

Marketing (A Level)

A-Level Business

Marketing analysis



A supermarket: retailers use data to compete on price, range and customer experience.

Image: ProtoKiwi, CC BY-SA 4.0 (commons.wikimedia.org)

Marketing analysis 营销分析 means using data to understand the market and to make better marketing decisions. At A Level you study some numbers tools: sales forecasting, time-series analysis, correlation, and elasticity.

Sales forecasting and time-series analysis

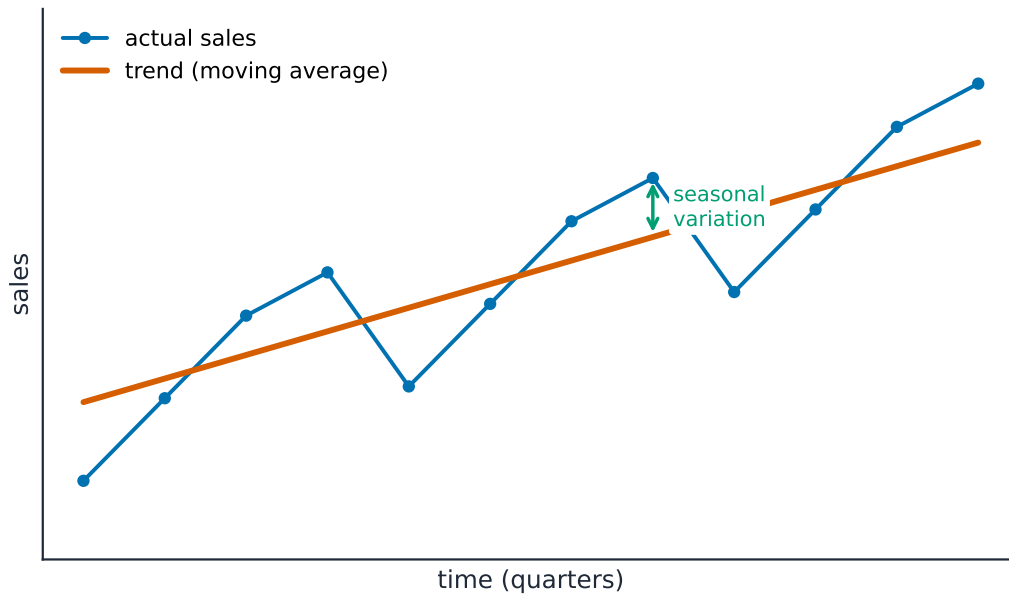
Sales forecasting 销售预测 is predicting future sales from past data and market knowledge. Good forecasts help a firm plan production, staff, stock and cash.

Time-series analysis 时间序列分析 studies past sales recorded over time to find a pattern. It has two main parts:

- the **trend** 趋势—the general direction of sales over the long run (up, down or flat).
- the **seasonal variation** 季节性波动—the regular rise and fall within a year (e.g. ice cream sells more in summer).

To find the trend, firms use a **moving average** 移动平均, which smooths the ups and downs by averaging several periods in a row. The seasonal variation is then how far the actual figure sits above or below the trend:

$$\text{seasonal variation} = \text{actual value} - \text{trend value}$$



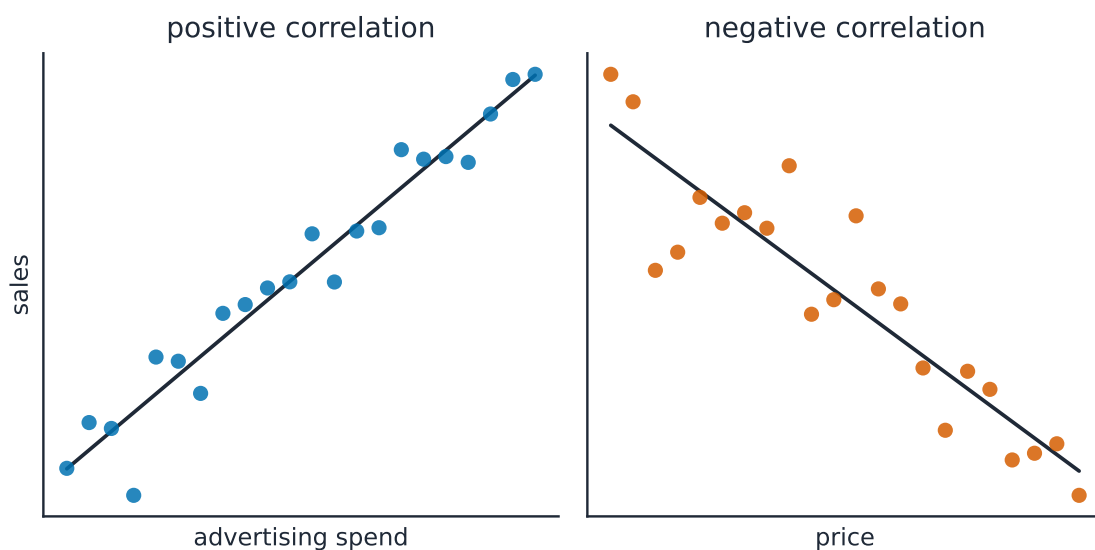
Actual sales wobble seasonally around a smooth underlying trend

A forecast extends the trend into the future (called **extrapolation** 外推) and then adds the usual seasonal variation. This works only if past patterns continue, so forecasts are never certain.

Correlation

Correlation 相关性 measures how strongly two things move together—for example, advertising spending and sales.

- **positive correlation** 正相关—when one rises, the other rises too.
- **negative correlation** 负相关—when one rises, the other falls.

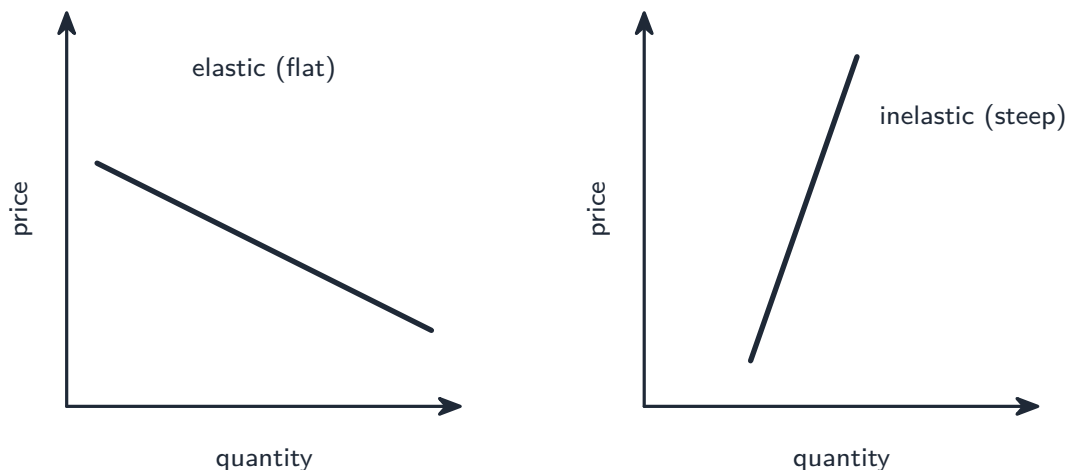


Positive correlation (both rise together) and negative correlation (one rises as the other falls)

Strong correlation helps a firm predict, but it does not prove that one thing *causes* the other. Other factors may be at work.

Using elasticity in marketing decisions

Elasticity 弹性 measures how much demand reacts to a change. Three types guide marketing decisions.



Elastic demand is flat; inelastic demand is steep

- **price elasticity of demand** 需求价格弹性 (PED) —for a **price elastic** 富有弹性 product, cutting the price raises total revenue; for a **price inelastic** 缺乏弹性 product, raising the price raises total revenue.
- **income elasticity of demand** 需求收入弹性 (YED) —tells a firm how sales will change as incomes rise or fall, which helps plan for booms and recessions.
- **cross elasticity of demand** 需求交叉弹性 (XED) —tells a firm how a rival's price change, or the price of a partner product, will affect its own sales.

So elasticity helps a firm set prices, choose products, and predict the effect of a competitor's move.

Worked example. Quarterly sales run Q1 100, Q2 140, Q3 180, Q4 120, then next Q1 108. Find the four-quarter moving-average trend centred on Q3, and the seasonal variation for Q3. Average the first four quarters: $(100 + 140 + 180 + 120) \div 4 = 135$. Average the next four: $(140 + 180 + 120 + 108) \div 4 = 137$. A four-period average falls **between** quarters, so centre the two: $(135 + 137) \div 2 = 136$, the trend at Q3. The **seasonal variation** is actual minus trend: $180 - 136 = +44$, so Q3 runs about 44 units above trend, and next year's Q3 forecast is the projected trend **plus 44**. The **centring** step is the one most answers drop: with an **even** number of periods the average lands between two quarters and must be centred before it can be compared with an actual figure.

Marketing planning and strategy

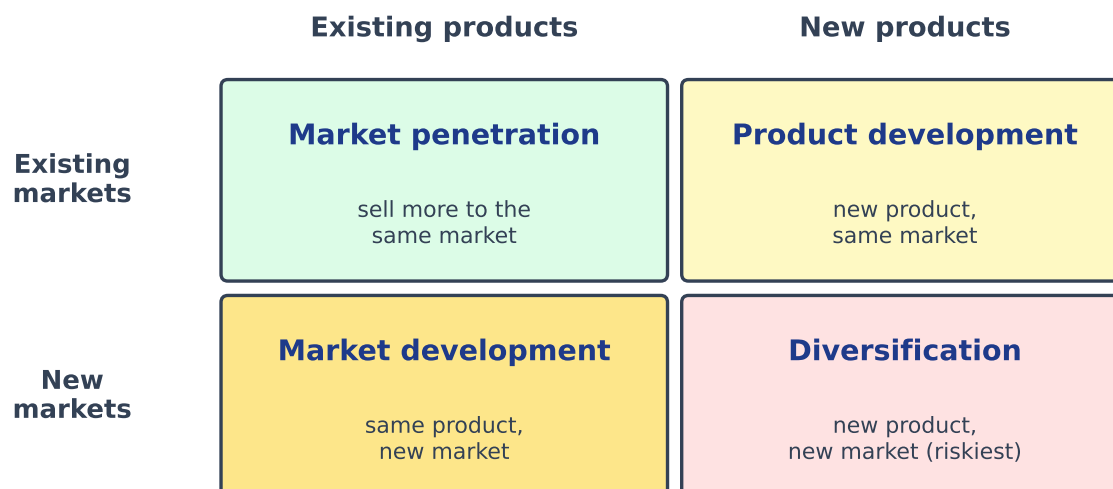


Digital advertising screens —marketing increasingly happens online and on screens.

Image: Alex Liivet from Chester, United Kingdom, CC0 (commons.wikimedia.org)

A **marketing strategy** 营销战略 is the long-term plan for how marketing will meet the firm's objectives. **Marketing planning** 营销规划 is the work of setting that plan: studying the market, choosing target customers, and deciding the marketing mix. Two tools shape strategy: Ansoff's matrix and product portfolio analysis.

Ansoff's matrix



Ansoff's matrix: four growth strategies, with risk rising to the bottom-right (diversification).

Ansoff's matrix 安索夫矩阵 shows four ways to grow, by mixing existing or new products with existing or new markets. The risk rises as you move away from what you know.

	Existing products	New products
Existing markets	market penetration 市场渗透 (sell more to current buyers)	product development 产品开发 (new products for current buyers)
New markets	market development 市场开发 (current products to new buyers)	diversification 多元化 (new products and new markets)

Market penetration is the safest; diversification is the riskiest because both the product and the market are new.

Product portfolio analysis

Product portfolio analysis 产品组合分析 looks at the firm's whole range of products together, using a tool like the Boston Matrix. It checks the balance: a firm needs some steady earners to fund its risky new products. The aim is a healthy mix, so the firm is not left with only ageing products.

Entering international markets

To grow, many firms sell abroad. **Globalisation** 全球化 (the world becoming more connected) has made this easier. A firm can enter a new country by **exporting** 出口, by setting up a **joint venture** 合资企业 with a local partner, or by opening its own branch there.



The entry modes trade off commitment against control: exporting risks least, an own branch gives the most control but costs and risks the most

But a strategy that works at home may need changes. **Localisation** 本地化 means adapting the marketing mix to the new market—for example, changing the product, the language, the price, or the way it is sold to suit local tastes, laws and incomes.

Exam tips

- Read **time-series** data: separate the underlying trend from seasonal variation, and extrapolate with caution.
- Interpret **correlation** (strength and direction) but never assume it proves causation.
- Use **Ansoff's matrix** to classify a growth strategy and judge its risk (diversification is riskiest).
- Use **elasticity values** to justify a pricing or promotion decision numerically.