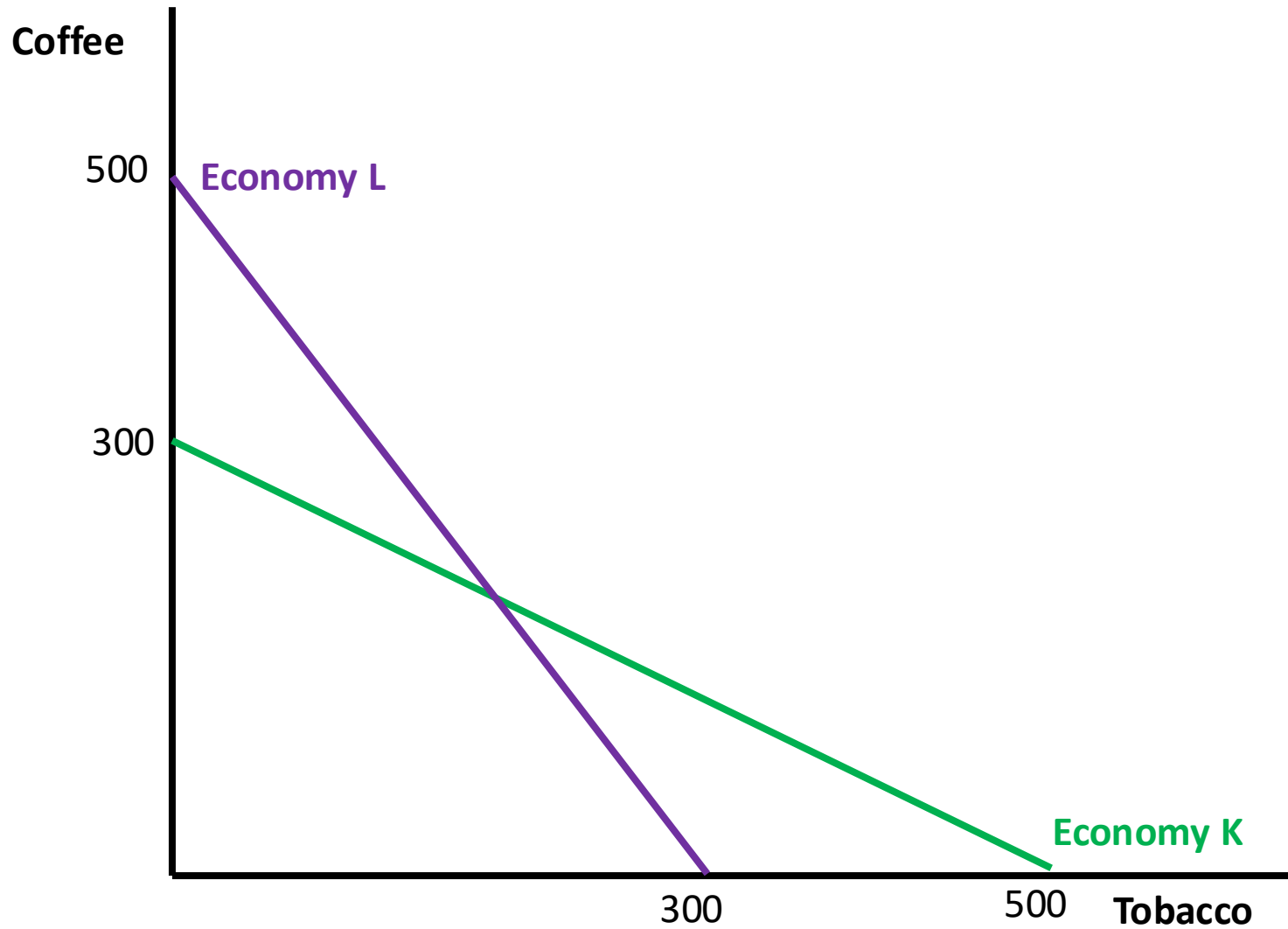
How two different Lorenz curves (income distributions) can give the same Gini coefficient

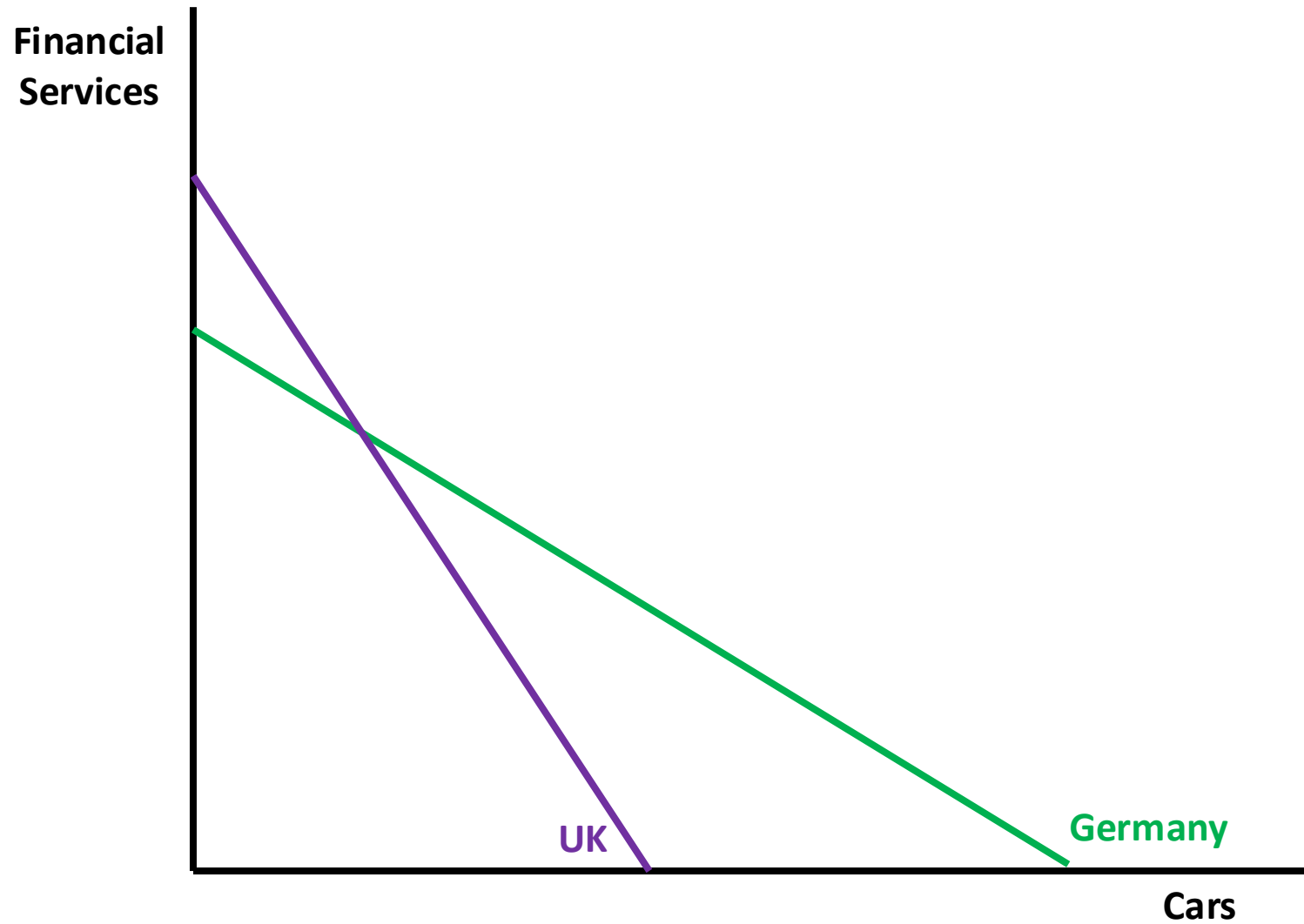


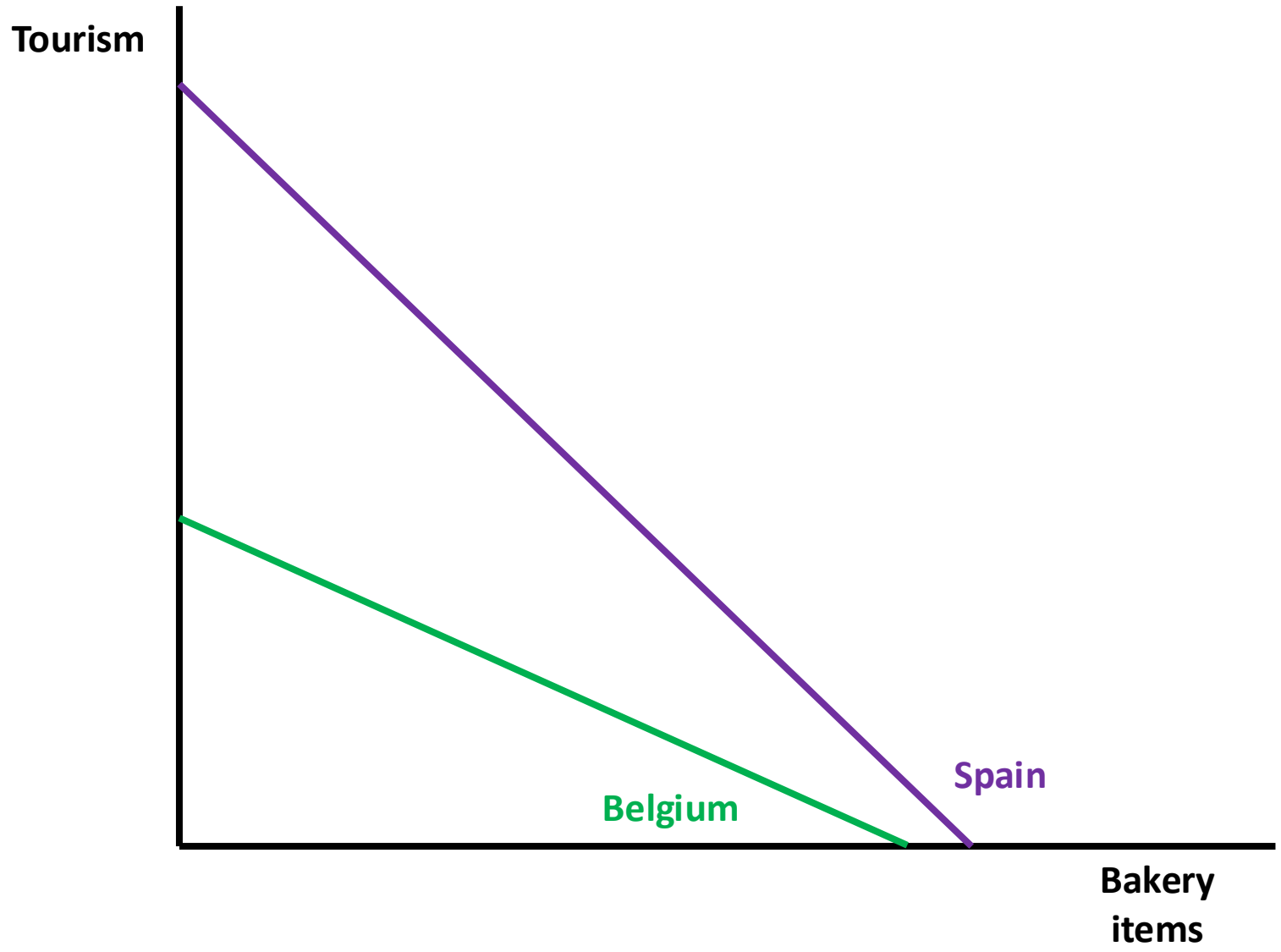
ECONOMICS DIAGRAMS

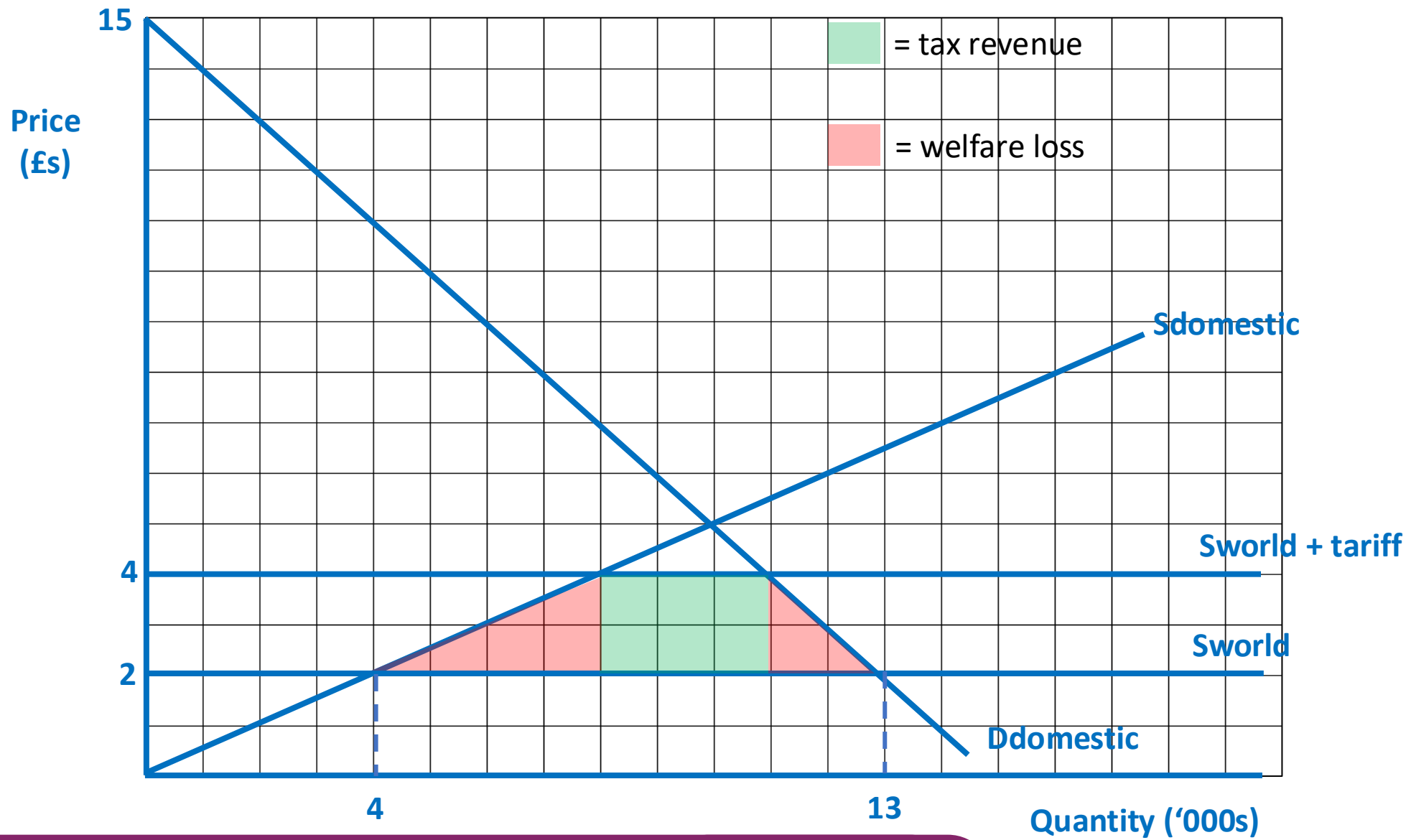
TRADE-RELATED DIAGRAMS



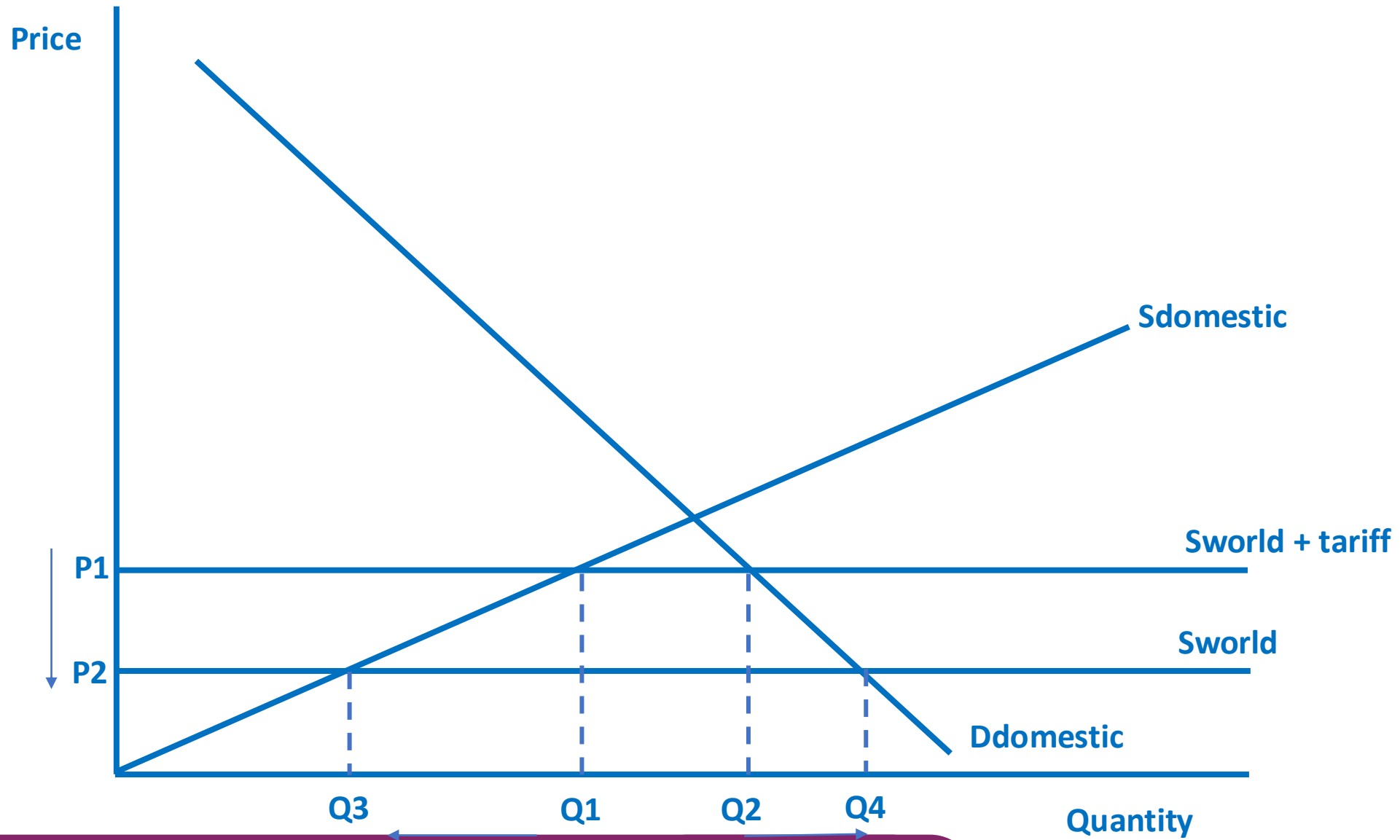




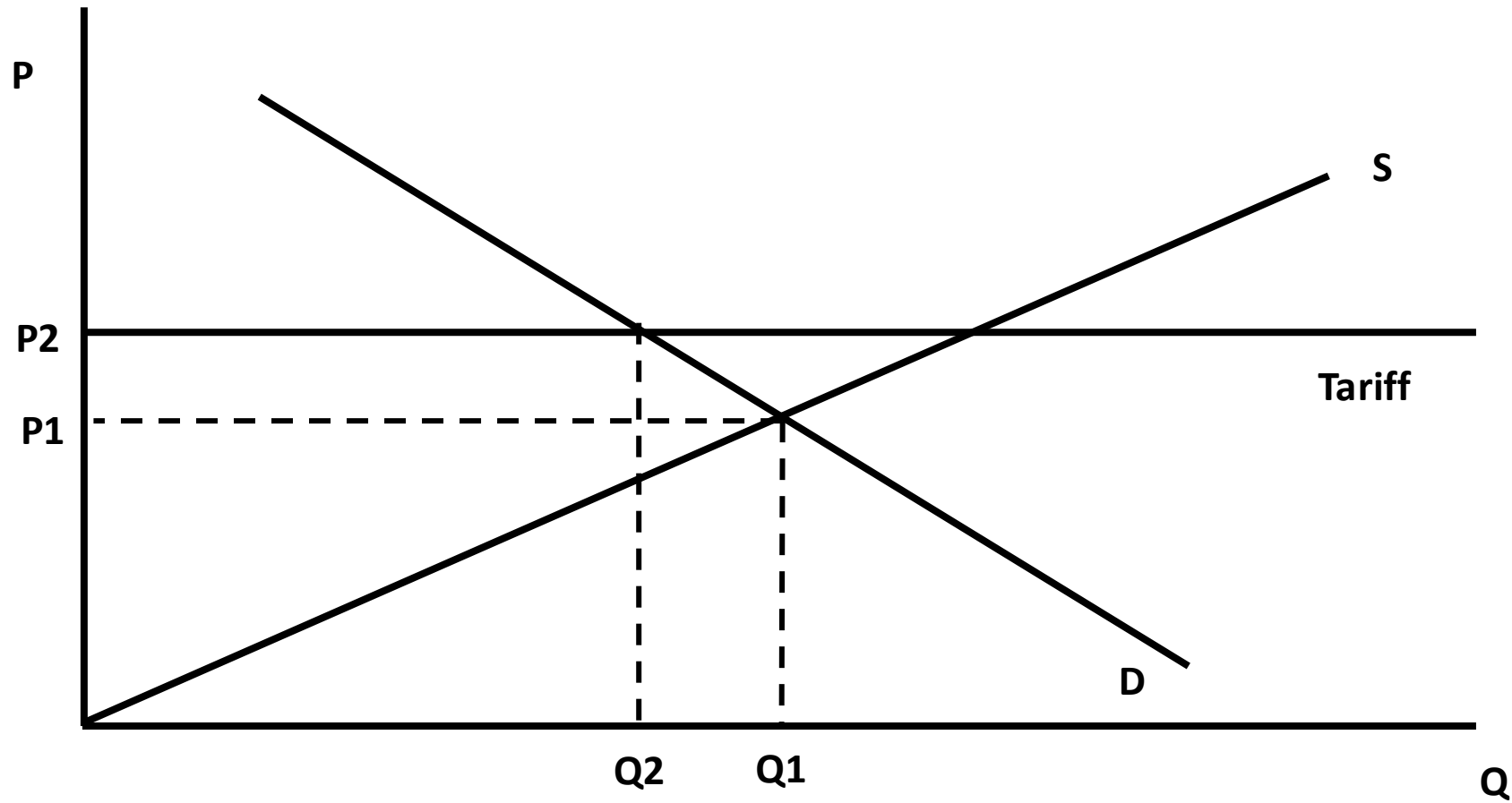




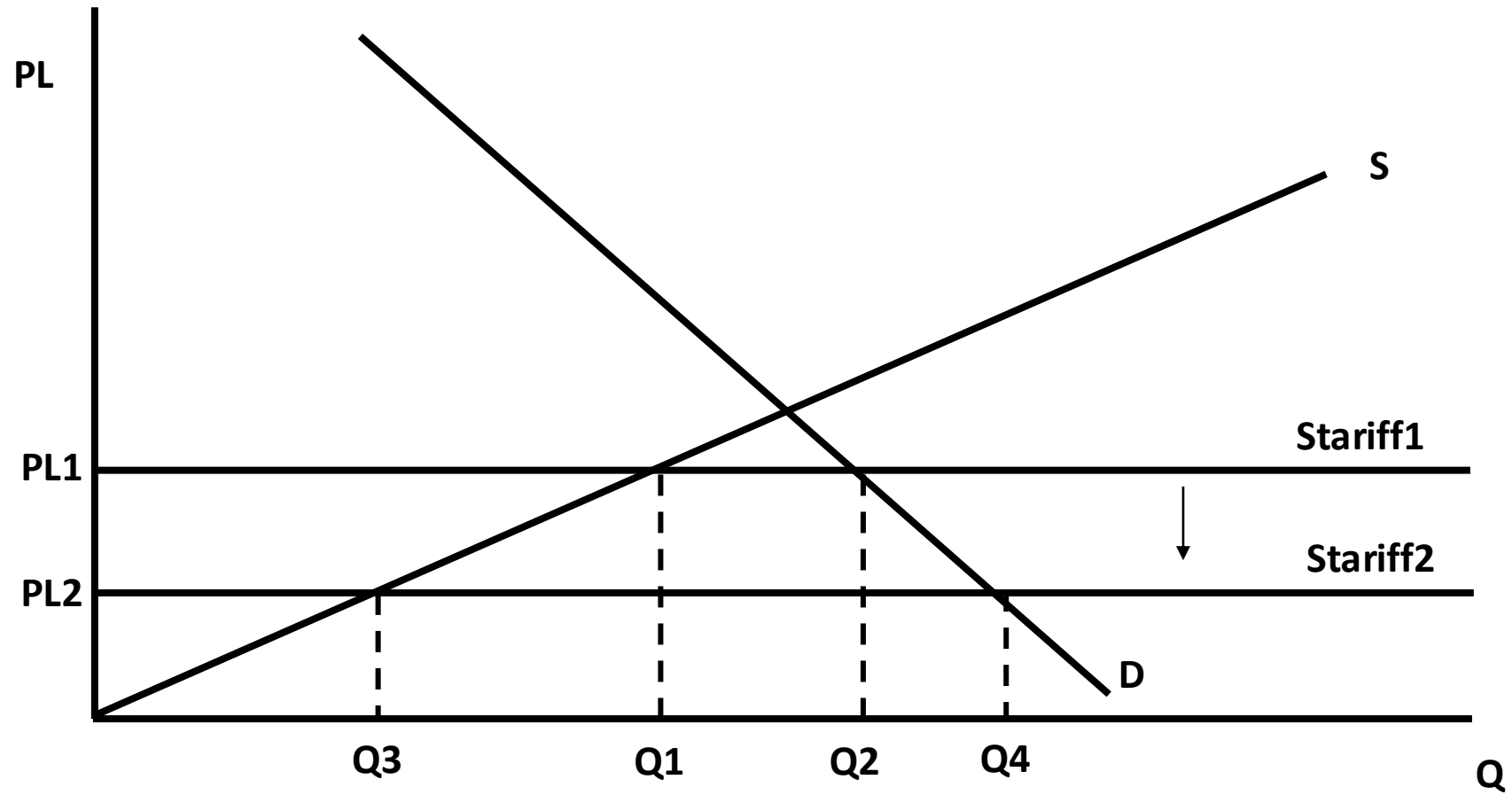
Tariff model; tariff imposed on good raises tax revenue but causes a welfare loss



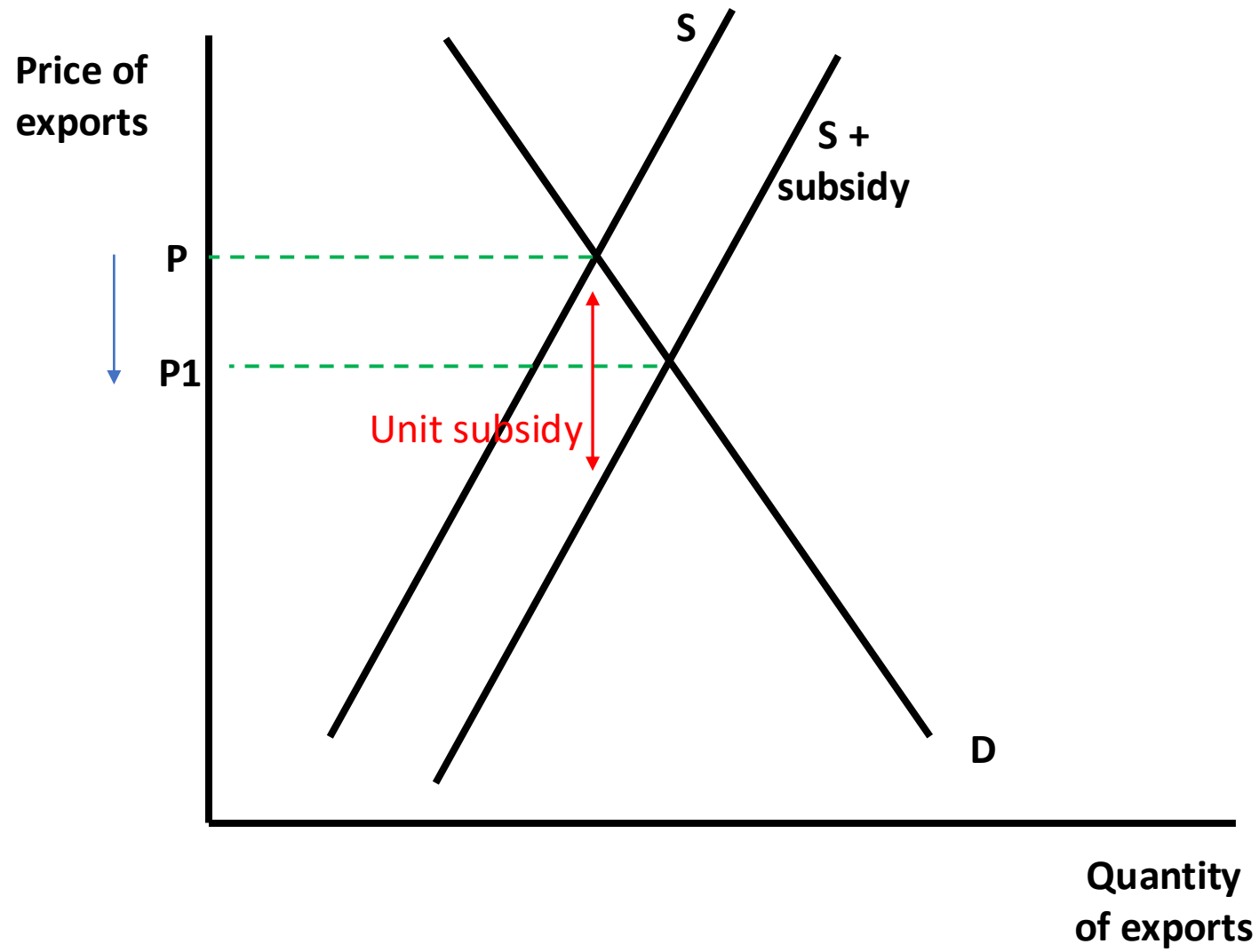
Removal of tariff increase imports from $Q_2 - Q_1$ to $Q_4 - Q_3$



Tariff set so price rises above domestic market equilibrium means there will be no imports and the market equilibrium will be determined domestically



Reduction in tariff



Impact of export subsidy on price of exports (vertical distance = subsidy per unit)