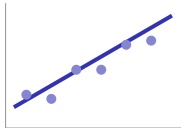


Marketing

A-Level Business ■ Topic 8

A-Level Business



What we will cover

- 1 Time-series forecasting
- 2 Correlation
- 3 Elasticity
- 4 Marketing strategy
- 5 Ansoff & portfolio
- 6 Recap

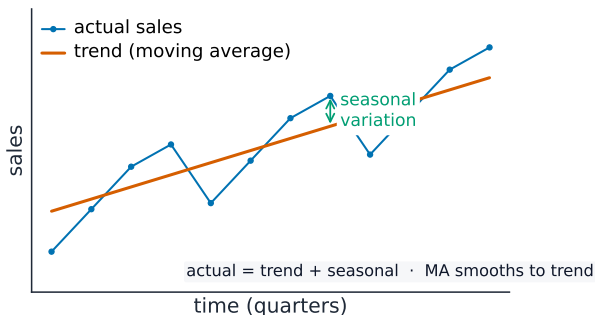


firms compete on data

1

Marketing analysis

Sales forecasting and time-series



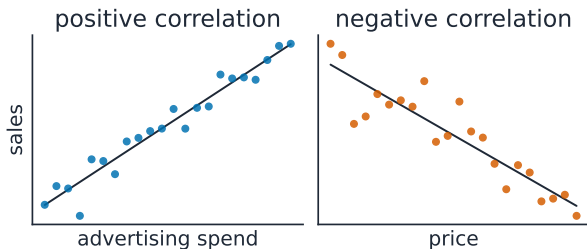
Time-series

analysis 时间序列分析 splits past sales into:

- the **trend** 趋势 – long-run direction (a **moving average** 移动平均 smooths it)
- **seasonal variation** 季节性波动 = actual – trend

Forecasts **extrapolate** 外推 the trend – never certain.

Correlation



correlation $\neq$ causation · line of best fit shows direction

Correlation 相关性 measures how two things move together:

- **positive** 正相关 – both rise together
- **negative** 负相关 – one rises as the other falls

Correlation is not causation
– another factor may be at work.

Reading a scatter, reading an elasticity

Positive correlation

Positive correlation 正相关: when one rises, the other rises too.

Negative correlation

Negative correlation 负相关: when one rises, the other falls.

Correlation is not cause

A strong line can still be a coincidence, or both variables can follow a third. Say what the causal mechanism would be.

Globalisation 全球化 – the world becoming more connected – has made both the data and the rival's response arrive faster.

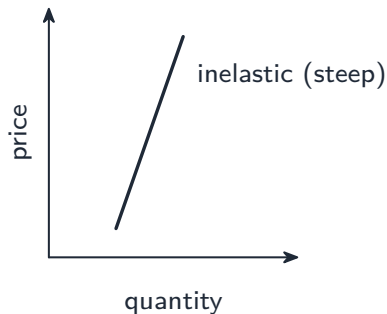
Reading a time series, and forecasting from it

the trend	the underlying direction over several years, found by a moving average
seasonal variation 季节性波动	the regular rise and fall within a year – ice cream sells more in summer
cyclical variation	the swing with the business cycle, over several years
random variation	what is left, and what cannot be forecast
extrapolation 外推	a forecast extends the trend into the future and then adds the usual seasonal variation back
the caution	extrapolation assumes the past pattern continues – which a shock breaks

With quarters 100, 140, 180, 120 the four-quarter average is 135, so Q1's seasonal variation is -35. Add that back to the projected trend to forecast next Q1.

Elasticity in marketing decisions

- **PED** 需求价格弹性 – elastic: cut price for more revenue; inelastic: raise it
- **YED** 需求收入弹性 – how sales move with incomes (booms vs slumps)
- **XED** 需求交叉弹性 – effect of a rival's or partner's price



Three elasticities, three decisions

Price elasticity of demand

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 one, raising the price does.

Income elasticity of demand

Income elasticity of demand 需求收入弹性 (YED): how sales will change as incomes rise or fall – which is how a firm plans for booms and recessions.

Cross elasticity of demand

Cross elasticity of demand 需求交叉弹性 (XED): how a rival's price change, or the price of a partner product, will affect its own sales.

Each answers a different question: my price, my customers' incomes, someone else's price.

2

Marketing strategy

Marketing strategy and planning



A **marketing strategy** 营销战略 is the long-term plan for marketing to meet objectives. **Marketing planning** 营销规划 studies the market, picks target customers, and sets the mix. Two tools shape it: [Ansoff's matrix](#) and portfolio analysis.

Ansoff's matrix

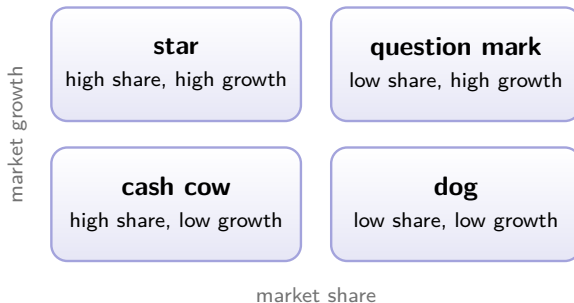
Ansoff's matrix 安索夫矩阵 maps growth by product $\times$ market:

- **market penetration** 市场渗透 – safest
- **product development** 产品开发
- **market development** 市场开发
- **diversification** 多元化 – riskiest (new $\times$ new)

Risk rises with each step away from what the firm knows: **diversification** brings neither product nor market experience.

	Existing products	New products
Existing markets	Market penetration same product, same market (safest)	Product development new product, same market
New markets	Market development same product, new market	Diversification new product, new market (riskiest)

Product portfolio analysis

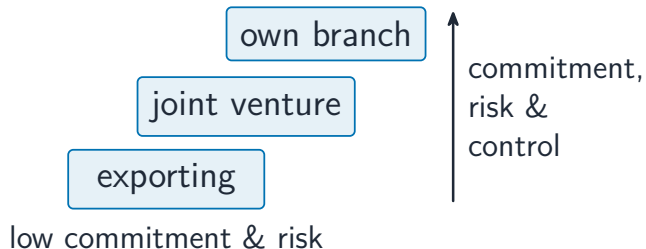


Portfolio analysis 产品组合分析 balances the range – steady **cash cows** fund risky new products.

Entering international markets

Enter a new country by **exporting** 出口, a **joint venture** 合资企业, or an own branch – rising commitment & control.

Localisation 本地化 adapts the mix (product, language, price) to local tastes & laws.



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.

3

Recap

Worked example – elasticity and revenue

A firm cuts price by 10% and demand rises 25%. Find PED and say whether the cut was right.

- $PED = \frac{\% \Delta Q_d}{\% \Delta P} = \frac{25}{10} = 2.5$ (ignoring the minus sign).
- $PED > 1 \Rightarrow$ demand is **price elastic**.
- Quantity rose **proportionally more** than price fell $\Rightarrow$ **total revenue rises**.
- So yes – but check that the extra volume still **covers the variable cost**.

Elastic $\Rightarrow$ cut price to raise revenue. **Inelastic** $\Rightarrow$ raise it. Revenue is not profit: always check costs before calling it a good decision.

Topic 8 – key takeaways

1

Time-series

trend + seasonal variation;
extrapolate

2

Correlation

moves together $\neq$ causes

3

Ansoff

penetration safest, diversification
riskiest

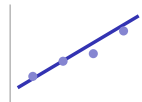
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Portfolio

balance stars, cash cows, dogs

Check yourself

- 1 Seasonal variation = actual minus what?
- 2 Does strong correlation prove causation?
- 3 Ansoff's safest growth strategy?
- 4 Which Boston product funds the others?



Answers 1. the trend value 2. no 3. market penetration 4. the cash cow