

Cambridge AS & A Level · Economics 9708 · Notes

Growth and survival of firms A2

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Read first: [Types of cost, revenue and profit, short-run and long-run production](#), [Different market structures](#)

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What you need to know

By the end of this topic you should be able to:

1. **Explain why firms are different sizes:** why some industries are run by a few very large firms, and why small firms survive, often alongside large ones.
2. **Explain internal growth:** **organic growth** (a firm expands from within) and **diversification** (it moves into new products or markets).
3. **Explain external growth by integration** (mergers and takeovers): the methods (**horizontal, vertical backward and forward, conglomerate**), the **reasons** firms integrate and the **consequences** for the firm, consumers, workers and competition.
4. **Explain cartels:** the conditions a cartel needs to work, and its consequences.
5. **Explain the principal–agent problem:** why the different aims of shareholders (owners) and managers cause it, and how owners try to deal with it.

Economies and diseconomies of scale and minimum efficient scale (MES) are in "Types of cost, revenue and profit"; oligopoly, collusion and the Prisoner's Dilemma are in "Different market structures". Questions here use them, so the key results are repeated briefly.

Understand it

Why firms are different sizes

A firm's size can be measured by its number of workers, its sales revenue, the capital it uses or its **market share**.

Large firms dominate where size cuts costs a lot:

- **The MES is large compared with market demand.** Steel, cars and aircraft need huge plants, so long-run average cost (LRAC) keeps falling until output is very large. A small firm would have far higher unit costs.

- **Other economies of scale:** bulk buying (purchasing), cheaper borrowing and access to share capital (financial), national advertising (marketing), specialist managers (managerial) and spreading risk across many products (risk-bearing).
- **Big fixed costs** such as research or networks, which are only worth paying if spread over a large output.

Small firms survive (they keep earning at least normal profit in the long run) for several reasons:

- **Small or specialised markets.** Made-to-measure, one-off or personalised products (a tailor, a custom guitar maker) have demand too small for a large firm to bother with.
- **Personal service and flexibility.** A local accountant or café knows its customers, and a small firm can react quickly when demand changes often.
- **Low MES.** In many services (hairstressing, plumbing, repairs) economies of scale run out at a small size, so a small firm is not at a cost disadvantage. As personal services take a bigger share of GDP, there is more room for small firms.
- **The owners' choice.** Many owners want to keep personal control or avoid the risk of expanding.
- **Limits on growth:** finance is hard for a small firm to raise (banks see it as risky); large firms suffer **diseconomies of scale**; large firms often buy parts and services from small specialist suppliers.
- **Government help:** grants, advice, lighter rules for small firms, and competition law that stops large firms growing into monopolies.

Threats to small firms: no barriers to entry (new rivals keep arriving and take their customers), large rivals with lower costs, consumers switching to cheaper mass-produced goods, expensive new technology, new regulations (the cost of complying is a larger share of a small firm's costs), higher interest rates and tough penalties for bankruptcy.

A firm becomes large either by **internal growth** or by **mergers and takeovers**, both explained next.

Internal growth and diversification

Organic (internal) growth means expanding from within: reinvesting profit or borrowing to build more capacity, hire more workers, launch products or open new branches.

- **Advantages:** the owners keep control; growth is gradual, so less risky and easier to manage; no culture clash; competition authorities rarely object.
- **Disadvantages:** it is slow; it is limited by the profit available and by the size of the market.

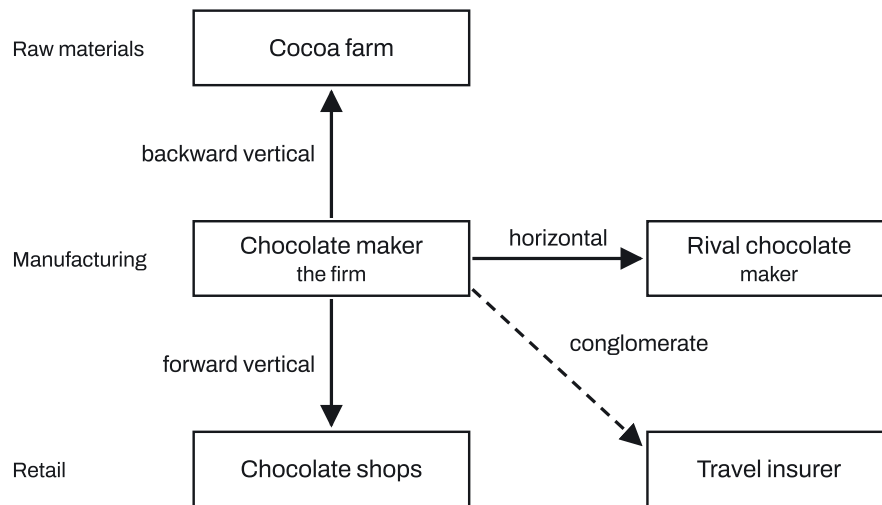
Diversification means producing new and different products or selling in new markets. Its main purpose is to **spread risk**: if demand for one product falls, sales of others can keep the firm going. It also uses spare capacity, a strong brand or spare cash. The risks: the firm may lack expertise in the new market, managers are stretched, and there may be few economies of scale. A firm can diversify organically (developing a new product) or by buying a firm in another industry (a conglomerate merger).

External growth: mergers and takeovers

- A **merger** is when two firms agree to join together as one new firm.

- A **takeover** (acquisition) is when one firm buys a controlling share (over half the shares) of another. The other firm's managers may oppose it (a hostile takeover).

Both are **integration**. The type depends on the **industry** and the **stage of production** of the two firms.



Type	What joins	Main reasons
Horizontal	firms in the same industry at the same stage (usually rivals)	economies of scale (technical, bulk buying, cutting duplicated managers and offices); a larger market share and more market power; a rival removed
Backward vertical	a firm and its supplier (an earlier stage)	secure supplies; control quality; cut costs by removing the supplier's profit margin; deny rivals the input
Forward vertical	a firm and its customer or retail outlet (a later stage)	secure sales outlets; control how the product is sold; keep the retailer's profit margin
Conglomerate	firms in unrelated industries	diversification: spread risk; use spare cash; buy a business that looks cheap

Effect on the firm's curves (common in multiple choice):

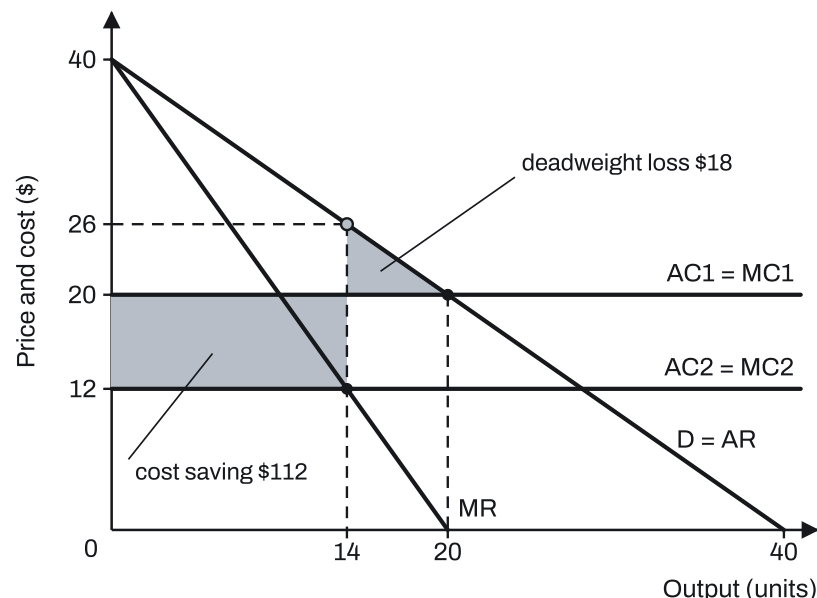
- A **horizontal** merger removes a rival, so the merged firm's demand (AR) **rises** and becomes **less price elastic** (fewer close substitutes). Economies of scale make its **average cost fall**.
- A **backward vertical** takeover of a supplier makes inputs cheaper, so **average cost falls**, but its customers and rivals are unchanged, so **demand does not change**.

Consequences of integration

	Possible gains	Possible losses
The firm	economies of scale lower LRAC; more market share, revenue and profit; secure supplies or outlets; less risk	diseconomies of scale (communication, coordination, motivation); clashes between the two firms' cultures and systems; the cost of funding the deal (borrowing, paying more than the shares are worth); profits often disappoint
Consumers	lower prices if cost savings are passed on; profit to fund research and better products (dynamic efficiency)	higher prices and less choice once rivals are gone; less pressure to keep costs down (X-inefficiency)
Workers	job security in a stronger firm	job losses where jobs are duplicated
Competition	a firm big enough to compete with foreign giants	higher concentration and higher barriers to entry; the market may become a near-monopoly

Because of the risks to consumers, a **competition authority** can investigate mergers and **block** them, or allow them only on conditions (such as selling some branches). Firms sometimes **demerge** (split into separate firms) when diseconomies of scale set in, or when their markets are so different that separate firms can set prices to suit each one.

Will consumers pay less? The diagram shows a market with demand $P = 40 - Q$.



- **Before:** competing firms keep the price at average cost, \$20, and 20 units are sold.
- **After:** economies of scale cut the merged firm's average and marginal cost to \$12. With no rival left, it maximises profit where $MR = MC$: $40 - 2Q = 12$, so 14 units at a price of \$26.
- **Consumers lose:** they pay \$6 more and buy 6 fewer units; the deadweight loss is $\frac{1}{2} \times 6 \times 6 = 18$ dollars.

- **Society gains** the cost saving on the units still made: $(20 - 12) \times 14 = 112$ dollars, which is bigger than the deadweight loss.
- **The merged firm** makes supernormal profit of $(26 - 12) \times 14 = 196$ dollars: the \$112 cost saving plus \$84 taken from consumers through the higher price.

So a merger can be efficient and still be bad for consumers. Here the price rises because, before the merger, competition already held it down to cost. The price falls only when the cost saving outweighs the gain in market power: for example when the merging firms already priced well above cost, or when the merged firm still faces competition (imports, a contestable market) or a regulator.

Cartels

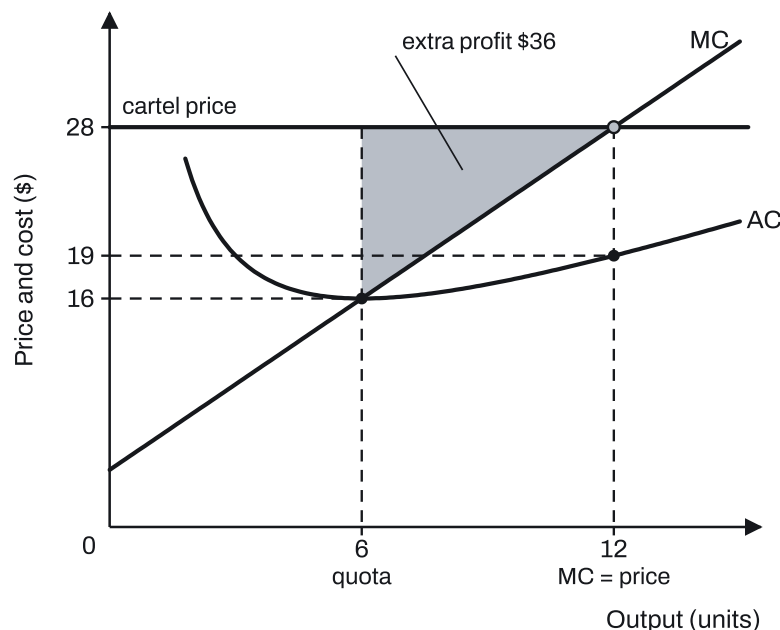
A **cartel** is a formal agreement between **independent** firms to restrict competition: by fixing the price, setting each member's output (a **quota**) or sharing out the market. Together the members act like a single monopoly. Unlike a merger, the firms stay separate, and in most countries cartels are **illegal** (competition authorities investigate and fine them); a merger is legal unless it is blocked. Collusion can also be **tacit**: no agreement, but firms follow a **price leader**.

Conditions for an effective cartel:

- **Few firms, and most of the industry in the cartel**: easy to agree and to watch each other. Outsiders could undercut the cartel price.
- **High barriers to entry**: otherwise the high profit attracts new firms that sell below the cartel price.
- **Similar costs and a similar (homogeneous) product**: one price and one set of quotas suits everyone.
- **Stable demand**: when demand falls, quotas must be cut, firms have spare capacity and are tempted to cut prices, and it is hard to tell cheating from a fall in demand.
- **Cheating is easy to detect and quotas are strictly enforced**, with penalties for members who break them.
- **Few substitutes from other industries** and **weak or absent competition law**.

Consequences: a higher price and lower output than with competition; supernormal profit; allocative inefficiency ($P > MC$) and a deadweight loss; less choice; little pressure to cut costs, so inefficient members survive. Possible benefits: stable prices and profit can fund investment and research.

Why cartels break down. Each member gains by cheating.



At its quota of 6 units, this member's marginal cost is \$16, far below the cartel price of \$28. If it secretly sells extra units at \$28, each one adds more to revenue than to cost, so it expands to where MC equals \$28, at 12 units. Profit rises from $(28 - 16) \times 6 = 72$ dollars to $(28 - 19) \times 12 = 108$ dollars: an extra \$36, the shaded triangle. Every member faces the same temptation. If they all cheat, total output rises, the price falls and the cartel collapses (the Prisoner's Dilemma).

The principal–agent problem

A **principal** hires an **agent** to act on their behalf. In a public limited company the **shareholders** (owners) are the principals and the **managers** are the agents. Ownership is **separated** from control: shareholders own the firm but the managers run it, and the managers know far more about the business than the owners can check (asymmetric information).

The problem arises because their **objectives differ**:

- shareholders want **maximum profit** (high dividends and a rising share price);
- managers may want a high salary, status, perks, job security and an easy life, which often come from running a **bigger** firm: they may aim for **growth**, **sales maximisation** or **revenue maximisation** rather than profit, or simply do "well enough" (satisficing), letting costs drift up (X-inefficiency).

What it does to price and output. A profit maximiser produces where $MC = MR$. A **revenue maximiser** produces where $MR = 0$. A **sales maximiser** produces the largest output that still covers its costs (normal profit), where $AR = AC$. Both give a **higher output and a lower price** than profit maximisation: consumers gain, shareholders get less profit, and resources are misallocated away from where $P = MC$.

Reducing the problem: link managers' pay to profit (profit-related bonuses, **share options** or paying them in shares, so they think like owners); set performance targets; monitor them (independent directors, audits, shareholder votes at the annual meeting). A falling share price also invites a **takeover**, after which poor managers lose their jobs.

The same idea applies wherever one person acts for another who cannot watch them: employees for a manager, a tenant using a landlord's house. It is only a principal–agent problem when the agent's choice **costs the principal** something. A taxi driver who rents a car but pays for his own fuel has no reason to waste fuel; he may still drive the car hard, because the owner pays the repairs.

Key facts and formulas

There is no formula list in the 9708 exam, so everything here is "Learn it".

Formula	Status
Profit maximisation: $MC = MR$; revenue maximisation: $MR = 0$; sales maximisation (normal profit): $AR = AC$	Learn it
Supernormal profit = $(AR - AC) \times Q$	Learn it
Merger cost saving = $(AC \text{ before} - AC \text{ after}) \times Q$	Learn it
Percentage change = $\frac{\text{new} - \text{old}}{\text{old}} \times 100$	Learn it
Extra profit from cheating on a cartel quota = area between the cartel price and MC, from the quota to the output where $MC = P$	Learn it

How to do it

We tagged 66 questions for this topic from 2021 to 2025 (56 different; 10 are repeats across paper variants): 54 Paper 3 multiple choice and 12 Paper 4 data-response and essay questions. For Paper 4 we count only the parts about this topic. One essay, [9708/43/O/N/21 Q4](#), has parts of three types, so the counts add up to 68.

Question type	Questions
Why firms are different sizes and how small firms survive	18
Reasons for and consequences of mergers and takeovers	15
Identify a method of growth: integration or diversification	13
Cartels and collusion	12
The principal–agent problem	10

Paper 4 essays were 25 marks (12- and 13-mark parts) in 2021–2022 and are 20 marks from 2023: up to 14 for knowledge and analysis (Table A) and 6 for evaluation (Table B). Data-response parts are 2–8 marks.

1. Why firms are different sizes and how small firms survive (18 questions)

Multiple choice (14). Ask of each option: does it give small firms something large firms can't match, or does it make large firms' cost advantage bigger?

- **Helps small firms:** unique, personalised or specialised products; personal service; demand that changes often; a low MES; owners who want control; stronger laws against monopoly; a growing share of personal services.
- **Threatens them:** no barriers to entry; consumers switching to cheaper mass-produced goods; dearer or more cautious bank lending; expensive new technology; new regulations; tougher bankruptcy penalties.
- **"What is not a reason to stay small?"** Pick the option that would push a firm to grow, such as owners who are ambitious risk-takers.
- **Large firms** come from internal growth or mergers, can still suffer diseconomies of scale, and small firms can have local monopoly power.

Essays and data response (4). For "the significance of economies of scale for survival" or "there is no place for small firms":

1. **Define** economies of scale (falling **long-run average cost** as the scale of production rises) and MES; draw an LRAC curve.
2. **Analyse** how economies of scale help large firms survive: lower costs, lower prices or higher profit, and a barrier to entry for smaller rivals. Link every point to **survival**.
3. **The other side:** why small firms survive (the list above) and why large firms meet diseconomies.
4. **Answer every part of the statement:** do costs always fall? do consumers always benefit? is there really no place for small firms?
5. **Conclude:** both survive because they serve different markets.

When an extract asks whether "the evidence" supports a view on large firms, use the figures and claims **in the extract** for both sides, and say what evidence is missing.

2. Reasons for and consequences of mergers and takeovers (15 questions)

Multiple choice (9).

- **The effect on curves:** horizontal → AC falls, AR rises and becomes less elastic; backward vertical → AC falls, AR unchanged.
- **"Least convincing reason for a horizontal merger":** a vertical reason, such as depending less on suppliers.
- **"Why might the merger fail, from the firm's point of view?":** costs to the firm (funding the deal, diseconomies, culture clash), not costs to consumers.
- **Demergers:** diseconomies in the combined firm, and markets that can be separated and priced differently.
- **One firm with about 80% of the market** and the rest split between many tiny firms is effectively a monopoly.

Data response "explain one benefit" (4 marks). For each type: a definition (1) and a benefit linked to it (1). "Horizontal integration is a merger of firms at the same stage of the same industry (1); the larger output gives economies of scale such as bulk buying, lowering average cost (1)."

"Evaluate" essays (20 marks), such as "growth by takeover is desirable because prices fall and profits rise", or "a merger should not have been allowed":

1. **Define** merger, takeover and external growth; name the types.
2. **Analyse the claim** with chains and a diagram: economies of scale → lower LRAC → lower prices (the cost-saving diagram, or an LRAC curve); vertical integration removes a supplier's margin; more market share → more revenue and profit.
3. **Evaluate**: savings may not be passed on; more market power lets the firm restrict output and raise the price (the diagram shows how); takeovers are costly to fund; a much bigger firm meets communication problems and diseconomies of scale; cultures may clash; the competition authority may intervene.
4. **Conclude on each key word** ("lower prices" and "profits"; "should not have been allowed"): it depends on how big the cost savings are, whether competition remains and whether a regulator watches prices.

"Consider" parts (8 marks) on whether the growth of large firms is bad for consumers, competition or equality. Up to 4 marks a side, 1 for the conclusion:

- **Bad**: less choice, a higher price and lower output; supernormal profit; small firms forced out and barriers raised; profit goes to a few owners while workers' pay is held down, which widens inequality.
- **Good**: economies of scale allow lower prices; profit funds innovation; consumers may value the service; jobs and tax revenue.
- **Use the extract** for evidence on each side, then conclude that the claim is not always true.

3. Identify a method of growth: integration or diversification (13 questions)

All multiple choice.

1. **Same industry?** If not, it is **conglomerate** (diversification).
2. **Same stage of production?** If yes, it is **horizontal**.
3. **Different stage of the same chain**: is the target **nearer the raw material** (a supplier: **backward**) or **nearer the consumer** (a customer or shop: **forward**)? Always judge the direction from the firm that is doing the buying.

Watch for:

- **"Organic growth"** is wrong whenever one firm buys another.
- **"Lateral integration"** (related but non-competing products) is only a distractor; the answers use horizontal, vertical, conglomerate or diversification.
- **A merger with two different firms** in one question: classify each separately.
- **"Why diversify?"**: to spread risk.

4. Cartels and collusion (12 questions)

Multiple choice (9). Use the list of conditions. A condition that **helps** a cartel is the **opposite** of a **barrier to collusion**: many firms, low barriers to entry, unstable demand, cheating that is hard to detect, and differentiated products all make a cartel fail. A cartel is a group of independent producers that agree to fix the price or restrict supply; it is **not** a merger, and it is often investigated by governments.

Diagram questions. Find the profit at the quota and the profit where MC equals the cartel price; the gain from cheating is the difference (the area between the price line and MC beyond the quota).

Data response.

- **Define a cartel (2):** a formal agreement between independent firms (1) to fix the price or limit output through quotas (1).
- **Explain collusion (3):** firms cooperate instead of competing (1); formal, as a cartel, or tacit, such as following a price leader (1); so the industry acts like a monopoly, charging a higher price (1).

Essays. For "collusion leads to higher prices and a less efficient allocation of resources":

1. **Features** of oligopoly and interdependence; define collusion and cartels.
2. **Analyse** with a monopoly diagram: colluding firms act as one monopoly, producing where $MC = MR$, so $P > MC$ (allocative inefficiency), output is not at lowest AC and there is a deadweight loss. Add X-inefficiency and the Prisoner's Dilemma (why firms want to collude).
3. **Evaluate:** cartels break down through cheating; they are illegal and fined; a joint firm may gain economies of scale; profit may fund investment; outside rivals or imports limit the price; tacit leaders may keep prices moderate to deter entry.
4. **Conclude** on "higher prices" and "less efficient" separately.

For "the difference between, and purpose of, integration and a cartel": integration makes **one firm** (for economies of scale, secure supplies or outlets, market power); a cartel leaves the firms **independent** but coordinated (to fix the price or share the market and raise profit). Integration is legal unless blocked; cartels usually are not.

5. The principal–agent problem (10 questions)

Multiple choice (9).

- **Cause:** the separation (divorce) of ownership and control; a manager making decisions for the owner.
- **Makes it worse:** less information about what managers do, or stopping managers owning shares.
- **Reduces it:** pay linked to profit, share ownership, contracts that make agents act for the principal.
- **Typical example:** directors choosing growth over higher dividends.
- **"Which is not an example?":** the case where the agent bears the cost of their own action.

Essay (20 marks), such as the effect on price and output of switching from profit maximisation to sales maximisation:

1. **Define** the principal–agent problem and both objectives.
2. **Diagram** with AR, MR, MC and AC: profit maximisation where $MC = MR$; sales maximisation where $AR = AC$, at a higher output and lower price.
3. **Evaluate**: consumers gain (lower price, more output); shareholders lose profit; the firm moves further from allocative efficiency; owners may react with profit-related pay or the firm may face a takeover.

Worked examples

Example 1

A firm that publishes school textbooks buys four businesses: W, a paper mill; X, a chain of bookshops; Y, a rival textbook publisher; Z, a bicycle maker.

Which row describes the four purchases?

	W	X	Y	Z
A	forward vertical	backward vertical	horizontal	conglomerate
B	backward vertical	forward vertical	horizontal	conglomerate
C	backward vertical	forward vertical	conglomerate	horizontal
D	horizontal	forward vertical	backward vertical	conglomerate

[1]

Paper is an input, so the mill is a supplier: **backward**. Bookshops sell the books to consumers: **forward**. A rival publisher is the same industry and stage: **horizontal**. Bicycles are unrelated: **conglomerate**. The answer is **B** (1).

Example 2

Two bus manufacturers each make 1 500 buses a year at an average cost of \$120 000 a bus. They merge, and the new firm makes 3 000 buses a year at an average cost of \$102 000.

(a) Calculate the percentage fall in average cost and the total yearly cost saving. [2]

(b) Explain why bus companies buying the buses may not gain from this saving. [2]

(a) $\frac{120\,000 - 102\,000}{120\,000} \times 100 = 15\%$ (1). Saving = $18\,000 \times 3\,000 = 54\,000\,000$ dollars, \$54 million a year (1).

(b) The merger removes a rival, so the merged firm has more market power and its demand is less price elastic (1). It can keep the price above cost, or even raise it, and keep the saving as supernormal profit instead of cutting prices (1).

Example 3

Extract: In the country of Varnia, five cement companies supply 94% of the cement sold. Cement is heavy and costly to transport, so very little is imported. A new cement works costs about \$300 million. In 2025 the competition authority found that the five companies had met every year to agree a price and each firm's share of sales. Demand for cement depends on house building, which fell by a fifth in 2025. One of the five has just installed new kilns with much lower costs than the others.

Consider whether the cement cartel is likely to last. [8]

Marked like a data-response "consider" part: up to 4 marks for each side and 1 for a conclusion, 8 maximum.

Reasons it may last. Only five firms hold 94% of sales, so agreeing a price and watching each other is easy (1). The \$300 million cost of a works and the cost of transport keep out new firms and imports (1), so no outsider can undercut the cartel price and its supernormal profit is not competed away (1). Cement is a standard product, so one price suits every member and any secret price cut is easy to spot (1).

Reasons it may break down. With house building down a fifth, the members must cut their quotas, leaving spare capacity (1), so each is tempted to win sales from the others with secret discounts (1). The low-cost firm could make more profit by selling more at a lower price than its quota allows, so the members may no longer agree on quotas (1). The authority has found the cartel, so fines and closer watching make it hard to continue (1).

Conclusion. The barriers would let the cartel survive in a stable market, but the fall in demand, the cost gap and the authority's discovery all point to it breaking down soon (1).

(4 + 4 + 1 = 9 points, so 8 marks, the maximum.)

Example 4

"A firm should grow by diversifying into new markets rather than by taking over its rivals."

Evaluate this view. [20]

Model answer (outline of each paragraph):

- 1. Definitions.** Diversification (new products or markets, organically or through a conglomerate merger); a takeover of a rival (horizontal integration, external growth). (AO1.)
- 2. For diversification.** It spreads risk: a fall in demand in one market is offset by sales in another, so profit is more stable and the firm more likely to survive. It uses spare capacity, a brand or spare cash. It gives the firm no extra market power, so competition authorities rarely object and consumers are not harmed. (AO2: *developed chains.*)
- 3. For taking over rivals.** Technical, purchasing and managerial economies of scale lower LRAC. The extra market share makes demand less elastic, so supernormal profit rises; it is faster than organic growth. Use the cost-saving diagram: costs fall from AC1 to AC2 and profit rises. (AO2: *diagram used in the text.*)

4. **Evaluating diversification.** The firm may lack expertise in the new market; there are few economies of scale; managers are stretched (diseconomies); buying a firm in another industry is costly; shareholders can spread risk themselves by owning shares in many firms. (AO3.)
5. **Evaluating takeovers.** The deal must be funded; cultures may clash; the bigger firm may meet diseconomies; the competition authority may block it; the same diagram shows consumers may pay more. (AO3.)
6. **It depends.** On the firm's aim (profit favours taking over rivals; survival favours diversifying); on its market (a mature or shrinking market favours diversifying; a high MES favours scale); and on who decides (managers may want growth for its own sake, a principal–agent problem). (AO3.)
7. **Conclusion.** Neither is always better. A firm in a market with large economies of scale and room to grow should take over rivals, if the authority allows it; a firm whose main market is risky or declining should diversify. The view holds only for the second kind of firm. (*Justified conclusion.*)

(Table A Level 3: 14; Table B Level 2: 6; **20/20.**)

Common mistakes

- **Describing economies of scale and forgetting survival.** In June 2022 (Paper 42 Question 3(b)) many answers only listed economies of scale; good ones explained how lower costs and higher barriers help firms survive.
- **Loose definitions of economies of scale.** In June 2024 (Paper 42 Question 1(a)) answers lost marks for leaving out "long run" or "average cost".
- **Answering only part of a statement.** In November 2021 (Paper 43 Question 4(b)) many answers spent too long on economies of scale and never asked whether consumers benefit or whether small firms have a place.
- **General theory instead of the extract.** In March 2021 (Paper 42 Question 1(d)) many wrote about economies of scale, which the article did not mention, instead of using its evidence on large firms.
- **Statements without chains, and no evaluation.** In March 2023 (Paper 42 Question 3) answers said collusion raises prices but didn't explain how it turns an oligopoly into a monopoly, and few questioned the statement at all.
- **Collusion ideas not linked.** In March 2025 (Paper 42 Question 2) answers mentioned game theory without linking it to why firms collude, and evaluation stopped at "collusion may break down".
- **Getting cartel membership backwards.** In March 2026 (Paper 32 Question 7) a common wrong answer suggested a cartel works less well when more firms join; the larger the share of firms inside, the easier it is to fix the price.
- **Missing why firms demerge.** In June 2022 (Paper 32 Question 11) only 39% saw that diseconomies of scale and separate markets are reasons to split a company up.
- **Not separating mergers from cartels.** The best answers in November 2021 (Paper 43 Question 4(a)) made the difference clear: merged firms become one firm, while cartel members stay independent and only coordinate; integration is legal, cartels usually are not.

- **Reversing backward and forward.** Judge the direction from the buying firm: towards its suppliers is backward, towards its customers is forward.
- **Assuming a merger lowers prices.** Lower costs give lower prices only if competition or regulation forces them through.

How to get the marks

- **Multiple choice:** for integration, ask "same industry? same stage? which way?"; for cartels, check each condition against the list; for principal–agent, find the owner and the person acting for them, and who bears the cost.
- **Definitions** earn the first marks: merger, takeover, each type of integration, cartel, collusion, principal–agent problem. Give the type **and** a reason or benefit when asked to "explain".
- **"Explain"** (2–6 marks): point, then a chain: the type of growth → what changes (costs, market share, elasticity of demand) → the result for price, output, profit or survival.
- **"Consider", "assess" or "discuss"** (6–8 marks): both sides, each usually capped at 4 marks, and a conclusion that follows from them. Use the extract's evidence when the question says "use the article".
- **20-mark essays:** Table A (14) rewards accurate definitions, a labelled diagram (LRAC, the cost-saving diagram or the monopoly diagram) that you refer to, and developed chains; Table B (6) rewards questioning the statement's key words ("desirable", "should not have been allowed", "always") and a justified conclusion.
- **25-mark essays (2021–2022)** had a 12-mark explanation part and a 13-mark discussion part; the discussion part needs both sides and a conclusion.
- **Name who gains and who loses:** the firm, consumers, workers, competitors, the economy.

Quick check

1. Explain two reasons why a firm might choose organic growth rather than taking over another firm. **[4]**
2. The owners of a hotel pay its manager a fixed salary and visit only once a year. Which change is most likely to reduce the principal–agent problem? **A** promising the manager the job for ten years **B** paying the manager a bonus equal to 5% of the hotel's profit **C** letting the manager set their own salary **D** the owners visiting less often
3. A cartel sets a price of \$50 a unit and gives one member a quota of 300 units. The member's marginal cost is $MC = 10 + 0.1q$. Find its marginal cost at the quota, the output it would produce if it could secretly sell more at \$50, and its extra profit.
4. A supermarket chain buys a large dairy farm. Name the type of integration and give one benefit and one risk for the supermarket. **[3]**
5. Distinguish between a merger and a takeover, and explain why a competition authority might block a merger between the two largest firms in a market. **[4]**

Answers

- Any two, each identified (1) and explained (1): the owners **keep control**, because no shares are given to another firm's owners (1 + 1); it is **lower risk**, since growth is gradual and there is no culture clash or costly deal to fund (1 + 1); it can be **paid for from retained profit** without borrowing (1 + 1); it is **unlikely to be investigated** by the competition authority (1 + 1).
- B** (1). A profit-linked bonus gives the manager (the agent) the same aim as the owners (the principals). A and C make the manager harder to discipline, and D means less monitoring.
- At the quota, $MC = 10 + 0.1 \times 300 = 40$ dollars, below the \$50 price, so the next unit adds about \$10 to profit. It would expand to where $MC = 50$: $10 + 0.1q = 50$, so $q = 400$ units. Extra profit is the triangle between the price and MC from 300 to 400 units: $\frac{1}{2} \times 100 \times (50 - 40) = 500$ dollars.
- Backward vertical integration** (1): the farm supplies an input to the supermarket. Benefit: secure milk supplies at cost, without the farmer's profit margin, and control of quality (1). Risk: the supermarket has no experience of farming, so managing the farm may raise its costs (diseconomies), or it is stuck with the farm's milk if cheaper milk becomes available elsewhere (1).
- A merger is two firms agreeing to join as one new firm (1); a takeover is one firm buying a controlling share of another, possibly against its managers' wishes (1). Joining the two largest firms would give the new firm a very large market share and remove its main rival (1), so it could restrict output and raise prices, cutting consumer surplus and choice and creating a deadweight loss (1).

Past questions to try

- 9708/32/M/J/22 Q11**: when splitting a company into two makes sense.
- 9708/32/M/J/22 Q12**: reading the extra profit from cheating on a cartel quota off a diagram.
- 9708/32/F/M/23 Q8**: spotting which situation is not a principal–agent problem.
- 9708/41/O/N/23 Q3**: a 20-mark essay, with a diagram, on whether a merger should have been allowed.