MY REVISION NOTES

HODDER EDUCATION

AQA

A-level

ECONOMICS

THIRD EDITION

- Plan and organise your revision
- Reinforce skills and understanding
- Practise exam-style questions

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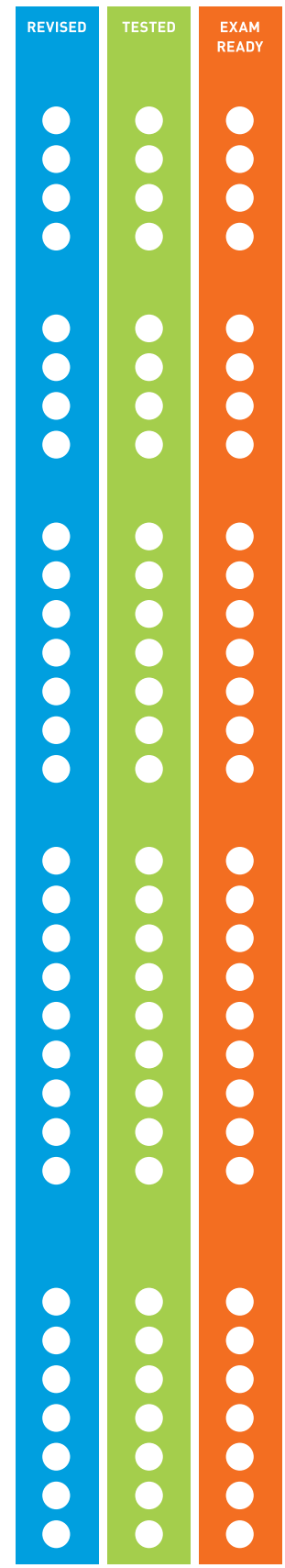
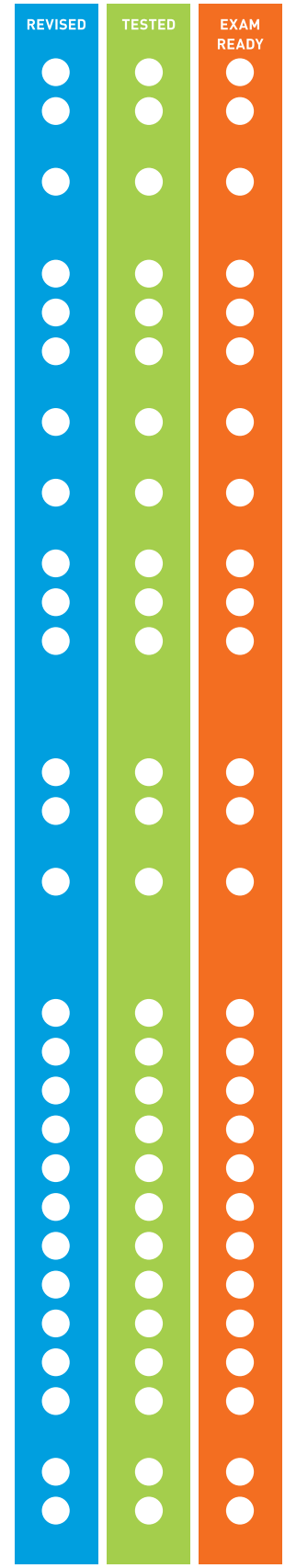
My revision planner

Paper 1 Markets and market failure





Paper 2 National and international economy

REVISED | TESTED | EXAM READY

Exam practice answers and quick quizzes online at
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1 Economic methodology and the economic problem

Economic methodology

Economics is the study of how the world's scarce resources are allocated to competing uses to satisfy society's wants.

As a social science, economics attempts to adopt a scientific methodology for observing the behaviour of individuals and groups, and then makes predictions based on these observations. For example, how many more units of a product might an individual buy if the price of that product is reduced by 25%?

Positive and normative economic statements

REVISED

- **Positive economic statements** are objective statements that can be tested against facts to be declared either true or false. They do not necessarily have to be true.
- **Normative economic statements** are subjective opinions or value judgements that cannot be tested against facts. These often concern views about what individuals, firms or governments should do, based on people's ethical, moral or political standpoint.
- Economic policy often rests on normative judgements about the 'right' levels of, for example, taxes, minimum wages or the amount of government intervention in markets.

Positive statement: an objective statement that can be tested against facts to be declared either true or false.

Normative statement: a subjective opinion, or value judgement, that cannot be declared either true or false.

Now test yourself TESTED

1 Which of the following would be classed as a normative economic statement?
- **A** An increase in price usually leads to a fall in the quantity demanded of a good.
- **B** The government should spend more money on improving public transport.
- **C** A reduction in income tax will lead to more people choosing to work.
- **D** An increase in price usually leads to a rise in the quantity supplied of a good.

Answers available online

Typical mistake

A positive statement need not necessarily be factually true. It simply needs to be capable of being tested to be declared true or false.

The nature and purpose of economic activity

Needs, wants and economic welfare

REVISED

The main purpose of economic activity is to satisfy society's needs and wants:

- A **need** is something that humans require to survive, such as food, shelter and warmth.
- A **want** is something not essential for survival but which people feel improves their standard of living, or **economic welfare**, e.g. a new car.

Economic welfare refers to the standard of living, or general well-being, of individuals in society. Satisfying society's needs and wants in terms of material and non-material things leads, in general, to increased economic welfare. Increasing real gross domestic product (GDP) per capita is pursued in

Need: something that humans need to survive, e.g. food, shelter and warmth.

Want: something that people feel improves their standard of living but is not required for survival.

Economic welfare: the standard of living or general well-being of people in society.

order for average living standards to increase, as this enables people to satisfy more of their needs and wants.

Making links

There is debate about whether people feel genuinely happier simply by having more of their wants satisfied. The potential trade-off between economic growth and living standards is considered in terms of environmental externalities in Chapter 8 and as a macroeconomic concept in Chapter 9.

Economic resources

A country's economic resources are known as the four factors of production:

- **Capital:** man-made physical equipment used to make other goods and services. This includes machinery and computer equipment.
- **Enterprise:** entrepreneurs are individuals who take a business risk in combining the other three factors of production in order to produce a good or service.
- **Land:** all naturally occurring resources such as minerals, the sea, fertile land and the environment. These can be further divided into renewable and non-renewable resources.
- **Labour:** people involved in production, sometimes referred to as human capital.

Factors of production: a country's productive economic resources, divided into capital, enterprise, land and labour.

Typical mistake

Don't confuse the term 'capital' with 'money' in economics. Money is classed as financial capital.

Exam tip

The four factors of production can be memorised using the acronym CELL, standing for capital, enterprise, land and labour.

Now test yourself TESTED

2 Which of the following would be classified as land by an economist?

A A sewing machine
B A taxi driver
C Oil in the North Sea
D A laptop computer

Answers available online

Scarcity, choice and the allocation of resources

The basic economic problem

REVISED

The basic economic problem is scarcity, i.e. that economic resources are limited relative to society's wants. This means that choices must be made when deciding how to allocate these resources. In so doing, the three fundamental economic questions must be considered:

1. **What to produce and in what quantities?** Goods are usually divided into consumer goods and capital goods. Consumer goods are those that give satisfaction to consumers, such as a pizza. Capital goods are those used to produce other goods, such as machinery and IT equipment.
2. **How should goods and services be produced?** The basic production decision is between labour-intensive methods (where a high proportion of human capital is used compared to capital) or capital-intensive methods (the opposite).
3. **To whom should goods and services be allocated?** This choice affects the degrees of equity and equality in society. Decisions about who in society gets what will be determined by the prevailing economic system. Two extreme forms of economic system are:

Basic economic problem: scarce economic resources compared with society's unlimited wants.

- **The free market or capitalist economy.** Decisions are made solely by the interactions of consumers and firms, with no government intervention.
- **The command or centrally planned economy.** Decisions are made solely by the planning department of governments.

Now test yourself TESTED

3 Why do individuals, firms and governments have to make choices about what to produce?

4 How might decisions about the three fundamental economic questions differ between a free market economy and a centrally planned economy?

Answers available online

Opportunity cost

REVISED

In making any choice regarding how to allocate scarce resources, something must be given up. This is the concept of **opportunity cost**, i.e. that scarce resources have competing uses. It means that when someone chooses one use, they must forgo the next best alternative use.

Opportunity cost: the cost of the next best alternative that you give up when you have to make a choice.

Now test yourself TESTED

5 John bought a German saloon car for £10000 two years ago. A new car would cost £13000. He could sell his German saloon car for £8000. What is the present opportunity cost of keeping his car?

A £10000
B £13000
C £3000
D £8000

Answers available online

Production possibility diagrams

REVISED

A **production possibility curve (PPC)** is a diagram that depicts the maximum combinations of two goods that can be produced by an economy, assuming all resources are fully employed and used efficiently. Figure 1.1 shows a PPC.

Production possibility curve (PPC): a diagram that shows the maximum possible output combinations of two goods in an economy, assuming full and efficient employment of resources.

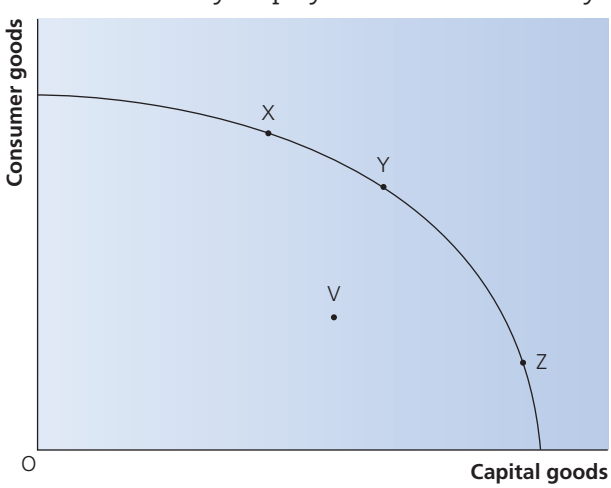


Figure 1.1 A production possibility curve (PPC)

Any point on the production possibility curve, e.g. X, Y or Z, implies that all factors of production are fully employed. An economy operating at point V must therefore be operating inefficiently, with unused resources, e.g. unemployed labour or idle machines.

Exam tip

Production possibility diagrams may also be referred to as production possibility frontiers (PPFs) and production possibility boundaries (PPBs).

Shifts of the PPC

Factors leading to shifts of the PPC, outwards or inwards, are driven by changes in the quantity and efficiency (quality) of the factors of production.

Factors causing an outward shift of the PPC

- Technological improvements that lead to increased productivity of capital equipment.
- Discovery of new resources, e.g. oil and gas.
- Improvements in education and training that lead to a more productive workforce.
- Changes that lead to an increase in working population, e.g. increases in immigration or a raised retirement age.

Factors causing an inward shift of the PPC

- Disasters, such as earthquakes or floods, that devastate productive resources.
- Wars.
- Global warming/climate change, which may lead to loss of farmland, rising sea levels and more extreme weather.
- A prolonged recession, which may lead to permanent loss of productive capacity if businesses close down and/or workers lose skills.

Using a PPC diagram to show opportunity cost

- The PPC in Figure 1.2 shows the maximum combinations of consumer goods and capital goods that can be produced with a given set of factors of production.
- The diagram shows the concept of opportunity cost – as more capital goods are produced, more consumer goods must be given up. An increase in the amount of capital goods from OM to OS leads to a loss of output of consumer goods from OL to OR.
- A subsequent increase in production of capital goods from OS to OV leads to a proportionately larger fall in production of consumer goods from OR to OT.

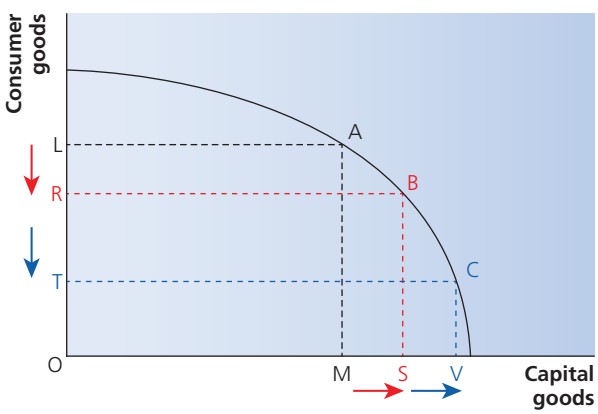


Figure 1.2 The production possibility curve and opportunity cost

Using a PPC diagram to show economic growth

- Production possibility diagrams can also be used to show economic growth.
- The PPC in Figure 1.3 again shows the maximum combinations of consumer goods and capital goods that can be produced with a given set of factors of production. We will assume that the economy is producing at point A on the current PPC.
- An improvement in technology, or any of the factors that lead to an outward shift of the PPC, means that there has been an increase in the

Economic growth: an increase in the productive capacity of an economy over time.

productive capacity of the economy. This will lead to the entire PPC shifting outwards. Production at point E is now possible, leading to increased potential output of both capital goods and consumer goods.

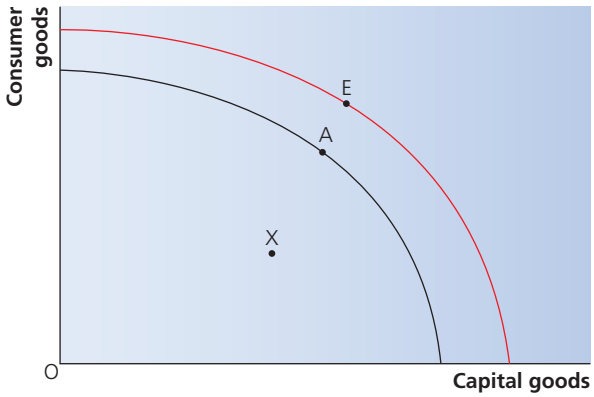


Figure 1.3 The production possibility curve and economic growth

Economic efficiency and production possibility diagrams

The two main types of economic efficiency are **productive efficiency** and **allocative efficiency**.

Productive efficiency is concerned with how well society uses its scarce resources to maximise outputs of goods and services. At the level of a whole economy, productive efficiency occurs when maximum output is produced from the available factors of production, which would be at any point on the PPC.

By definition then, any point that lies inside the PPC is productively inefficient. The concepts of productive efficiency and productive inefficiency are shown in the PPC diagram in Figure 1.4.

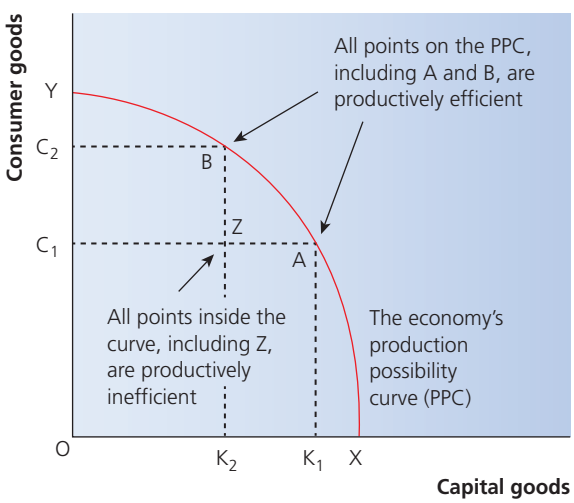


Figure 1.4 Productive efficiency and the PPC

Allocative efficiency exists when an economy's factors of production are used to produce the combination of goods and services that maximises society's welfare. The PPC shows all possible efficient combinations of goods and services that can be produced but does not specify an allocatively efficient point.

The allocatively efficient point on the PPC is the one that best reflects society's preferences for particular goods and services.

Typical mistake

A movement from point X to point A is short-run, not long-run economic growth. It shows an economy making fuller use of its existing, previously unemployed, resources.

Productive efficiency: when maximum output is produced from the available factors of production and when it is not possible to produce more of one good or service without producing less of another.

Allocative efficiency: when an economy's factors of production are used to produce the combination of goods and services that maximises society's welfare.

Exam tip

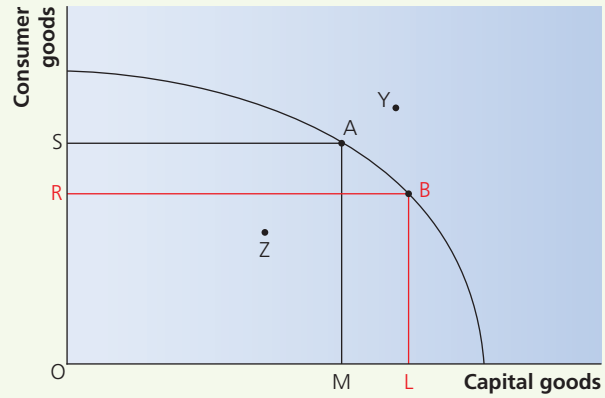
Learn how to draw PPC diagrams to illustrate efficiency, scarcity, choice and opportunity cost at the microeconomic level as well as economic growth, full employment and unemployment at a macroeconomic level.

Now test yourself

TESTED

6 With reference to the figure:
- a) What is the significance of point Z?
- b) Explain why points A and B can be considered productively efficient.
- c) How might point Y be achieved in the future?
- d) Explain how the diagram can be used to show the concept of opportunity cost.

7 Explain the effect on a PPC of the following:
- a) improvements in soil fertility resulting from the use of chemicals
- b) a decrease in population size due to falling birth rates
- c) technological improvements in capital equipment
- d) increased government spending on education and training



A PPC diagram

Answers available online

Exam skills

This chapter covers many of the fundamental concepts in economics. Students often neglect to review these concepts over the two years of their A-level course, not realising that they underpin so many others, in both micro- and macroeconomics. Make sure you understand, for example:

- how the concept of opportunity cost can be applied to decision making at the level of the individual, firm and government
- how the quantity and efficiency of the four factors of production affect the productive potential of an economy and therefore influence long-run economic growth
- how decisions about the 'best' way to tackle economic issues often rest on normative views.

Exam practice

1 Which statement is true?
- **A** A positive economic statement never contains words such as 'should' or 'ought to'.
- **B** A positive economic statement is one that can be tested against the facts.
- **C** A normative statement never contains words such as 'will' or 'does'.
- **D** A normative statement can be scientifically proven. [1]

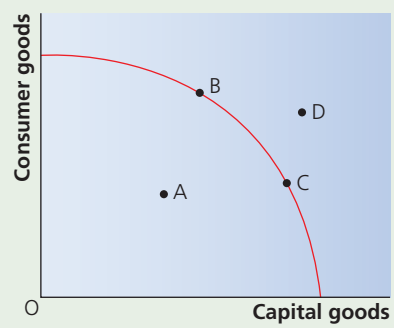
2 Scarcity in an economy means that:
- **A** there is a misallocation of resources
- **B** all goods have zero opportunity cost
- **C** people must make choices
- **D** it is not possible to maximise economic welfare [1]

3 When money is used as a medium of exchange:
- **A** trade is likely to increase
- **B** specialisation and the division of labour are impossible
- **C** barter becomes more widespread
- **D** prices must increase [1]

4 Which of the following is a factor of production?
- **A** a loan from a bank
- **B** profits made by businesses
- **C** labour productivity
- **D** a computer [1]

5 The diagram below shows an economy's production possibility curve.

Which of the following combinations of consumer goods and capital goods is achievable with the current factors of production?
- **A** only A
- **B** only B and C
- **C** A, B, C and D
- **D** only A, B and C [1]



A PPC diagram

Answers and quick quiz 1 online

Summary

You should have an understanding of:

- the meaning of the term 'economics'
- basic economic methodology
- the nature and purpose of economic activity
- the difference between needs and wants
- positive and normative economic statements
- the meaning of scarcity and how this leads to choices having to be made
- the four key factors of production: capital, enterprise, land and labour
- the difference between consumer goods and capital goods
- the concept of opportunity cost and its significance for individuals, firms and governments
- production possibility curves and how to draw them correctly
- how to use PPCs to illustrate opportunity cost, efficiency and economic growth.

2 Individual economic decision making

Consumer behaviour

Rational economic decision making and economic incentives

REVISED

Traditional, neoclassical economic theory assumes that consumers always act rationally, seeking to maximise satisfaction for every pound spent on each product they buy.

Utility theory

REVISED

Utility and utility maximisation

Utility is the amount of satisfaction or benefit that a consumer gains from consuming a good or service.

We assume that:

- individual consumers try to place a value on a good or service equal to the satisfaction they perceive it will bring. They may try to give this an actual monetary value, e.g. £5
- consumers aim to maximise utility per pound spent and so will compare their perceived satisfaction with the price of the good or service
- **rational consumers** will consume a good or service only if the perceived satisfaction is greater than, or equal to, the price.

Utility: the amount of satisfaction or benefit that a consumer gains from consuming a good or service.

Rational consumer: an assumption of traditional economic theory that consumers act in such a way as to always maximise satisfaction, or utility, when they spend money on goods and services.

Now test yourself TESTED

1 A rational consumer will always try to:
- **A** spend all of their income
- **B** maximise their earnings
- **C** take the views of others into account
- **D** maximise their total utility

Answers available online

Marginal utility

Marginal utility is the satisfaction gained from consuming an additional unit of a good or service. Table 2.1 shows what happens to marginal utility when an individual consumer buys more of a good or service, such as a cup of coffee.

Marginal utility: the satisfaction gained from consuming an additional unit of a good or service.

Table 2.1

Number of units	Total utility	Marginal utility
1	8	8
2	15	7
3	20	5
4	23	3
5	24	1

In Table 2.1, the total utility from consuming additional cups of coffee continues to increase, up to a value of 24 at 5 units, but the marginal utility from consuming additional cups falls, down to 1 for the fifth cup.

Making links

The concept of the margin and marginal analysis underpins many ideas in A-level microeconomics. We will return to it many times throughout this book.

Diminishing marginal utility

As illustrated in Table 2.1, when individuals consume more units of a good or service, the additional units give successively smaller increases in total satisfaction. This is the concept of **diminishing marginal utility**. For example, once an individual consumer has drunk their first cup of coffee, their thirst or need for a boost of energy will largely have been satisfied, so that additional cups do little extra to satisfy these requirements.

Now test yourself TESTED

2 Explain the concept of diminishing marginal utility, using chocolate bars as an example.

Answers available online

The concept of diminishing marginal utility is a way of deriving an individual's downward-sloping demand curve for a good or service, as shown in Figure 2.1.

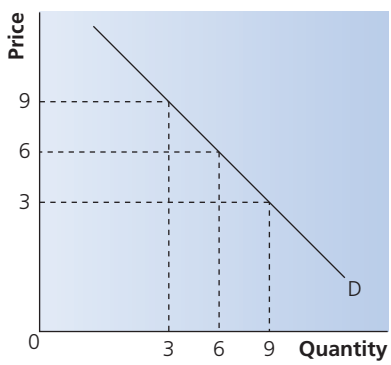


Figure 2.1 Diminishing marginal utility and the individual demand curve

For the first units of a good or service in Figure 2.1, an individual is happy to pay a relatively high price. The individual is prepared to pay £9 for the third unit but only £6 for the sixth unit and £3 for the ninth unit. As marginal utility declines, the price the consumer is willing to pay for additional units decreases.

Now test yourself TESTED

3 What is the marginal utility to a consumer from the fifth pancake?

A 60 **C** 30
B 40 **D** 0

Quantity of pancakes	Total utility
3	200
4	260
5	300
6	330
7	330

Answers available online

Exam tips

In reality it is likely that individual consumers' perceptions of utility differ between quantities of different products, but this does not necessarily undermine the theory.

Sources of imperfect and asymmetric information challenge traditional assumptions of economics regarding rational consumer behaviour.

Diminishing marginal utility: as individuals consume more units of a good or service, the additional units give successively smaller increases in total satisfaction.

Making links

The concept of the margin and marginal analysis underpins many ideas in A-level microeconomics. We will return to it many times throughout this book.

Imperfect information

The field of behavioural economics recognises that humans are unlikely to always act rationally in the face of every decision they make. One reason for this is that consumers face **imperfect information**. This means that they rarely possess all of the information required to make fully informed decisions. Imperfect information makes it difficult for economic agents to make rational decisions and is a potential source of market failure.

Imperfect information: when economic agents do not know everything they need to know in order to make a fully informed decision.

Sources of imperfect information

REVISED

- Economic agents can be faced with too little information or too much information, or find themselves knowing more or less information than other parties to a transaction.
- Information can also be presented in such a way as to exclude some people and be meaningful to others, e.g. technical or legal jargon.
- There can be costs involved in acquiring information, which deters people from doing so, e.g. house surveys or mechanical checks on cars.

Making links

Imperfect information can lead to a misallocation of resources in the case of merit and demerit goods, which are explored in Chapter 8.

Asymmetric information

REVISED

Asymmetric information is a form of imperfect information when one party (usually the seller) has more/superior information than another (usually the buyer). Examples include:

- the market for so-called 'lemons', where a second-hand car salesperson knows more about the quality of a car they are selling than the buyer does
- where an individual may know more about their creditworthiness than the bank from which they are attempting to secure a loan.

Asymmetric information: a source of information failure where one economic agent knows more than another, giving them more power in a market transaction.

Both examples lead to an imbalance of power, where one party can exploit the other, resulting in market failure. Uncertainty also leads to a lack of trust between agents, which may mean that a mutually beneficial exchange does not occur.

Now test yourself TESTED

4 Explain two reasons why consumers may not possess all the relevant information required to make a fully informed decision about buying healthy food.

Answers available online

Aspects of behavioural economic theory

Behavioural economics is a relatively modern field of economic theory that recognises the social, moral and psychological factors that determine the behaviour of economic agents. It differs from traditional economic theory as it questions the assumption of individuals as rational decision makers. People may therefore not behave as traditional textbooks suggest.

Bounded rationality

REVISED

Bounded rationality: when people try to behave rationally but are restricted by factors such as lack of time to make decisions.

Bounded rationality is the idea that people may try to behave rationally, but their ability to do so is severely restricted, for three main reasons:

- The human mind has limited ability to process and evaluate information.
- The available information is incomplete and often unreliable (and rapidly out of date).
- The time available to make decisions is limited.

Therefore, even with the best intentions, individuals end up 'satisficing', or accepting suboptimal outcomes.

Bounded self-control

REVISED

Bounded self-control: when individuals lack the self-discipline to see their rational good intentions through.

Bounded self-control is when individuals have good intentions but lack the self-discipline to see them through, e.g. regular gym attendance, giving up smoking or saving for the future.

As a result of bounded rationality and bounded self-control, people are therefore 'predictably irrational' – a term coined by leading behavioural economist Dan Ariely, demonstrating predictable biases in decision making.

Now test yourself TESTED

5 Which of the following is not a reason for bounded rationality in individual decision making?

- **A** too much information for the human mind to process
- **B** incomplete and unreliable information
- **C** limited time to make decisions
- **D** up-to-date information

Answers available online

Rules of thumb

REVISED

Rules of thumb: thinking shortcuts, or informed guesses, that individuals use to make decisions in order to save time and effort.

Sometimes known as heuristics, **rules of thumb** are 'thinking shortcuts' individuals use to make decisions, given the problems of bounded rationality. For example, consumers may choose the same hot drink in a coffee shop each time they visit because they have enjoyed it previously. This saves the consumer the time and effort of having to make comparisons on every visit.

Anchoring

REVISED

Anchoring: the tendency of individuals to rely on particular pieces of information when making choices between different goods and services.

Anchoring is the tendency of individuals to rely on particular pieces of information, especially in situations where they lack knowledge or experience. For example, a consumer choosing between car insurance premiums online may focus on price as the key point of comparison rather than the features, excesses and exclusions of individual policies.

Availability

REVISED

Availability bias: when people make judgements about the probability of events by recalling recent instances.

Availability bias occurs when people make judgements about the probability of events by recalling recent instances, e.g. rushing out to buy barbecues and sun cream on the first sunny day of the year. Availability serves as a mental shortcut if an example comes to mind easily, e.g. recalling a family member who lost their retirement savings in the last recession, therefore discouraging personal saving.

Social norms

REVISED

- The concept of **social norms** recognises the influence of others on individual decision making, e.g. encouraging passengers to put pressure on drivers not to drive too fast or under the influence of alcohol.
- Social norms link strongly into economic policies that use knowledge of behavioural economics concerning, for example, the wearing of seatbelts, reducing smoking in public places and using mobile phones while driving.
- Social norms can be used to increase charitable donations – hence examples of donations on telethons such as Children in Need and Comic Relief.

Social norms: when individuals are influenced by others when making decisions.

Altruism and fairness

REVISED

- The biases of **altruism and fairness** mean that people are motivated to 'do the right thing'. Giving to charity, doing voluntary work or paying extra to support fair trade initiatives may be seen as irrational in traditional, neoclassical economic theory.
- However, individual consumers can gain a genuine sense of satisfaction and extra utility from acting in these ways. Critics of altruism and fairness argue that people simply fear 'being judged', especially in a world where information flows freely, e.g. via social media.

Altruism and fairness: individuals are motivated to do the right thing, even if this means paying more for a good or service.

Now test yourself TESTED

6 Which of the following is not a bias in individual decision making?

- **A** altruism
- **B** anchoring
- **C** marginal utility
- **D** availability

Answers available online

Behavioural economics and economic policy

Insights provided by behavioural economic theory can help governments and other agencies devise policies that more effectively influence economic decisions. This may involve influencing the ways in which individuals' choices are 'framed' as well as 'nudging' people towards more desirable courses of action.

Making links

Policies that take behavioural economics into account can be used alongside more mainstream policies, such as indirect taxation and regulation, to help achieve more desirable outcomes for society. See Chapter 8 for further detail.

Exam tip

There are now many interesting, accessible books written on the subject of behavioural economics. Ask your teacher for recommendations.

Choice architecture

REVISED

Choice architecture refers to how choices may be influenced by the way they are presented to the decision maker, in order to achieve desired outcomes. For example, countries with governments that require people to opt out of organ donation generally have a significantly higher percentage of the population willing to donate than countries where people are required to opt in.

Choice architecture: influencing consumer choices by the way the choices are presented.

Framing

REVISED

Framing is a form of choice architecture that influences choices by the way words and numbers are used, e.g. presenting life insurance premium payments as 'less than £3 per day' sounds more palatable than £1000 per year. Gym membership adverts often use clever framing.

Framing: influencing consumer choices by the way words and numbers are used.

Nudges

REVISED

- Nudges are another form of choice architecture that aim to influence consumer behaviour via the use of gentle suggestions and positive reinforcement, such as the 'five-a-day' campaign to encourage greater consumption of fruit and vegetables.
- Nudges can change people's behaviour in a socially desirable manner without taking away freedom of choice.
- They can be a more cost-effective alternative to the use of laws, bans or regulation and can complement traditional policy methods. For example, seatbelt laws are costly to enforce, but using adverts to reinforce a social norm means this issue now needs little enforcement.

Nudges: influencing consumer behaviour via the use of gentle suggestions and positive reinforcement.

Now test yourself TESTED

7 Explain how individuals could be 'nudged' towards making more desirable decisions with regard to healthy food choices.

Answers available online

Default choice

REVISED

Default choices are an additional form of choice architecture that set socially desirable choices as the default option, making it an effort to choose otherwise, e.g. for organ donation and pension enrolment. In each case, the default choice would be to opt in and so individuals would have to actively elect to opt out. The use of default choices in each case has led to significant increases in opt-in rates.

Default choice: influencing consumer behaviour by setting socially desirable choices as default options.

Mandated choice

REVISED

Mandated choice is a stronger form of choice architecture where people are required by law to make a choice. For example, in many countries people are required to make a decision about organ donation as part of their driving licence or passport application.

Mandated choice: where people are legally required to make a choice.

Restricted choice

REVISED

Restricted choice is another way of influencing people's choices, recognising that too much choice can sometimes 'paralyse' individuals from making an effective choice, for example with savings or pensions. Therefore, giving a limited number of options may be better.

Restricted choice: giving consumers a limited number of options when making a choice.

Now test yourself TESTED

8 Which of the following would be considered a form of choice architecture?

A giving consumers an unlimited choice of options
B clearly illustrating the full annual cost of health insurance
C giving consumers extensive nutritional information on food packaging
D giving consumers a limited choice of options

Answers available online

Exam skills

This chapter covers the traditional assumptions of rational economic decision making as well as the relatively new area of behavioural economic theory. Ensure you can recall all of the decision-making biases covered in this chapter and the ways in which an understanding of behavioural economics can help governments and other agencies bring about socially desirable outcomes. You will then be well-placed to tackle questions covering the following:

- the concept of diminishing marginal utility
- the main ways in which behavioural economics differs from traditional assumptions about individual decision making
- the reasons why individuals consume too much, or too little, of certain goods and services
- how insights from behavioural economics can complement more 'standard' policies used by governments to bring about socially desirable outcomes.

Exam practice

1 A traditional economic assumption about consumer behaviour is:

A bounded rationality
B asymmetric information
C utility maximisation
D altruism [1]

2 What is the marginal utility to a consumer from the fourth packet of crisps?

A 160 **C** 100
B 140 **D** 60

Quantity of packets of crisps	Total utility
1	100
2	260
3	400
4	500
5	560

[1]

3 Economic policy that takes behavioural theory into account is least likely to involve:

A obliging consumers by law to opt in or out of a programme or scheme
B taking account of consumer altruism
C giving consumers a limited range of preselected options
D setting out all possible options [1]

4 With the help of a diagram, explain how the availability bias might lead to individuals overestimating their requirement for snow-clearing equipment following a snowy winter. [9]

5 With the help of a diagram, explain how mandating choices towards pension opt-in might influence the market towards more desirable outcomes. [9]

6 Evaluate the effectiveness of policies that take account of behavioural economics in attempting to resolve market failures. [25]

Answers and quick quiz 2 online

Summary

You should have an understanding of:

- the assumptions of traditional, neoclassical economics regarding rational decision making
- how consumers make rational decisions about how much of various products to consume on the basis of utility theory and the hypothesis of diminishing marginal utility
- how, in reality, consumers are faced with imperfect information when making decisions
- the significance of asymmetric information
- how behavioural economic theory challenges the fundamental assumption of traditional economic theory of consumer rationality
- the meaning of bounded rationality and bounded self-control
- some key biases in decision making: rules of thumb, anchoring, availability and social norms
- how altruism and perceptions of fairness influence consumer decisions
- how insights provided by behavioural economists can help governments and other agencies influence economic decision making
- the meaning and examples of choice architecture, framing, nudges, default choices, restricted choice and mandated choice.

3 Price determination in a competitive market

The meaning of a competitive market

A **market** is a situation in which buyers and sellers come together to engage in trade. A market does not have to occur in a physical location, with e-commerce now playing an increasingly important role in the exchange of goods and services. A **competitive market** occurs when there are a large number of potential buyers and sellers, all individually powerless to influence the ruling market price. This price, known as the **equilibrium price**, is determined by the interaction of market demand and market supply.

Market: a situation in which buyers and sellers come together to engage in trade.

Competitive market: a situation where there are a large number of potential buyers and sellers with abundant information about the market.

Equilibrium price: the price at which the planned demand of consumers equals the planned supply of firms.

Making links

Competitive and uncompetitive markets are both covered in more detail in Chapters 4 and 5. As you will see, the slope of the demand curve differs between market structures, linked to firms' ability to set prices in their respective markets.

The determinants of the demand for goods and services

Demand refers to the quantity of a good or service that consumers are willing and able to buy at given prices in a particular time period. Economists are concerned with **effective demand**, i.e. desire for a product backed up by the ability to pay, rather than an unfulfilled want.

Demand: the quantity of a good or service that consumers are willing and able to buy at given prices in a particular time period.

The law of demand and the shape of the market demand curve

REVISED

The law of demand states that as the price of a good or service falls, the quantity demanded increases. This inverse relationship between the price and quantity demanded of a good or service is shown in Figure 3.1.

Effective demand: consumers' desire to buy a good, backed up by the ability to pay.

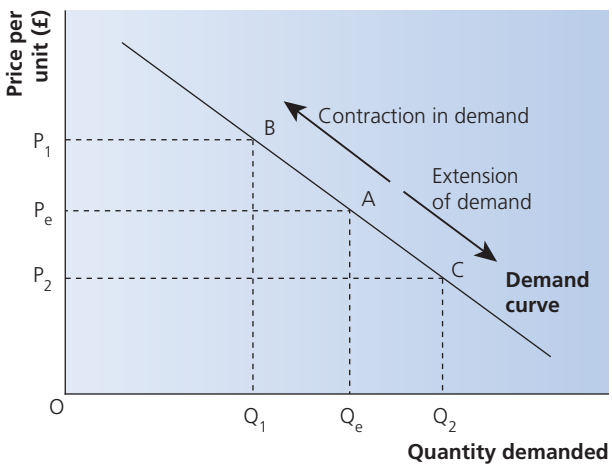


Figure 3.1 Movements along a demand curve

In analysing the effect of a change in price on quantity demanded, we usually assume that all other possible determinants of demand are held constant. Economists refer to this ªssumption as 'ceteris paribus'. An increase in the quantity demanded resulting from a fall in price is known as an extension of demand, whereas a fall in quantity demanded resulting from an increase in price is known as a contraction of demand.

Shifts of a demand curve

REVISED

Factors that may lead to a shift in the position of the demand curve are referred to as the **conditions of demand**.

These include:

- **Real disposable incomes:** the incomes of individuals after the effects of inflation, **taxation** and benefits are taken into account.
- **Tastes and preferences (fashions):** the popularity of goods and services is often influenced by changes in society's preferences and may be influenced by the media, advertising and technological change.
- **Population:** the size, age and gender composition of the population will affect the market size for many products.
- **Prices of substitute products:** **substitute** products are those in competitive demand that may be seen as close alternatives to a particular good or service.
- **Prices of complementary products:** **complementary** products are those in joint demand, i.e. demanded together with other goods or services.

If any of these factors change, then the demand curve for the good or service in question will change. This leads to either a rightward or a leftward shift of the demand curve, as shown in Figure 3.2. A rightward shift is known as an increase in demand, whereas a leftward shift is known as a decrease in demand. A rightward shift means that a greater quantity of a good or service is demanded at any given price, whereas a leftward shift means that a lower quantity of a good or service is demanded at any given price.

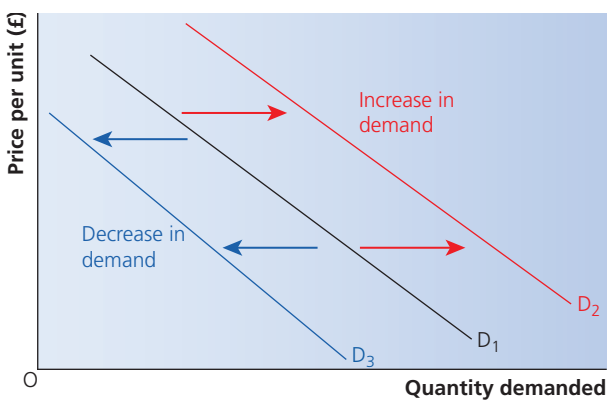


Figure 3.2 Shifts of the demand curve

Exam tip

Do not confuse a movement along a demand curve with a shift of the whole demand curve. The only variable that leads to a movement along a given demand curve is a change in price of that good or service. Changes in other factors, such as real disposable incomes and consumer tastes, lead to a rightward or leftward shift of a demand curve.

Conditions of demand: factors other than the price of the good that lead to a change in position of the demand curve.

Taxation: a charge placed by the government on various forms of economic activity. Most taxes are on forms of income and types of spending.

Substitute: a good that may be consumed as an alternative to another good.

Complement: a good that tends to be consumed together with another good.

Now test yourself TESTED

1 What would be the effect of the following on demand for cars in the UK?
   a) an increase in petrol prices
   b) a decrease in car parking fees
   c) a fall in rail fares
   d) an increase in fuel efficiency of cars

Answers available online

Price, income and cross elasticities of demand

Price elasticity of demand (PED)

REVISED

Price elasticity of demand: the responsiveness of quantity demanded of a good to a change in price.

Price elasticity of demand refers to the responsiveness of the quantity demanded of a good or service to a change in its price.

The formula is stated as:

$$\text{PED} = \frac{\text{percentage change in quantity demanded}}{\text{percentage change in price}}$$

Apart from a few cases, the value for price elasticity of demand is negative because of the assumed inverse relationship between price and quantity demanded. In practice, the minus sign tends to be ignored when presenting the result of any calculation.

Exam tip

It is worth memorising the percentage change formula as you will be required to use it frequently.

$$\text{Percentage change} = \frac{\text{change}}{\text{original value}} \times 100$$

Key values and diagrams

Price inelastic demand

When demand for a product is price inelastic, the value of PED is between 0 and 1, ignoring the minus sign.

Example: a 50% increase in the price of petrol leads to a 10% fall in quantity demanded. So:

$$\text{PED} = \frac{-10}{+50} = -0.2$$

The change in price has led to a smaller percentage change in the quantity demanded.

Price elastic demand

When demand for a product is price elastic, the value of PED is greater than 1, ignoring the minus sign.

Example: a 10% reduction in the price of cars leads to a 15% increase in quantity demanded. So:

$$\text{PED} = \frac{+15}{-10} = -1.5$$

The change in price has led to a larger percentage change in the quantity demanded.

Figure 3.3 illustrates an inelastic and elastic section of a demand curve.

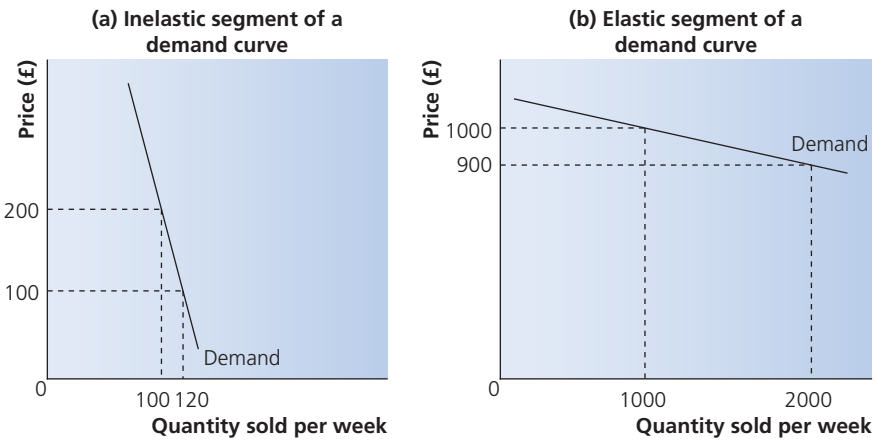


Figure 3.3 An inelastic and an elastic section of a demand curve

Making links

The concept of price elasticity of demand is important for governments wishing to maximise revenue from placing a tax on goods and services, as well as in reducing consumption of certain products. Price elasticity of demand for the UK's imports and exports also determines how the current account of the balance of payments responds to changes in exchange rates.

Unitary elastic demand

When demand is unitary elastic, the value of PED is exactly 1, ignoring the minus sign. The demand curve is a rectangular hyperbola, as shown in Figure 3.4.

Example: a 20% increase in the price of a mobile phone leads to a 20% decrease in quantity demanded. So:

$$\text{PED} = \frac{-20}{+20} = -1.0$$

The change in price has led to the same percentage change in quantity demanded.

Perfectly inelastic demand

When demand for a product is perfectly price inelastic, the value of PED is 0. The demand curve will be vertical, as shown in Figure 3.4.

Example: a 10% increase in the price of a carton of milk leads to no change in quantity demanded. So:

$$\text{PED} = \frac{0}{+10} = 0.0$$

The change in price has led to no change in quantity demanded.

Perfectly elastic demand

When demand is perfectly elastic, the value of PED is infinity. The demand curve will be horizontal, as shown in Figure 3.4.

Example: an extremely small increase in the price of a product leads to the quantity demanded falling to zero.

The change in price has led to an infinitely large change in quantity demanded.

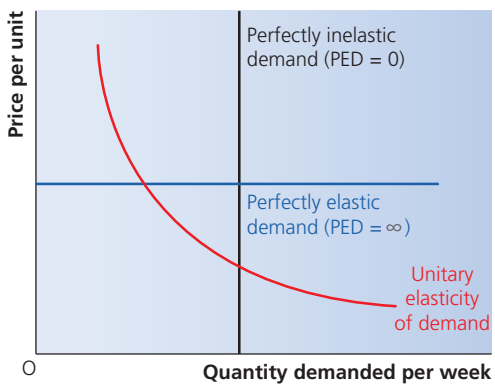


Figure 3.4 Demand curves showing unitary elasticity, perfectly inelastic demand and perfectly elastic demand

Worked example

Calculate the price elasticity of demand of pasta if a rise in the price from £1.80 to £2.20 per kilogram leads to a fall in quantity demanded from 6 million to 5.5 million kilograms per week. Comment briefly on your answer.

1 $\%\text{ change in price} = \frac{+£0.40}{£1.80} \times 100 = +22.2\%\ \text{(rounded)}$

2 $\%\text{ change in quantity demanded} = \frac{-0.5\,\text{m}}{6\text{m}} \times 100 = -8.3\%$

3 $\text{PED} = \frac{-8.3}{+22.2} = (-)0.37$

4 Pasta is inelastic in this case.

Now test yourself TESTED

2 Calculate the price elasticity of demand in the following examples and comment briefly on your results:

a) A rise in the price of petrol from 100p to 120p per litre leads to a fall in quantity demanded from 50 to 45 litres per week.

b) A fall in the price of games consoles from £250 to £200 leads to a rise in quantity demanded from 100 to 150 per day.

c) A rise in the price of racing bicycles from £2400 to £2640 leads to a reduction in quantity demanded from 60 to 40 per month.

Answers available online

Price elasticity of demand and total revenue

The price elasticity of demand of a product determines what happens to consumer spending (and, therefore, total revenue) following a price change.

- If demand is price elastic, a reduction in price leads to an increase in total revenue.
- If demand is price inelastic, a reduction in price leads to a decrease in total revenue.
- If demand is price elastic, a price increase leads to a reduction in total revenue.
- If demand is price inelastic, a price increase leads to an increase in total revenue.

Now test yourself TESTED

3 The initial price of tea bags is £1.50 per box and quantity demanded is 3000 boxes per week. In a sales promotion the price is reduced to £1.20 per box and the quantity demanded becomes 3300 per week as a result. Calculate both the change in total revenue and the price elasticity of demand.

4 If demand for holidays to the Maldives is price elastic, what will happen to total revenue if holiday companies increase their prices for holidays to this destination?

5 If an increase in the price of milk leads to a rise in total revenue, what can be concluded about price elasticity of demand?

Answers available online

Determinants of price elasticity of demand

- **Availability of close substitutes:** if a very close substitute exists for a product, an increase in its price will lead to consumers buying more of the substitute. If one or more close substitutes exist, this will tend to make demand for the product price elastic. If there are few close substitutes, demand will be more inelastic.
- **Percentage of income spent on the product:** if a product accounts for a relatively large percentage of a consumer's income, such as a new car, a change in price of, say, 50% is likely to have a significant impact on disposable income. Therefore, demand for such products will tend to be price elastic. However, the same proportional price change for a relatively inexpensive product, such as a loaf of bread, will not have the same overall impact on disposable income and so consumers are likely to be less sensitive to changes in price. Therefore, demand for such products will tend to be price inelastic.
- **Nature of the product:** if a product is seen as a necessity, or perhaps even has addictive qualities, demand will tend to be price inelastic as few alternatives will exist from the viewpoint of the consumer. However, if a product is seen as a luxury, i.e. something that a consumer can do without, demand will tend to be price elastic.

- **Time period:** the longer the time period following a price change, the easier it is for a consumer to adjust their spending patterns or research alternatives, and for more alternatives to become available. In the very short run, motorists may feel obliged to pay whatever price they are charged per litre of fuel, and so demand will be more price inelastic. In the long run, motorists may be able to switch to alternative fuels or more fuel-efficient cars, use public transport or move closer to work. This will make demand for a product more price elastic in the long run.
- **Broad or specific market definition:** a broad market category, e.g. food, is likely to have price inelastic demand, whereas a specific product in a market segment, e.g. baked beans produced by a particular firm, is likely to have more price elastic demand.

Income elasticity of demand (YED)

REVISED

Income elasticity of demand: the responsiveness of demand for a good to a change in consumers' real income.

Income elasticity of demand measures the responsiveness of demand to a change in real income. The formula is:

$$\text{YED} = \frac{\text{percentage change in quantity demanded}}{\text{percentage change in real income}}$$

Key values

For YED the sign is important. If the value is positive, i.e. greater than 0, the product is a normal good. This means a rise in income will lead to an increase in demand. If the value is negative, i.e. less than 0, the product is an inferior good. This means a rise in income will lead to a fall in demand.

Income elastic demand

When demand for a product is income elastic, the value of YED is greater than +1.

Example: a 10% increase in real income leads to a 20% increase in demand for foreign holidays. So:

$$\text{YED} = \frac{+20}{+10} = +2.0$$

The increase in real income has led to a greater percentage increase in demand. Income elastic products are often referred to as luxury goods.

Income inelastic demand

When demand for a product is income inelastic, the value of YED is between 0 and +1.

Example: a 10% increase in real income leads to a 2% increase in demand for cartons of milk. So:

$$\text{YED} = \frac{+2}{+10} = +0.2$$

The increase in real income has led to a smaller percentage increase in demand. Income inelastic products are often referred to as basic goods or necessities.

Negative income elasticity

When demand for a product is negative income elastic, the value of YED is negative, i.e. less than 0.

Example: a 20% increase in real income leads to a 10% fall in demand for a supermarket's value brand of baked beans. So:

$$\text{YED} = \frac{-10}{+20} = -0.5$$

The increase in income has led to a fall in demand. Negative income elastic products are referred to as inferior goods.

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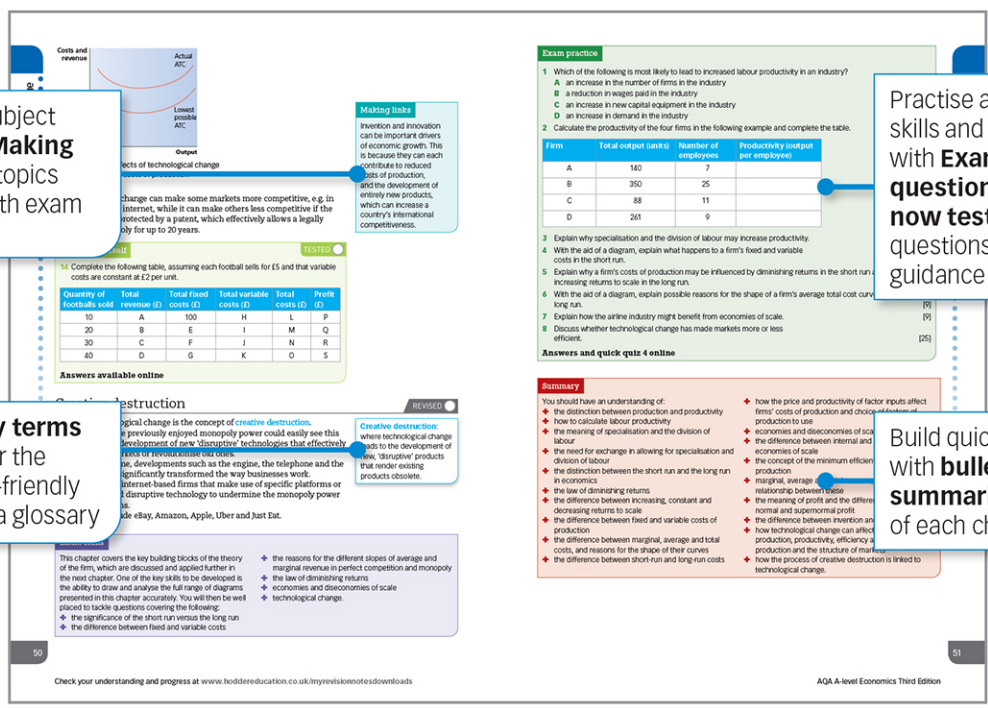

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