Exercise walk-through

2.4
Government intervention in markets

International Baccalaureate · IB Diploma · Economics · HL

Data-response practice (Paper 2 style) (2)

- (d) Using a diagram, explain the effect of the planned **maximum price** on the rice market in Country R. [4]
- (e) Using information from the text and your knowledge of economics, evaluate the use of a maximum price to protect consumers in Country R from higher rice prices. [15]
- **The case for.** Demand is very inelastic ($PED = -0.16$), so the price rise from 0.80 dollars to 1.00 dollars mostly raises spending, not saving. Poor households spend a large share of their income on rice and are hit hardest. A cap at 0.85 dollars lowers the price for everyone who can still buy rice, and it costs the government almost nothing to announce.

Data-response practice (Paper 2 style) (3)

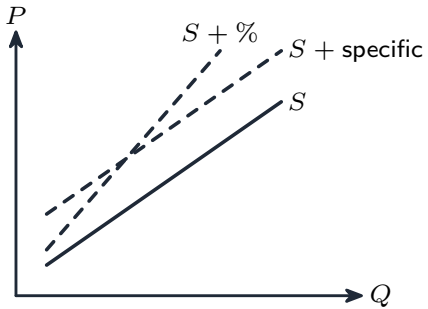
- **Shortage and black markets.** The shortage of 5.5 thousand tonnes is about 11% of what consumers want. Rice goes to those who queue first or know the sellers, not to those in most need, and black-market prices may rise above 1.00 dollars.
- **Supply falls further.** Country R imports most of its rice and importers pay the world price. If they must sell below what they pay, they import less, and the shortage grows. Local farmers also receive less, so in the long run, when supply is more elastic, they grow less rice.
- **Stakeholders.** Consumers who get rice gain; those who cannot get it lose. Importers and farmers lose income. The government must pay to enforce the cap and to fight the black market.

Data-response practice (Paper 2 style) (4)

- **Alternatives.** The government could pay importers the gap between the world price and 0.85 dollars (about 0.15×48 million kg $= 7.2$ million dollars a month), release rice from a **buffer stock** , cut any import tariff, or give targeted **cash transfers** or food vouchers to poor households. Transfers protect the poor while the price still signals that rice is scarce.
- **Short run and long run.** The ban was temporary (India eased it in 2024). A short, time-limited cap combined with government imports could protect consumers through a temporary shock. A long-lasting cap would damage supply.

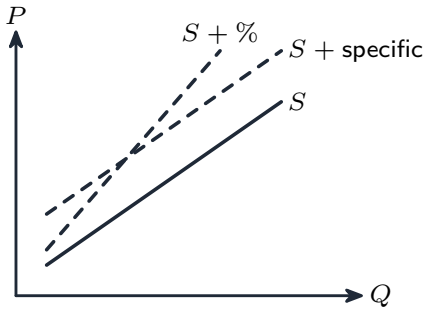
Exercise 2.1

2.1 Distinguish between a specific tax and an *ad valorem* tax. [2]



Exercise 2.1

2.1 Distinguish between a specific tax and an *ad valorem* tax. [2]

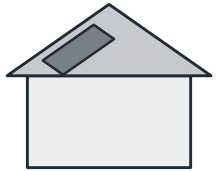


2.1

specific tax: a fixed amount per unit, e.g. \$1 per litre; supply shifts up in parallel; ad valorem: a percentage of the price, e.g. 20% VAT; the gap grows at higher prices

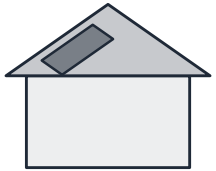
Exercise 2.2

2.2 State **two** reasons why a government might subsidize a product. [2]



Exercise 2.2

2.2 State **two** reasons why a government might subsidize a product. [2]



2.2

any two: to lower prices for consumers, e.g. basic food; to support producers' incomes, e.g. farmers; to increase output of goods with positive externalities, e.g. solar energy, vaccines; to help a new industry compete

Exercise 2.3

2.3 A city sets a maximum rent below the equilibrium rent. Using a diagram, explain **two** consequences. [4]



[[drawlines:4]]

Exercise 2.3

2.3 A city sets a maximum rent below the equilibrium rent. Using a diagram, explain **two** consequences. [4]



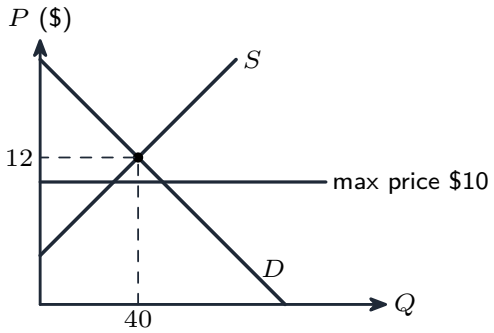
[[drawlines:4]]

2.3

diagram with a maximum price below equilibrium and the shortage Q_s to Q_d shown; quantity demanded rises and quantity supplied falls, giving a shortage of flats; any two consequences: long waiting lists / queues; illegal "key money" or black markets; landlords spend less on repairs, so quality falls; some flats move to other uses, so supply falls further in the long run

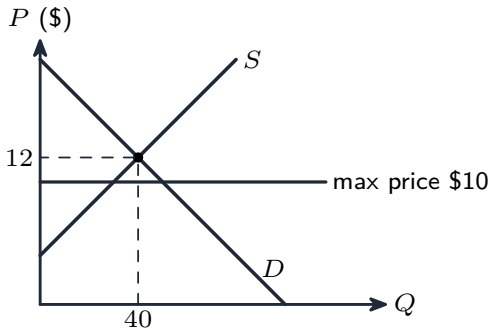
Exercise 2.4

2.4 In the market for a good, $Q_d = 100 - 5P$ and $Q_s = -20 + 5P$. The government sets a maximum price of \$10. Calculate the equilibrium price and quantity, and the shortage at the maximum price. [3]



Exercise 2.4

2.4 In the market for a good, $Q_d = 100 - 5P$ and $Q_s = -20 + 5P$. The government sets a maximum price of \$10. Calculate the equilibrium price and quantity, and the shortage at the maximum price. [3]

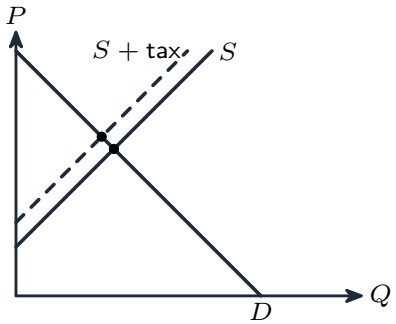


2.4

$100 - 5P = -20 + 5P$, so $P = \$\mathbf{12}$, $Q = \mathbf{40}$; at \$10: $Q_d = 50$, $Q_s = 30$; shortage = **20** units

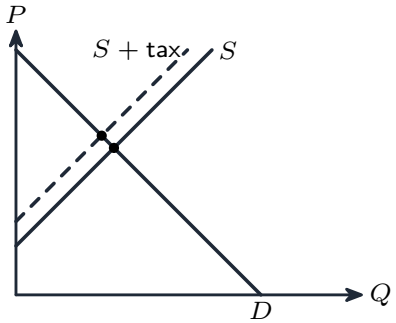
Exercise 2.5

2.5 In the same market, the government instead puts a specific tax of \$2 per unit on producers. Calculate the new price paid by consumers, the price received by producers, and the tax revenue. [3]



Exercise 2.5

2.5 In the same market, the government instead puts a specific tax of \$2 per unit on producers. Calculate the new price paid by consumers, the price received by producers, and the tax revenue. [3]



2.5

new supply: $Q_s = -20 + 5(P-2) = -30 + 5P$; $100 - 5P = -30 + 5P$, so $P_c = \$\mathbf{13}$, $Q = 35$; producers receive $13 - 2 = \$\mathbf{11}$; tax revenue $= 2 \times 35 = \$\mathbf{70}$

Exercise 3.1 (a)

3.1 A government introduces a minimum price for wheat above the equilibrium price to support farmers.

(a) Identify **one** group that gains and **one** that loses. [2]



Exercise 3.1 (a)

3.1 A government introduces a minimum price for wheat above the equilibrium price to support farmers.

(a) Identify **one** group that gains and **one** that loses. [2]



(a) gains: wheat farmers (higher price and income); loses: consumers (pay more) / taxpayers

Exercise 3.1 (b)

3.1 A government introduces a minimum price for wheat above the equilibrium price to support farmers.

(b) Using a diagram, explain the consequences of the minimum price for the market and for the government. [6]

[[drawlines:6]]

Exercise 3.1 (b)

3.1 A government introduces a minimum price for wheat above the equilibrium price to support farmers.

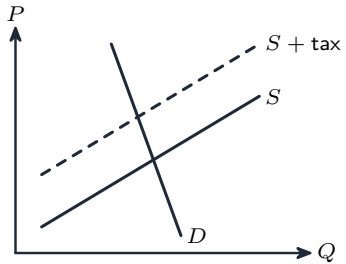
(b) Using a diagram, explain the consequences of the minimum price for the market and for the government. [6]

[[drawlines:6]]

(b) diagram: minimum price above equilibrium, surplus between Q_d and Q_s; higher price lowers quantity demanded and raises quantity supplied; to keep the price up, the government must buy the surplus, at a cost of minimum price $\times$ surplus; storage costs, waste, or selling abroad cheaply (dumping), which hurts foreign farmers; resources are over-allocated to wheat: allocative inefficiency / welfare loss

Exercise 3.2

3.2 Demand for cigarettes is price inelastic. The government adds a specific tax.

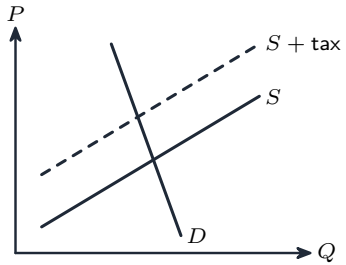


Using a diagram, explain why consumers pay most of the tax. [4]

[[drawlines:4]]

Exercise 3.2

3.2 Demand for cigarettes is price inelastic. The government adds a specific tax.



Using a diagram, explain why consumers pay most of the tax. [4]

[[drawlines:4]]

3.2

diagram: steep (inelastic) demand, supply shifts up by the tax per unit, P_c and P_p marked; price rises by almost the full tax, quantity falls only a little; the consumer share $(P_c - P_e) \times Q$ is much larger than the producer share $(P_e - P_p) \times Q$; because buyers have few substitutes, firms can pass the tax on