

3.1 The mixed economy and externalities

Name: _____ Class: _____ Date: _____

Total: 22 marks

KEY WORDS public good • external cost

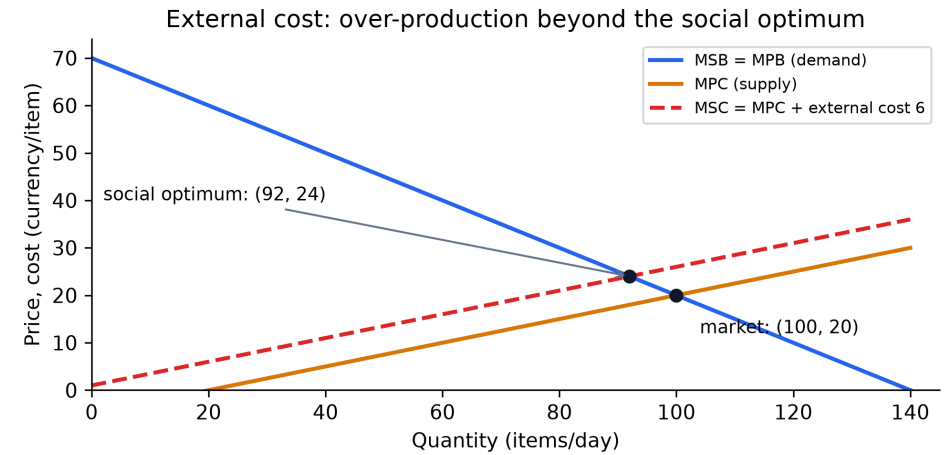
The mixed economy and externalities

Objective

Distinguish the sectors, apply the three questions, define public goods and the free-rider problem, evaluate privatisation, and use the social cost and benefit formulae (spec 1.1.5–1.1.6).

1 Key knowledge and worked examples

Sectors and externalities. Private sector: owned by individuals and firms for profit; public sector: state-owned for welfare – ownership, control and aims differ. Public goods are non-excludable and non-rival, so free-riders make private provision impossible. Social cost = private cost + external cost; social benefit = private benefit + external benefit. On the shared model with external cost 6, the market (100, 20) over-produces against the social optimum (92, 24).



Original model; both equilibria are computed in the solutions.

2 Practice

2.1 Define the mixed economy and name its two sectors. [2]

2.2 State the three questions every economy must answer. [2]

2.3 State the two properties of a public good and the problem they create. [2]

2.4 Define privatisation. [1]

2.5 Give one example of an external cost and one of an external benefit. [2]

2.6 Write the two social formulae. [2]

3 Exam-style questions

3.1 (*Original.*) Explain why street lighting must be provided by the public sector, using the terms non-excludable and free-rider. [3]

3.2 (*Original.*) A market trades at $(100, 20)$ on the demand curve $Q_d = 140 - 2P$ and supply $Q_s = 20 + 4P$. Production carries an external cost of 6 per unit. Find the social optimum and state the size and direction of the market failure. [4]

3.3 (*Original.*) Evaluate the effects of privatising the state water company on consumers and the government. [4]

Solutions

2.1 An economy with both a private sector and a public sector (1); private and public (1).

2.2 What to produce; how to produce; for whom to produce.

2.3 Non-excludable and non-rival (1). They create the free-rider problem – nobody can be made to pay, so private firms cannot profit and do not provide the good (1).

2.4 The transfer of ownership from the public sector to the private sector.

2.5 External cost: pollution (or congestion, environmental damage). External benefit: education (or healthcare, vaccinations).

2.6 Social cost = private cost + external cost; social benefit = private benefit + external benefit.

3.1 Street lighting is non-excludable: anyone passing benefits, whether or not they paid (1). It is non-rival: one person's use does not dim another's (1). So each resident free-rides, hoping others pay; no private firm can collect revenue, and the good would not be provided – the public sector provides it from taxation (1).

3.2 Social supply in consumer prices: $Q_s = 20 + 4(P - 6) = 4P - 4$. Setting $140 - 2P = 4P - 4$ gives $144 = 6P$, so $P = 24$ and $Q = 92$: the social optimum is (92, 24). The market equilibrium (100, 20) over-produces by 8 units – resources are over-allocated because the external cost never reaches buyers or sellers.

3.3 Consumers: prices may FALL if privatisation brings efficiency and competition, and service quality may rise (investment incentives); but if the private company is a natural monopoly, prices may RISE above the state-controlled level and rural customers may be neglected. Government: gains a one-off sale receipt and may stop subsidising losses; but loses future dividends and control over pricing, and may have to fund a regulator. A judgement weighing the competitive structure earns the marks.

Local review guidance: definitions word-perfect – free-rider and privatisation are one-mark definitions; the social optimum solved from the shifted supply equation before the failure is sized; (R1) the privatisation answer names the CONDITION (competition or monopoly) on which each effect depends. This is authored classroom guidance.