Published for OXFORD INTERNATIONAL AQA EXAMINATIONS

ernational A2 Level

-12,0427

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2,7



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How to use this book

This book fully covers the syllabus for the Oxford AQA international A2 Level Economics course (9640). Experienced examiners and teachers have been involved in all aspects of the book, including detailed planning to ensure that the content adheres to the syllabus.

Using this book will ensure you are well prepared for the assessment at this level and will give you a solid foundation for further study at university level and beyond. The features below are designed to make learning interesting and effective.

Activities

These are exercises that relate to the chapter content. They can be done in class or as part of individual study.

Progress questions

These questions appear throughout the book. They are designed to check that you understand the content as you learn. Answers for all progress questions are available in the back of the book.

Key terms

These are the most important vocabulary and definitions that you need to learn. They are also compiled at the end of the book in a glossary.

Get it right

These are helpful tips and hints to give you the best chance of success.

Link

Links are provided to other parts of the book, and to the AS course/ book where appropriate, for you to find related information.

Case study

These are real-life examples to illustrate the subject matter in the chapters. These examples are accompanied by questions to test your understanding.

Exam-style questions

These questions appear at the end of each chapter section. They use the same command words, structure and mark assignment as the OxfordAQA exams. Answers for all examstyle questions are available in the back of the book.

Quantitative skills

These are the skills required to calculate, illustrate, apply and interpret data and key economic concepts. The nine specific QS are listed in the syllabus.

The questions, example answers, marks awarded and/or comments that appear in this book were written by the authors. In examinations, the way marks would be awarded to answers such as these may be different.

At the end of the book, you will find a glossary of the key terms highlighted in bold in the text.

1 The objectives of individuals and firms

The economics of business behaviour and the distribution of income



This section will develop your knowledge and understanding of:

- → utility theory: total and marginal utility, the hypothesis of diminishing marginal utility and utility maximisation
- → the importance of information for decision making
- → the significance of asymmetric information.

Individual decision making

An important part of microeconomic theory involves analysing factors that affect the decisions made by individuals and households. Individuals and households have limited incomes and they must decide how best to use this income. In particular, they have to decide which goods and services to buy. However, they may also decide to save some of their income, to allow them to consume more goods and services in future.

Traditional economic theory assumes that individuals are motivated by self-interest, focusing on their own needs and wants. When deciding which goods and services to buy and in what quantities, people aim to maximise their own satisfaction or welfare. Their income limits what they can buy, so they have to make choices, weighing up alternatives and the opportunity cost of each decision. If they buy more of one good, they will have less income available for others.

Some households may be able to consume more than they can buy from their current income by using past savings, reducing their wealth. Also, household incomes are not necessarily fixed. Some people may be able to work longer hours to increase their income.

Traditional economic theory assumes that people prefer leisure to work. The hours they choose to work will depend on the value they place on leisure compared to the value they place on the goods and services they could buy with the extra income earned from working more.

More recent developments in Economics question this approach to individual decision making and they will be explored further when considering behavioural economics.

Utility theory

Utility theory assumes that individuals are motivated by self-interest, focusing on their own needs and wants. They are rational economic decision makers. They consider alternative choices, making decisions that will provide them with the most benefit, welfare or satisfaction. Individuals will try to maximise their utility. This is the classical or traditional view.

Link

Rational behaviour was introduced in 1.3 "Scarcity, choice and the allocation of resources" in the AS book, when discussing opportunity cost.

Total, marginal and average utility

If consumers act rationally, they weigh up the welfare or satisfaction they believe they will obtain from products in relation to their price. In Economics, this satisfaction is called **utility**. Utility in Economics is not the same as usefulness. It is based on the view of the consumer of the expected pleasure they will gain from consuming a product at a particular time. Some products which may be bad for us, such as cigarettes, provide utility to the individuals who consume them.

Utility is difficult to measure but sometimes, economists use theoretical units called utils to represent the amount of satisfaction a person believes they will obtain from consuming a particular product at a given time. This estimate of utility is subjective. It will vary from person to person and be different at different times. For example, the estimated utility from consuming a biscuit is likely to be lower if that person has just eaten a meal compared to if they are hungry.

For each decision, a person will need to consider the price of the items, the satisfaction gained from them and the opportunity cost. They may, for example, be weighing up the satisfaction gained from spending an extra \$1 on biscuits or a soft drink.

The **total utility** (for a product) is the amount of satisfaction obtained from consuming different amounts of a product and **marginal utility** is the change in total satisfaction when one more unit or one unit fewer of the product is consumed. For example, if the total satisfaction from consuming three biscuits is 205 utils and the satisfaction obtained from consuming two biscuits is 150 utils, then the marginal utility of the third biscuit is 55 utils, the difference between the total utility for two and three biscuits (as shown in Table 1.1.1).

Average utility is the amount of satisfaction per item. It is calculated by dividing the total utility by the number of units consumed. If the total utility of consuming two units is estimated to be 150 utils, then the average utility of each unit is 75 utils.

The hypothesis of diminishing marginal utility

For most products, the more you have, the less satisfaction you gain from consuming another item. There is diminishing (falling) marginal utility. It is likely that consuming the first biscuit will give you the most satisfaction and that each extra biscuit you consume will give you less satisfaction than the one before. This principle is often known as the law or **hypothesis of diminishing marginal utility**.

If a person continues to consume more biscuits, there is likely to come a point where they receive no, or even negative, utility from an extra biscuit.



▲ Figure 1.1.1: Diminishing marginal utility?

Get it right

In Economics, many decisions are made at the margin. For example, the decision may not be whether to have biscuits or soft drinks but whether to spend a certain sum of money on a third biscuit or a second soft drink. It is the marginal utility gained from the alternatives that will affect this decision, not the total utility.

Key terms

Utility: the satisfaction obtained from consuming a good or service.

Total utility: the satisfaction obtained from consuming a particular number of units of a product, the aggregate of the utility for all the units consumed.

Marginal utility: the addition to total utility from consuming an extra unit of a product.

Average utility: the satisfaction per item, calculated by dividing total utility by the number of items.

The hypothesis of diminishing marginal utility: the idea that the more you have of something, the less satisfaction you gain from consuming an extra unit.

Activity

Think of the last **three** items you bought. To what extent did you consider the satisfaction you would gain from consuming each of these items in relation to their price?

Link

The relationship between price and quantity demanded was covered in 2.1 "The demand for goods and services" in the AS book.

The hypothesis of diminishing marginal utility and the demand curve

If people receive less satisfaction from extra units when they consume more, this suggests that they will be willing to pay less for additional units. To persuade people to buy more, the price will need to be lower, which suggests that the individual and market demand curves are likely to be downward sloping. If someone receives little pleasure from consuming a fifth biscuit, the price may need to be low to persuade them to buy five biscuits.

The hypothesis of diminishing marginal utility helps to support a downward-sloping demand curve, where demand is the quantity that consumers are willing and able to buy at a given price in a given period of time. The lower the price, the greater the quantity demanded. The price of a good relative to the price of others will affect the quantities we buy of each.

The relationship between marginal utility and total utility

Table 1.1.1 shows what happens to marginal and total utility as a person's consumption of biscuits rises.

Number of biscuits	Marginal utility (utils)	Total utility (utils)
1	80	80
2	70	150
3	55	205
4	35	240
5	10	250
6	0	250
7	-10	240

Table 1.1.1: Diminishing marginal utility

Ouantitative skills

When drawing a diagram to show the change in a variable such as marginal utility, when there is one more or one fewer unit, it is conventional to plot the points opposite 0.5 units, 1.5 units, and so on, as can be seen in Figure 1.1.3. For example, the marginal utility of 55 utils for the third biscuit represents the difference between the total utility obtained from two biscuits (150 utils) and the total utility from three biscuits (205 utils). This is plotted halfway between these two values, at 2.5 biscuits. Table 1.1.1 shows a situation where marginal utility falls the more biscuits a person consumes. Diminishing marginal utility sets in after the first biscuit. The marginal utility of the second biscuit of 70 utils is less than the satisfaction of 80 utils obtained from the first biscuit.

Total utility rises as long as marginal utility is positive but as marginal utility falls, total utility rises at a decreasing rate. For example, the marginal utility of the fourth biscuit adds only 35 utils to the previous total utility, compared to the 55 utils added from consumption of the third biscuit. When the sixth biscuit provides no additional satisfaction, sometimes called the saturation point, total utility stays the same and if even more biscuits are consumed, the resulting negative marginal utility (sometimes called disutility) causes total utility to fall.

Sometimes, the satisfaction gained from an additional unit can rise before falling. For example, if the marginal utility of the first three biscuits had been 70 for the first, 80 for the second and 55 for the third, then diminishing marginal utility would have set in after the consumption of the second biscuit.



Figure 1.1.2 and Figure 1.1.3 are drawn using the data in Table 1.1.1. Figure 1.1.2 shows total utility increasing but at a decreasing rate, until no extra satisfaction is obtained from the sixth biscuit. This is because marginal utility is falling for every extra biscuit consumed until no utility is obtained from the sixth biscuit, as shown in Figure 1.1.3. Since the marginal utility of the seventh biscuit is negative, this causes total utility to fall.

Utility maximisation

Economic theory often assumes that economic agents are maximisers. The goals they set are driven by self-interest. For example, firms are assumed to be profit maximisers. A rational consumer will try to obtain the most benefit, welfare or satisfaction from the goods and services they consume. This is known as **utility maximisation**. Utility theory assumes that households try to maximise their total utility from spending their income but this does not mean that they try to maximise the total utility from each product they buy.

For a single product, total utility is maximised when marginal utility is zero. Up to this point, if marginal utility is positive, it will increase total utility. In the biscuit example in Table 1.1.1, total utility is maximised when six biscuits are consumed. This can also be seen in Figures 1.1.2 and 1.1.3. When the seventh biscuit is consumed, marginal utility is negative (-10 utils), resulting in the total utility of seven biscuits (240 utils) being lower than the total utility of six biscuits (250 utils). If the biscuits are free, utility will be maximised by consuming six biscuits. However, even if biscuits are free, a rational consumer will not consume the seventh biscuit, since it will reduce their total satisfaction.

Since they require resources to make them, it is unlikely that the biscuits will be free. Rational consumers need to consider the amounts spent on different goods and services and the satisfaction gained from

Key term

Utility maximisation: obtaining the highest possible satisfaction.

Progress questions

- 1 What is utility?
- 2 Use Table 1.1.1 to calculate the average utility of:
 - i. 4 biscuits
 - ii. 5 biscuits.

Link

Other maximising situations are covered later, including the fact that total revenue is maximised where marginal revenue is zero in 2.4 "Marginal, average and total revenue curves". them to decide which combination of products would enable them to maximise their satisfaction with a given sum of money. When a consumer is choosing between alternative products, they must weigh up how much utility they will gain from extra units of the different products in comparison to their prices.

Utility maximisation is limited by people's incomes. People cannot buy everything that will give them some satisfaction. They must weigh up the opportunity cost of their decisions, in terms of what they must sacrifice when they choose to buy an extra item of a particular product. However, satisfaction is difficult to measure and a consumer cannot know exactly how much benefit they will obtain from every product they might consider.

The importance of information for decision making

One of the assumptions underlying utility theory is that everyone has perfect information. Consumers need all relevant information to make a rational decision about which products to consume and in what quantities. They will need to know the price and quality of different goods and services. They must then consider the satisfaction they will gain from alternative choices to make a decision about which combination of products will give them the most satisfaction. If they have imperfect information, such as incomplete or incorrect information, they may make the "wrong" decision.

Imperfect information may lead to the underconsumption of merit goods and overconsumption of demerit goods. If people are unaware of, or do not understand, the full effects both in the short term and the long term of consuming certain products, they may make an irrational or wrong decision about which products to buy and in which quantities, so they do not maximise their satisfaction.

Sometimes consumers have too much choice and/or it may relate to a technical issue which they know little about. For example, there may be many health insurance policies to choose from in some countries and the details may be difficult to understand and compare. Similarly, is it easier to choose the best ice cream flavour if there are five or twenty-five different flavours available?

Also, the satisfaction a person expects to obtain may not be the satisfaction they receive from the experience. For example, a football supporter may spend \$200 on travel and entrance fees to an away game, believing that the expenditure is worth the likely satisfaction obtained. A poor match when her team loses may make her regret her choice. At the time, it was a rational decision but afterwards she may think that there would have been better ways of spending the money to gain more satisfaction.

The significance of asymmetric information

Asymmetric information is a form of imperfect information where one party, usually the seller, has more or better information than the other, usually the buyer. For example, in the market for second-hand cars, the seller has far more knowledge of their quality than the buyer.

Link

Imperfect information, including asymmetric information, was explained in 5.5 "Market imperfections" in the AS book, as a possible cause of market failure. The buyer may buy a car which proves to be faulty and therefore does not provide the satisfaction expected but he could also miss out on buying a good car if he does not trust the seller. In this case, the seller also loses out on the sale. When buying health insurance, for example, it is the buyer that has more knowledge of their past and current health than the insurance company. Either way, if one party has more information, the "wrong" decision could be made.

Information failure, where individuals or firms have inaccurate or incomplete information, or have misunderstood the data, makes it difficult for economic agents to make rational decisions and is another possible cause of market failure. Consumers will be unable to weigh up all the costs and benefits to maximise their utility/satisfaction.

Summary of utility theory and its limitations

Utility theory has, for a long time, underpinned economic ideas about which products individuals buy and in what quantities. It assumes that an individual considers the satisfaction they will obtain from alternative goods and services to try to maximise their total utility from the package of goods and services they buy, given their limited income.

However, the theory has a number of limitations including:

- measurement of utility is difficult
- there may be imperfect information
- habit and impulse may cause us not to weigh up utility.

These and other influences on individual economic decision making are considered further in the next section.

Case study: The utility of water



▲ Figure 1.1.4: Parkrunners

The first parkrun was in London, England in 2004. Parkruns are usually held once a week, are free to enter and involve people covering a distance of 5km. Fifteen years later, there were typically over 250,000 runners taking part on a Saturday in about 1,500 locations in over 20 countries. After the United Kingdom and Australia, the country with the third most parkruns is South Africa.

Bandile completed his usual parkrun on a hot day in Johannesburg in a personal best time of just under

21 minutes. Cups of water were available at the finish. Table 1.1.2 lists some details of the utility he estimated he would obtain from different numbers of cups of water, measured in utils.

▼ Table 1.1.2: Bandile's utility schedule

Cups	Marginal utility (utils)	Total utility (utils)	Average utility (utils)
1		42	
2	28		
3			29
4		96	
5	4		
6			16.5

1 Copy and complete the table.

- 2 If water is free, how many cups will Bandile drink to maximise his utility?
- **3** How might Bandile's consumption of water be different if he had not just completed the parkrun?

