A-LEVEL ECONOMICS • EXERCISE SHEET

7.4 Private costs and benefits, externalities and social costs and benefits

Name: ____________ Class: ________ Date: __________ **Total: 26 marks**

KEY WORDS externality 外部性 • private benefit 私人收益 • private cost 私人成本 • deadweight welfare loss 无谓损失 • social benefit 社会收益

Objective

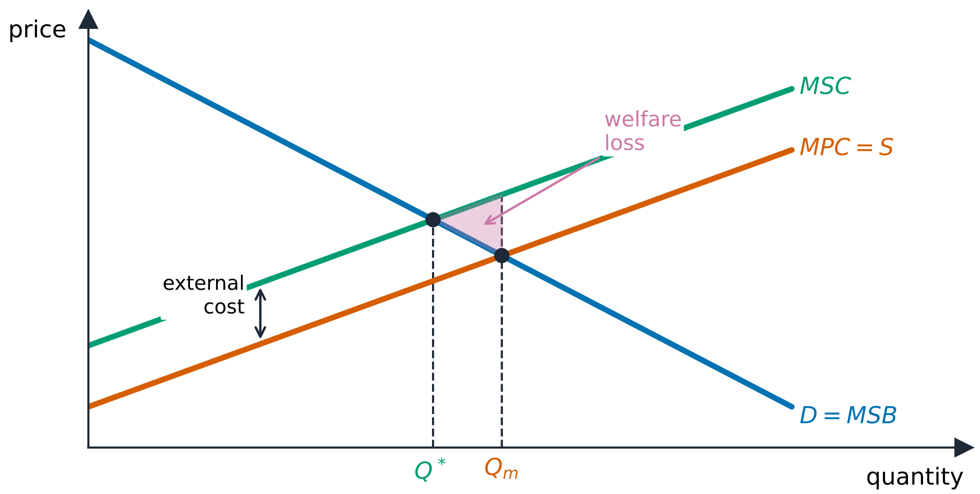
Build the skills to answer exam questions on **externalities and social costs and benefits 外部性与社会成本收益** — **private, external and social 私人、外部、社会** costs and benefits, **marginal analysis 边际分析** (MPC, MSC, MPB, MSB), and **deadweight welfare loss** 无谓损失.

You must be able to:

- distinguish private, external and social costs and benefits
- draw the marginal externality diagram and identify the welfare loss
- analyse negative and positive externalities

1 Worked examples

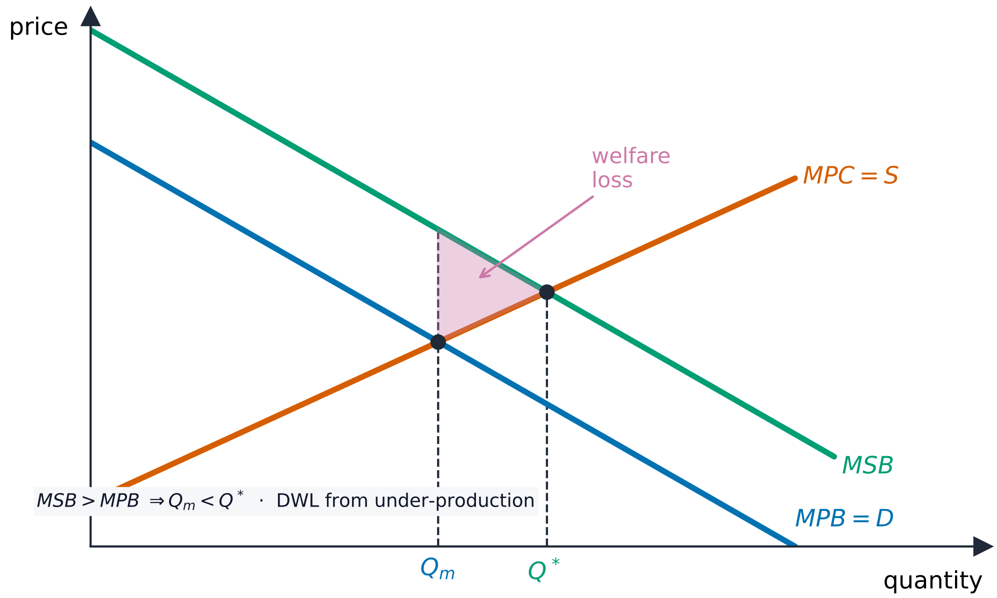
■ Marginal externality analysis



$MSC > MPC \Rightarrow Q_m > Q^*$ · DWL from over-production

The social optimum is where MSC = MSB; the market produces where MPC = MPB

- **Social cost** 社会成本 = private cost + **external cost** 外部成本; **social benefit** = private benefit + external benefit.
- **Negative externality:** MSC > MPC → market makes **too much**. **Positive externality:** MSB > MPB → **too little**.
- The gap creates a **deadweight welfare loss** 无谓损失 (the triangle between the social and private curves).



A positive externality: the free market under-produces below the social optimum Q^*

Answer shapes: an **Explain [up to 8]** answer should use a labelled marginal diagram (AO3); **Discuss [12]** adds a judgement (AO4).

2 Practice

2.1 Define the term *external cost.* [2]

2.2 State the relationship between marginal social benefit and marginal private benefit for a good with a positive externality. [1]

2.3 Define the term *deadweight welfare loss.* [2]

3 Exam-style questions

3.1 At the socially optimum level of output: [1]

A | B
C | D

A marginal private cost equals marginal private benefit
B marginal social cost equals marginal social benefit
C total cost equals total benefit
D marginal cost equals zero

3.2 Using a marginal diagram, explain why a good with a **positive externality** is under-produced by the free market. [8]

3.3 Discuss the best way for a government to deal with the negative externality from car use. [12]