

4.1 Information and market power

Name: _____ Class: _____ Date: _____

Total: 21 marks

KEY WORDS asymmetric information • moral hazard

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Objective

Distinguish adverse selection from moral hazard, solve the monopoly model with its welfare cost, and evaluate the policy responses to market power (syllabus 2.10–2.11).

1 Key knowledge and worked examples

Information and power toolkit. Asymmetric information fails markets through adverse selection (before the contract) and moral hazard (after). Monopoly: $MR = 70 - Q$ meets $MC = 10 + Q/2$ at $Q = 40$, price 50 on the demand curve; with ATC 30, supernormal profit $(50 - 30) \times 40 = 800$. The competitive benchmark (60, 40) reveals the deadweight loss $\frac{1}{2} \times 20 \times 20 = 200$. Natural monopoly: regulate, do not fragment. CR4 from shares $40 + 25 + 15 + 10 = 90\%$.

2 Practice

2.1 Define asymmetric information and distinguish adverse selection from moral hazard by timing. [2]

2.2 Explain how a pooled insurance price causes adverse selection. [2]

2.3 Name any four barriers to entry that sustain monopoly. [2]

2.4 State the profit-maximisation condition and read the monopoly price from which curve. [2]

2.5 Market shares are 40, 25, 15, 10 and 10 percent. Calculate the four-firm concentration ratio and one limitation of the measure. [3]

3 Exam-style questions

3.1 (*Original.*) On AR $P = 70 - Q/2$, MR $P = 70 - Q$, MC $P = 10 + Q/2$ with ATC 30 at the profit-maximising output: find the output and price, calculate the supernormal profit, and find the deadweight loss against the competitive outcome. [5]

3.2 (*Original.*) A rail network has falling average costs over the whole market. Explain why fragmenting it would raise costs, and evaluate one regulatory response. [3]

3.3 (*Original.*) A bank's deposit insurance leads banks to lend more recklessly. Name the failure and one policy that limits it. [2]

Solutions

2.1 One party to a transaction knows more than the other (1). Adverse selection operates BEFORE the contract (the informed side self-selects badly); moral hazard AFTER it (the protected side takes more risk) (1).

2.2 A single pooled premium is a bargain for high-risk customers and a poor deal for low-risk ones (1), so low-risks drop out, the risk pool worsens, the price rises, and more low-risks exit – until only high-risks remain and the market for low-risk cover vanishes (1).

2.3 Any four of: legal barriers; patents; branding/marketing; control of essential resources; economies of scale; high start-up costs.

2.4 Produce where $MR = MC$; the price is read from the DEMAND (average revenue) curve at that output.

2.5 $CR4 = 40 + 25 + 15 + 10 = 90\%$. Limitation (any one): it misses foreign competition; it says nothing about contestability; it ignores interdependence among the top four.

3.1 $MR = MC$: $70 - Q = 10 + Q/2$ gives $60 = 1.5Q$, so $Q = 40$; price on AR: $P = 70 - 20 = 50$. Supernormal profit $= (50 - 30) \times 40 = 800$ per day. Competitive: $70 - Q/2 = 10 + Q/2$ gives $Q_c = 60$, $P_c = 40$. Deadweight loss $= \frac{1}{2} \times (60 - 40) \times (50 - 30) = \frac{1}{2} \times 20 \times 20 = 200$.

3.2 With falling ATC, one network serves the whole market at the lowest average cost; splitting it into rivals duplicates the fixed network, raising each firm's average cost (natural monopoly). Regulatory response (any one, evaluated): price capping at marginal cost maximises output but may price below average cost and require subsidy; average-cost pricing breaks even but leaves some deadweight loss; state ownership aligns coverage with policy but weakens profit discipline.

3.3 Moral hazard (the insured party takes more risk after the contract). Limiting policy: deductibles/excesses so banks bear part of the loss; capital requirements; or regulation of lending standards.

Local review guidance: the $MR = MC$ equation, then price on AR, then the two welfare points; (R1 3.2) the response named with BOTH its gain and cost; the failure named as moral hazard specifically. This is authored classroom guidance.