

Cambridge AS & A Level · Business 9609 · Notes

Location and scale A2

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What you need to know

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

1. **Explain the factors that decide where a business locates, or relocates:** costs, nearness to customers and suppliers, labour, infrastructure, government help and rules, and the qualitative factors that cannot be measured in money.
2. **Explain how local, national and international location decisions differ:** what extra a business has to think about as the choice moves from a street, to a region, to another country.
3. **Explain why businesses offshore** (move activities to another country) **and reshore** (bring them back), and analyse the effects on the business.
4. **Analyse how globalisation affects location and relocation decisions.**
5. **Explain the factors that influence the scale of a business:** how big its operations are.
6. **Explain the causes of internal and external economies of scale and diseconomies of scale**, with examples of each.
7. **Link economies and diseconomies of scale to unit costs:** why average cost first falls and then rises as a business grows.

Payback, ARR, NPV and decision trees belong to investment appraisal and business strategy. Location questions often give you their results to use as evidence; how to calculate them is in those topics.

Understand it

What makes a good location

The **optimal location** is the site that gives the best balance between low costs and high revenue over the long term, once the factors that cannot be measured in money are counted too. No site is best on every factor, so a location decision is always a trade-off.

Quantitative factors (they can be measured in money):

- **Cost of the site:** buying or renting land and buildings, or building new ones. A city centre costs far more than a town on the edge of a region.

- **Labour costs:** wage rates differ between regions and, much more, between countries.
- **Transport costs:** a business whose raw materials are heavy and bulky (cement, steel) saves money by locating near them; one whose product gets bulkier or more fragile as it is made (furniture, bottled drinks) saves by locating near its customers.
- **Utilities and taxes:** energy prices, business taxes, local charges.
- **Government grants and tax breaks** offered to attract businesses to an area with high unemployment.
- **Revenue potential:** the number of customers near the site and their incomes, or how many people pass a shop.
- **Results of investment appraisal:** a case may give the payback period, ARR or NPV of each site. The site that pays back faster or earns a higher return is the better one on these figures.

Qualitative factors (they cannot easily be put into numbers):

- **Skilled labour:** are there enough workers with the right skills nearby?
- **Infrastructure:** roads, rail, ports and airports, a reliable electricity supply, fast internet.
- **Room to expand** on the site later.
- **Planning permission and regulations:** local rules on what can be built and what can be emitted.
- **Political stability and the legal system**, especially abroad.
- **Risk from the natural environment:** flooding, earthquakes, extreme weather.
- **Ethics and image:** the impact on local people and the environment, and what customers think of the site (a prestige address for a law firm; a factory built on farmland may attract protests).
- **Managers' and owners' preferences:** where they want to live and work.

A good answer uses **both kinds**: the numbers say which site is cheaper, the qualitative factors say whether that saving is safe and lasting.

Relocation

Relocation means moving an existing operation from its current site to a new one. Relocation decisions compare the **current** site with the **new** one, and add the one-off cost of the move itself.

Reasons to relocate:

- costs at the current site have risen (rent, wages, energy), or a lease is ending;
- the business has outgrown the site and has no room to expand;
- its customers or suppliers have moved, or a new market has grown elsewhere;
- a government offers grants or lower taxes somewhere else, or new rules (taxes on imports, planning limits) make the current site worse;
- a disaster or political change makes the current site unsafe or unworkable;
- selling online means a shop or office in an expensive area is no longer needed.

Effects of relocating:

- **One-off costs:** moving equipment, fitting out the new site, redundancy pay for staff who will not move.
- **Disruption:** output stops or slows during the move, so orders may be late.
- **Staff:** experienced employees who will not move take their skills with them; those who stay may be unsettled, and recruiting and training replacements costs money.
- **Customers:** a shop that moves can lose its regular customers.
- **Long-term gains:** lower running costs, room to grow, and a site that suits the business's future.

Local, national and international decisions

The same factors apply at every level, but the further the move, the more there is to consider and the more risk there is.

Decision	Typical question	Factors that matter most
Local	Which street, which building in this town?	Rent, passing customers, parking, nearby competitors, the owner's knowledge of the area
National	Which region or city of this country?	Regional differences in wages and property prices, transport links, skilled labour, regional grants, where the main customers are
International	Which country?	All of the above, plus exchange rates, tariffs and trade barriers, foreign laws, language and culture, political stability, corruption, tax rates, distance from head office

What makes an international decision different:

- **Exchange rates:** costs and revenue are in another currency, so a change in the exchange rate can wipe out a cost advantage or reduce the value of profits sent home.
- **Trade barriers:** locating inside a country, or inside a trade bloc, avoids the tariffs and quotas paid on goods sent in from outside.
- **Different laws:** employment law, health and safety, product standards and planning rules all have to be learnt.
- **Language and culture:** managing staff, dealing with officials and selling to customers all work differently.
- **Political and economic risk:** a change of government can bring new taxes, new rules or even take-over of foreign assets.
- **Distance:** managers at head office find it harder to control and communicate with a site in another time zone.
- **Research:** the business knows far less about a foreign market, so it must research more before it commits.

Offshoring and reshoring

Offshoring is moving a business activity (manufacturing, a call centre, software development, accounts) from the business's home country to another country. The business can run the activity itself abroad, or pay a firm abroad to do it, which is offshoring and outsourcing at the same time.

Reasons for offshoring:

- **lower costs**, especially wages and land, so unit costs fall;
- **skills** that are in short supply at home;
- being **nearer to fast-growing markets** abroad, and inside their trade barriers;
- **government incentives** in the host country;
- **round-the-clock service**, with teams in different time zones.

Impact of offshoring: lower unit costs, so lower prices or higher margins. But the business has longer supply chains and longer lead times, quality is harder to control from a distance, communication is harder, transport costs rise, and it may face criticism for job losses at home or poor working conditions abroad, which can damage its image.

Reshoring is bringing an activity that was offshored back to the home country. Reasons:

- **wages abroad have risen**, so the cost advantage has shrunk;
- **transport costs** and delivery times have risen, and long supply chains have proved easy to disrupt;
- **quality problems** or slow responses to changes in demand;
- **automation** means labour is a smaller part of costs, so cheap labour matters less;
- customers who are willing to pay more for goods **made in their own country**, and a better ethical image;
- **government incentives** at home.

Impact of reshoring: more control over quality, faster delivery and response to customers, and a "made at home" marketing message. But labour costs are higher, setting up again costs money, and the business may struggle to find skilled staff at home.

Globalisation

Globalisation is the growing connection between the world's economies: more trade, more movement of capital and investment between countries, and faster flows of information. It affects location decisions in several ways:

- **More choice of country.** Fewer trade barriers, cheaper shipping and better communications let a business run a site in a far-off country and still control it.
- **More pressure to cut costs.** Rivals from all over the world compete in the same markets, so businesses offshore activities to wherever costs are lowest.
- **Producing inside markets.** Multinationals build factories inside large markets or trade blocs to avoid tariffs, cut transport costs and adapt products to local tastes.
- **Countries compete for investment**, offering grants and low taxes to attract foreign businesses.
- **More risk.** Global supply chains can be broken by events far away, which has pushed some businesses to reshore, or to spread production across several countries.

Scale of operations

The **scale of operations** is how big a business's operations are: how much it can produce, which depends on its sites, equipment and number of employees. Scale grows by investing in new sites and equipment (internal growth) or by taking over or merging with another business (external growth).

Factors that influence the scale of a business:

- **Demand:** there is no point in a scale that the market cannot buy. Businesses selling to small, local or niche markets stay small.
- **The owners' objectives:** some owners want to stay small to keep control, the personal touch or a manageable workload; others aim for growth.
- **Finance:** growth needs capital, so the finance a business can raise limits its scale.
- **The nature of the product:** personal or made-to-order services (hairdressing, architects) do not suit large scale; standard products made in high volume do.
- **Competition:** in an industry where rivals have large scale and low costs, a business must grow, or find a niche, to survive.
- **Economies of scale available in the industry:** where they are large (car making, steel), firms grow big; where they are small, small firms can compete.
- **Resources and management:** enough skilled labour, land and managers who can run a larger organisation.
- **Government:** competition law may block a merger that would make a business too big.

Economies of scale

Economies of scale are the reductions in **average (unit) cost** that a business gains as it increases its **scale of operations**. Total costs rise when a business grows, so the point is that each unit costs less.

Efficiency means producing output with as few resources, and so at as low a cost per unit, as possible; economies of scale make a business more efficient.

Internal economies of scale are the cost savings a business creates by expanding its own operations:

- **Purchasing (bulk-buying) economies:** suppliers give discounts on large orders, and a large customer has more bargaining power, so the cost of materials per unit falls.
- **Technical economies:** a large business can afford advanced, automated machinery and keep it busy, and large equipment often costs less per unit to run (a lorry twice the size does not need twice the drivers or twice the fuel). Large volumes also suit flow production.
- **Managerial (specialisation) economies:** a large business can employ specialist managers, such as accountants, marketing experts and HR managers, who do their job better than one manager doing everything.
- **Financial economies:** banks see large businesses as lower risk, so they lend more cheaply; large firms can also sell shares to raise capital.

- **Marketing economies:** an advertising campaign costs the same however many units are sold, so its cost per unit falls as sales rise; large firms can also run their own distribution.
- **Risk-bearing economies:** a large business can sell many products in many markets, so a fall in one does not threaten the whole business.

External economies of scale come from the growth of the **industry in an area**, and help every business there, whatever its own size:

- **Concentration:** when many businesses in one industry gather in an area, a pool of skilled workers builds up, specialist suppliers and services move in, and local colleges train people for that industry, so training and supply costs fall.
- **Infrastructure:** governments and others improve roads, ports, power and research facilities to serve the industry.

Diseconomies of scale

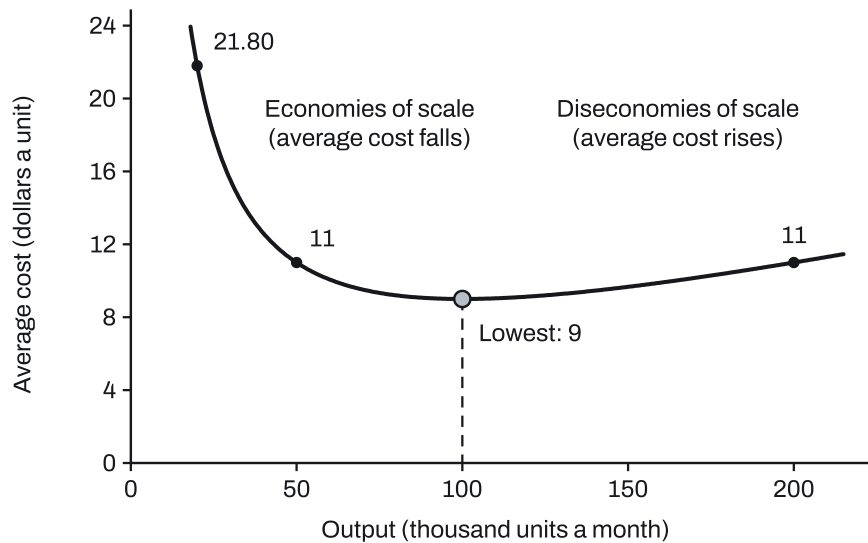
Diseconomies of scale are the **increases in average (unit) cost** that happen when a business grows beyond a certain scale. Their causes come from being big:

- **Poor communication:** more managers and more layers of hierarchy mean a longer chain of command and wider spans of control; messages pass through more people, so they arrive late, get changed on the way or never arrive.
- **Coordination and control problems:** many departments, sites and countries are harder to keep working towards the same goals; work is duplicated, and managers lose sight of what is happening.
- **Slow decision-making:** decisions go through more people and more rules (bureaucracy), so the business reacts slowly to customers and competitors.
- **Low motivation (alienation):** employees in a huge organisation feel unimportant and far from the people in charge, so morale falls and absence and labour turnover rise.

External diseconomies of scale come from the industry growing too much in one area: traffic congestion slows deliveries, businesses compete for the same workers and land so wages and rents rise, and pollution can bring stricter rules.

Scale and unit costs

Put together, economies and diseconomies of scale give the **long-run average cost curve** its U shape. As a business grows from a small scale, economies of scale make average cost fall. At some scale average cost is lowest: this is the most efficient size. Beyond it, diseconomies of scale outweigh the economies, and average cost rises again.



In the diagram, a business producing 50,000 units a month has an average cost of 11 dollars. Doubling to 100,000 units cuts average cost to 9 dollars. Doubling again to 200,000 units pushes it back up to 11 dollars: the business has grown too big to run efficiently.

$$\text{Average (unit) cost} = \frac{\text{total cost}}{\text{output}}$$

Lower unit costs give a business a choice: **cut its price** to win sales from rivals, or keep its price and earn a **higher profit margin** on every unit. Rising unit costs do the opposite: the business must raise prices, which makes it less competitive, or accept lower profit.

Key facts and formulas

There is no formula list for this subject in the exam. "Learn it" means you must remember it.

Fact or formula	Status
Optimal location: the site giving the best balance of low costs and high revenue, quantitative and qualitative factors included	Learn it
Relocation: moving an existing operation to a new site	Learn it
Offshoring: moving a business activity from the home country to another country	Learn it
Reshoring: bringing an offshored activity back to the home country	Learn it
Globalisation: growing connection of the world's economies through trade, investment and information	Learn it
Average (unit) cost = $\frac{\text{total cost}}{\text{output}}$	Learn it

Fact or formula	Status
Economies of scale: falls in average (unit) cost as a business increases its scale of operations	Learn it
Internal economies of scale: purchasing, technical, managerial, financial, marketing, risk-bearing	Learn it
External economies of scale: from the growth of the industry in an area (concentration, infrastructure)	Learn it
Diseconomies of scale: rises in average (unit) cost when a business grows beyond a certain scale	Learn it
Causes of internal diseconomies: communication, coordination and control, slow decisions, low motivation	Learn it

How to do it

We have tagged 13 questions on this topic (2021–2025), on Papers 1, 2 and 3; one Paper 1 question appears on two papers, so 12 are different. 3 of the 13 have parts of more than one type, so the counts add up to 16.

Question type	Questions
Choose between two possible locations using case data	3
Define economies of scale	3
Explain causes of diseconomies of scale	3
Analyse benefits or effects on efficiency of a bigger scale / internal economies of scale	2
Evaluate opening a new site abroad (international location decision)	2
Evaluate the economies of scale a business would gain from growing	1
Analyse factors that make a business relocate	1
Explain the term "internal economies of scale"	1

The marks are for four skills: **K** (knowledge: a correct point or definition), **App** (application: using the business in the question), **An** (analysis: a chain of causes and consequences) and **Eval** (evaluation: a supported judgement). Below, (K), (App), (An) and (Eval) after a sentence show the mark it earns.

1. Choose between two possible locations using case data (3 questions)

The case gives a table comparing two sites (costs, wages, build time, output, skills, transport) and asks which one the business should pick. On Paper 3 it is worth **[12]** (2 K, 2 App, 2 An, 6 Eval), and earlier parts usually make you calculate payback or ARR for one site; on the older Paper 2 it was **[11]** (4 for knowledge and application, 7 for analysis and evaluation) and asked for a recommendation with justification.

1. **K**: name two or more location factors you will use (cost, nearness to market, labour, infrastructure, risk, ethics). A definition earns at most one K mark.
2. **App**: use the case's figures and facts, and **say what they mean**: "Site A costs 40% more to build", "Site B starts producing 4 months sooner". Two different uses of the case give both App marks. Linking a figure to another part of the case (its finance, its objectives, its brand, its customers) is the strongest application.
3. **An**: chain each factor to costs, sales, profit, cash flow or risk, both for and against each site. Useful chains:
 - lower capital cost → less to borrow → lower interest costs and less risk if sales disappoint;
 - lower wages or operating cost per unit → lower unit cost → lower price or higher margin;
 - shorter build time → output starts sooner → cash from sales flows in earlier, easing the strain of the investment;
 - weak infrastructure (power cuts, congested roads, no nearby port) → lines stop or shipments wait → customers get goods late and buy elsewhere;
 - near a large or richer market → more customers who can afford the product → higher sales;
 - a site that harms the environment or the local community → bad publicity → conflicts with CSR aims.
4. **Eval**: pick a site **for this business** and justify it by weighing the most important factor. Say what the decision depends on: whether the business can raise the finance, its attitude to risk, its objectives (profit now or growth later, its ethical aims), short term against long term, and **how reliable the figures are** (forecasts and estimates can be wrong). A staged choice (start small, expand later) is credited when justified.

Focus on two or three factors that matter most, not every row of the table.

2. Define economies of scale (3 questions)

Paper 1 [2]: one mark for each of the two parts of the definition.

1. **Average (unit) cost falls** (1),
2. **because the scale of operations (output) increases** (1).

Missing either part gives 1 mark. In 2021 a correct diagram showing average cost falling as output rises could also earn both marks.

3. Explain causes of diseconomies of scale (3 questions)

Paper 1 [3], two reasons: 3 marks for two reasons both explained, 2 for one explained (or two partly explained), 1 for a list.

1. Name a cause: communication, coordination and control, slow decisions, low motivation; external causes (congestion, higher wages and rents in a crowded area) also count.
2. **Explain how it comes from growth** and how it raises cost: "more layers of management (growth) → instructions slow and distorted → mistakes and wasted time → higher cost per unit".

4. Analyse benefits or effects on efficiency of a bigger scale / internal economies of scale (2 questions)

Paper 3 [8]: 2 K, 2 App, 4 An, for **two** points. Only the best two count. A definition earns at most one K mark.

1. **K** (1 each): name two benefits or effects, such as purchasing, technical, managerial, financial or marketing economies. When the question asks about the **effects** of a bigger scale, diseconomies of scale (communication problems) are an effect too. When it asks only for **benefits**, disadvantages earn nothing.
2. **App** (1 each): use the case: what the business makes, how it is growing (new factory, takeover), its competitors, its costs, its owners' aims.
3. **An** (up to 4): a developed chain of two or more links on **each** point earns the top marks. Useful chains:
 - economies of scale → lower unit cost → lower price → more competitive against larger rivals → more sales;
 - lower unit cost → keep the price → higher margin on each unit → more profit for the owners or for reinvestment;
 - lower unit cost → absorb a rise in input prices without raising the selling price → keep customers;
 - bigger scale → more products and customers → more revenue;
 - diseconomies (longer chain of command, sites far apart) → slower, distorted communication → higher average cost → lower profit.

5. Evaluate opening a new site abroad (international location decision) (2 questions)

The case describes a plan to open a site in another country and asks you to judge it: Paper 3 [12] (2 K, 2 App, 2 An, 6 Eval), often after a part that calculates an expected monetary value from a decision tree; or the older Paper 2 [11], judging the factors to consider before opening.

1. **K**: international factors: costs and finance, demand in the new market, competition there, laws and licences, language and culture, infrastructure, staff, political risk, exchange rates.
2. **App**: the case's figures (the EMV or other results, the capital cost) and facts (interest rates, liquidity, the state of its home market, its experience abroad).
3. **An**: chain each to profit, cash flow and risk. For example: the host currency weakens → the branch's profit converts into less home currency → the return on the investment falls; a licence or permit takes longer than planned → the site opens late → it starts covering its costs later; demand rising abroad while the home market shrinks → new sales that replace lost ones.
4. **Eval**: decide, and say what it depends on: market research in the new country, whether finance can be raised, how far the forecasts can be trusted, given who made them and what they assume, whether the plan fits the business's objectives, and how long it will take to become profitable.

6. Evaluate the economies of scale a business would gain from growing (1 question)

Older Paper 2 [11].

1. **K**: name specific economies of scale: purchasing, marketing, financial, technical, managerial, risk-bearing; external ones if the case fits.
2. **App**: say what each means for **this** business (what it buys in bulk, what advertising it spreads, what equipment it could afford).
3. **An**: chain each to lower unit cost, then to price or profit.
4. **Eval**: judge which economies are largest for this business and what they depend on (whether demand fills the bigger scale, whether diseconomies appear).

Saying that a bigger business sells to more people and so earns more is about revenue, not cost per unit, so it is not an economy of scale. Name an economy and show how it cuts the cost of each unit.

7. Analyse factors that make a business relocate (1 question)

An older Paper 1 essay part, **[8]**, marked in levels: knowledge (1–2), application (3–4), limited analysis (5–6), good analysis (7–8).

1. Define **relocation**: moving an existing operation from its current site.
2. Take each factor (rising costs, no room to expand, market moved, new taxes or rules, political change, disaster risk, e-commerce) and analyse it as a **comparison between the current site and a new one**: what has changed at the current site, and why a new site would lower costs or raise sales.

8. Explain the term "internal economies of scale" (1 question)

Paper 2 **[3]**, one mark for each element; no case context is needed.

1. Average (unit) costs fall as output rises (1).
2. They are caused by the firm's own expansion, not the industry's (1).
3. An example, such as purchasing or technical economies (1).

Worked examples

Example 1

FreshFold runs laundries. It has grown from one site to twelve sites in three years.

(a) Define the term "diseconomies of scale". **[2]**

(b) Explain two reasons why FreshFold might experience diseconomies of scale. **[3]**

(a) Diseconomies of scale are rises in average (unit) cost (1) that happen when a business expands its scale of operations beyond a certain size (1).

(b) Communication: with twelve sites, FreshFold needs area managers between the owners and each site manager, so instructions pass through more people and arrive late or changed (1); sites keep doing things the old way, wasting time and materials, so the cost of each load washed rises (1).

Motivation: staff at a distant site rarely see the owners and feel like a small part of a big organisation, so morale falls; absence and staff turnover rise, and FreshFold pays more to cover shifts and to recruit and train replacements (1).

3 marks: two reasons, each explained and linked to FreshFold's growth (one reason explained would earn 2; the two names alone, 1).

Example 2

Kiln Co (KC) makes ceramic floor tiles. It has replaced its old kiln with a much larger, modern one and doubled its output to 4 million tiles a year. Because it now orders clay by the trainload, its supplier has given it a 12% discount, cutting the cost of clay from 0.50 to 0.44 dollars per tile. The new kiln uses 30% less gas per tile, cutting gas cost from 0.20 to 0.14 dollars per tile. KC's other costs are 0.90 dollars per tile. It sells to housebuilders, which give each contract to the lowest suitable bid, at 1.90 dollars a tile. A housebuilder is about to choose a supplier for a 600-home development.

Analyse two benefits to KC of internal economies of scale. [8]

Benefit 1: purchasing economies. A large buyer gets discounts from suppliers, so its material cost per unit falls (K). KC's clay now costs $0.50 - 0.44 = 0.06$ dollars less per tile, a saving of $4000000 \times 0.06 = 240,000$ dollars a year (App). With a lower cost per tile, KC can bid a lower price for the 600-home contract and still cover its costs (An), so it is more likely to win the contract, and the extra sales help it sell its doubled output (An).

Benefit 2: technical economies. Larger, modern equipment uses fewer inputs for each unit it produces (K). The new kiln cuts gas cost per tile from 0.20 to 0.14 dollars (App). Together with the clay discount, KC's unit cost falls from $0.50 + 0.20 + 0.90 = 1.60$ to $0.44 + 0.14 + 0.90 = 1.48$ dollars (An). If KC keeps its price at 1.90 dollars, its profit on each tile rises from $1.90 - 1.60 = 0.30$ to $1.90 - 1.48 = 0.42$ dollars, so its profit rises even without winning extra contracts (An).

$2 K + 2 \text{ App} + 4 \text{ An}$ (a developed chain on each benefit) = 8.

Example 3

Corvo Cycles (CC) makes electric bicycles in country H. Its only factory is working at full capacity and CC is turning away about 1,500 orders a month. 70% of its sales are in country H, and its marketing stresses that every bike is "built in H". CC has 12 million dollars of retained profit for a second factory; anything more must be borrowed at 9% a year. It has two options:

	Site West (country H)	Country K
Cost to build	18 million dollars	11 million dollars

	Site West (country H)	Country K
Time to build	10 months	16 months
Output when full	40,000 bikes a year	40,000 bikes a year
Operating cost when full	26 million dollars a year	20 million dollars a year
Wage per worker	3,200 dollars a month	1,100 dollars a month
Transport cost to CC's main market	15 dollars a bike	60 dollars a bike

Country K is in the same trade bloc as country H, so no tariffs are paid. It has had two changes of government in the last three years.

Evaluate which location CC should choose for its second factory. [12]

Knowledge. The optimal location balances low costs against high revenue and risk (K). Quantitative factors, such as operating and transport costs, are weighed with qualitative ones, such as political stability and brand image (K).

Costs. Per bike, West costs $26000000 \div 40000 = 650$ dollars to operate plus 15 dollars transport, 665 dollars; country K costs $20000000 \div 40000 = 500$ plus 60, 560 dollars (App). K is $665 - 560 = 105$ dollars a bike cheaper, which is $105 \times 40000 = 4.2$ million dollars a year at full output (App). Lower unit cost would let CC either cut prices to win sales or earn a higher margin on every bike (An).

Finance. K costs $18 - 11 = 7$ million dollars less to build and fits within CC's 12 million dollars of retained profit, while West needs $18 - 12 = 6$ million dollars of borrowing, costing $6000000 \times 0.09 = 540,000$ dollars a year in interest. So West costs 7 million dollars more to build and then about $4.2 + 0.54 = 4.74$ million dollars a year more to run, interest included, which cuts the profit the new factory adds (An).

Against country K. It takes 6 months longer to build, so CC would turn away about $1500 \times 6 = 9000$ more orders, and disappointed buyers may go to rivals for good (An). Two changes of government in three years suggest political risk: new rules or taxes could raise costs or disrupt production after CC has invested (An). Bikes made in K could not honestly be sold as "built in H", which weakens the message CC's marketing is built on (An).

Judgement. On cost alone, country K is clearly better: 105 dollars a bike cheaper and no borrowing (Eval). But CC sells 70% of its bikes at home on a "built in H" promise, and it is already losing 1,500 orders a month, so a factory that opens 6 months sooner and keeps the promise true protects the sales the whole investment depends on (Eval). CC should choose Site West, provided it can borrow the 6 million dollars. West's real extra cost is about 4.7 million dollars a year, so West is right only if the "built in H" promise and the 6 months saved protect more sales and profit than that; CC should test with market research how far the promise is a reason customers buy its bikes before deciding (Eval). The cost and output figures are forecasts, so CC should also check how quickly each site would actually reach full output (Eval).

The marks: 2 K, 2 App, 2 An, and 6 Eval for a supported judgement in CC's context that weighs both sites and says what the decision depends on.

Common mistakes

- **Defining economies of scale with half the definition.** Mentioning lower costs but not the rise in output or scale loses a mark (November 2022); so does giving only an example of how costs fall, such as a purchasing discount, instead of a definition (June 2021).
- **Writing "costs fall" instead of "average (unit) costs fall".** Total costs rise as a business grows; the report on the "internal economies of scale" question says an explanation must refer to average or unit costs (November 2021).
- **Confusing economies of scale with a country's economy.** The term is about a business's cost per unit, nothing to do with how well the economy is doing (November 2022).
- **Diseconomies that have nothing to do with size.** Problems such as a machine breaking down or a supplier delivering late earn nothing unless you show they come from the business having grown (June 2021, November 2022). Start from growth: more layers, more sites, more staff.
- **Describing extra sales instead of an economy of scale.** A bigger business selling more is about revenue; an economy of scale must be named and shown to cut cost per unit (November 2022).
- **Copying the table instead of using it.** Restating the figures without saying why they matter earns little; pick the two or three factors that matter most to this business and work with those (June 2023). A fact about a site needs its consequence: what it does to costs, sales or risk (June 2021).
- **Bullet-point lists of factors.** A list of location factors without explanation or context stays in the lowest marks (November 2022). Plan your time so the last question gets developed paragraphs.
- **General location factors in a relocation question.** Relocation means leaving a site the business already has, so say what is wrong with where it is now and what a new site would change (March 2022).
- **Analysing more than two points** when the question asks for two: only the best two are marked, and extra points take time from developing the chains.

How to get the marks

- **Command words.** *Define*: the precise meaning, both parts. *Explain*: a point, then how or why. *Analyse*: two points (when asked for two), each developed through a chain of two or more links to a consequence; no judgement needed. *Evaluate* and *Recommend*: both sides, then a decision for this business with reasons and what it depends on.
- **[2] define**: unit (average) cost falls + scale of operations rises.
- **[3] explain internal economies of scale**: unit cost falls as output rises, from the business's own growth, plus an example.
- **[3] two causes of diseconomies**: each cause linked to growth and explained; a list gets 1.
- **[8] analyse two**: 2 K, 2 App, 4 An. One case fact per point; a developed chain on each.
- **[12] evaluate a location (Paper 3)**: 2 K, 2 App, 2 An, 6 Eval. The top band needs a judgement **in context**: a decision for this business, supported by its figures and facts, weighing the most important factor and saying what the choice depends on (finance, risk, objectives, reliability of the data). Judge as you go as well as at the end.

- **Use the numbers.** A difference in cost per unit, a payback or ARR from an earlier part, or a gap in build time is strong application; work it out rather than just quoting the table. If your earlier calculation was wrong, using your own figure still earns credit.
- **Either site can be the right answer.** Examiners have no "correct" site in mind: they reward how well your choice is argued and supported.

Quick check

1. Define the term "economies of scale". **[2]**
2. A bakery's total costs are 150,000 dollars when it makes 50,000 loaves a month, 300,000 dollars at 120,000 loaves and 560,000 dollars at 200,000 loaves, as it grows over several years. Calculate its average cost at each scale, and say what each change shows.
3. Say whether each is an internal or external economy of scale, or an internal or external diseconomy of scale: (a) a city's many software firms recruit graduates from a local university course built for their industry; (b) a supermarket chain that has doubled in size is offered a lower interest rate on its loans; (c) after a merger, a bank's projects need approval from three committees and are delayed for months; (d) so many warehouses have opened near a port that the roads are jammed, and every firm's deliveries take longer.
4. A maker of kitchen knives moved production to another country ten years ago to cut costs. It is now bringing production back home. Give two reasons why.
5. A chain of gyms has opened branches in several regions of its own country and now plans its first branch abroad. Explain one factor it must consider abroad that it did not face at home. **[3]**

Answers

1. Economies of scale are falls in average (unit) cost (1) that a business gains as it increases its scale of operations (1).
2. Average cost = $\frac{150000}{50000} = 3.00$ dollars, $\frac{300000}{120000} = 2.50$ dollars and $\frac{560000}{200000} = 2.80$ dollars a loaf. From 50,000 to 120,000 loaves, average cost falls, so the bakery is gaining economies of scale; from 120,000 to 200,000 it rises, so diseconomies of scale have set in, even though it is still making more loaves.
3. (a) External economy of scale (concentration of the industry in the area). (b) Internal economy of scale (financial). (c) Internal diseconomy of scale (slow decision-making and poor coordination). (d) External diseconomy of scale (congestion).
4. Any two, for example: wages in the other country have risen, so the cost saving has shrunk; shipping costs and delivery times have risen, so knives reach shops more slowly; quality is easier to control at home; customers will pay more for knives made in their own country; automation means cheap labour now saves less.
5. Exchange rates (K, identifies the factor). If the other country's currency falls in value, the profit a branch sends home is worth less, even if the branch is doing well (K, explains it). The gym's membership fees abroad would be paid in that currency, so a fall cuts what the new branch earns for the chain (App, context). The 3 marks are awarded by level, not one per sentence: identifying a factor earns 1, explaining it 2, explaining it in context 3. (Other valid factors: different laws, such as health and safety or employment rules; language and culture; political stability; tax rates.)

Past questions to try

- 9609/32/M/J/23 Q4: ARR for one site, then which of two factory sites to choose.
- 9609/22/M/J/21 Q2: part (d), recommending one of two sites for a second farm.
- 9609/23/O/N/22 Q1: part (d), the economies of scale from growing into bigger venues.
- 9609/12/F/M/22 Q7: part (a), the factors behind relocating a business.