

Consumer behaviour

Key concepts from Year 1

This chapter builds on the concept of the rational consumer, introduced in Year 1. It links closely to Chapter 6 of the Year 1 companion textbook – the determinants of demand – by explaining the link between marginal utility and the individual demand curve.

This chapter examines the traditional view of rational economic decision making and economic incentives. Utility theory is then considered, looking at the difference between total utility and marginal utility and explaining the hypothesis of diminishing marginal utility. The chapter concludes with a study of utility maximisation and the importance of analysis of the margin when making choices.

Rational economic decision making

Economists often make assumptions when analysing situations, and investigating consumer behaviour is no exception. A critical assumption made by traditional economists is that consumers are rational. Each consumer will make decisions that will, as a whole, maximise their individual welfare. If this logic is applied to the market, then all consumers in the market act logically.

Economic man (or *homo economicus*) is the name given to the hypothetical individual who:

- behaves rationally. This means that economic man acts in a way that is consistent with his (or her) preferences. Neoclassical economics assumes that individuals have a fixed set of preferences when choosing their consumption of goods and services;
- has complete knowledge. In order to make rational decisions, perfect knowledge is required. It is also assumed that economic man can undertake the complex calculations required to assess and compare the relative value of the various wants that he wishes to satisfy;
- acts solely in self-interest. Decisions made by economic man are intended to satisfy his personal/household wants. No consideration is given to the impact of his decisions on other parties.
- aims to maximise personal utility/satisfaction/happiness. Economic man consumes the goods and services that allow him to enjoy the highest possible level of satisfaction or happiness.

Behavioural economists question the validity of the concept of economic man, arguing that the assumptions outlined above are not realistic in modern society. In particular, we will examine why they challenge the idea that man always acts rationally. In Chapters 3 and 4 we will examine the views of behavioural economists and their impact on economic behaviour and policy.

Key term

Rational economic

decision making occurs when individuals compare the benefits and costs of alternative decisions and select the one that maximises their personal net benefit.

Key note

In his book *Principles of Economics* (1998), Harvard University economist Greg Mankiw identified ten economic principles. Four of these relate to ‘how people make decisions’:

- People face trade-offs.
- The cost of something is what you give up to get it.

(These ideas refer to the concepts of ‘choice’ and ‘opportunity cost’, introduced in Chapter 4 of the Year 1 companion textbook.)

- People respond to incentives. (This is explained immediately below.)
- Rational people think at the margin. (This is explained in the section on marginal utility later in this chapter.)

Economic incentives

The traditional view of consumer behaviour is that ‘people respond to incentives’. In this context, the word ‘incentives’ refers to both costs and benefits. If the price of a good rises, then people will buy less of it. Similarly, if the price of a good falls, then people will buy more of it. In this way, price acts as an incentive to buy less (or more) of a good.

A benefit describes the satisfaction that a consumer receives from a good. If a rational consumer believes that, in a new situation, a particular good provides them with more satisfaction, then they will be encouraged to buy more of it.

We saw in the first year how the market mechanism impacted upon consumer behaviour through its influence on the quantity demanded. Changes in the quantity demanded were brought about through price changes (*resultant* changes) or changes in consumers’ perceptions of the benefits of the good (real changes). These changes acted as incentives to modify the quantity consumed.

Utility theory: total and marginal utility

It is difficult to quantify happiness, although utility is an attempt by economists to do so. The term ‘util’ is sometimes used as a way of measuring utility or satisfaction. Although utility can be difficult to measure, the market mechanism uses price to decide the allocation of goods. This is based on the assumption that an individual who is prepared to pay a given price for a good must want that good more than an individual who is not prepared to pay that price. However, this approach ignores the importance of income and wealth. Nevertheless, the satisfaction that one individual gains from different goods can be assessed by the price that he or she is willing to pay for each good. This means that the relative utility of different goods to a given individual can be judged.

Key terms

Utility is a measure of the satisfaction or happiness gained from the consumption of a good or service.

Total utility is the aggregate sum of satisfaction or happiness that an individual gains from the consumption of a given amount of a good or service.

Marginal utility is the additional satisfaction or happiness gained from the consumption of one more unit of a good or service.

Economic incentives are costs or benefits that influence economic agents to act in a certain way. These incentives are often, but not necessarily, financial.

For a rational consumer, the more units of a good that a consumer buys, the less utility each additional unit provides for the consumer. For example, if someone is very thirsty, the first bottle of water gives a great deal of utility as it is needed to quench the thirst. A second bottle may also help, but the main thirst has been quenched and so it gives less utility than the first bottle and so on for subsequent bottles.

A rational consumer will only buy a product if the amount of utility it gives is equal to or greater than the price charged. In the instance above, the consumer may be prepared to pay £2 for the first bottle of water, as it provides a great deal of utility. The second bottle is worth less than the first bottle, say 50p, as it helps to quench the remaining thirst. The third bottle may be valued at 10p, as it provides some utility. If the fourth bottle provides no additional utility, then the consumer will value it at zero.

This logic applies to the individual's utility. However, as the UK market consists of about 60 million consumers, each making rational decisions, total utility for a good will follow the same pattern. As a consequence, at a high price fewer consumers will gain enough utility to make purchase worthwhile; at a lower price there will be more customers wanting to buy (demand) the good.

Table 1.1 shows how total and marginal utility may be quantified. The values are based on the choices made by the individual in the paragraph above. Since these choices were expressed in terms of a willingness to pay a given price, their utility (utils) is equated to the number of pence they were prepared to pay.

Table 1.1 Measure of marginal and total utility of bottles of water for an individual

Quantity consumed	Marginal utility (utils)	Total utility (utils)
0	–	0
1	200	200
2	50	250
3	10	260
4	0	260

The hypothesis (law) of diminishing marginal utility

Measuring marginal utility allows the demand curve of an individual to be derived. Table 1.1 indicates that at prices above £2 per bottle, there will be no demand for water. At £2, the individual gains sufficient utility to purchase one bottle. A second bottle of water will only be purchased if the price falls to 50p. Similarly a third bottle will be demanded if the price is 10p. If water is free, then a fourth bottle will be demanded.

The hypothesis of diminishing marginal utility supports the view that demand curves should be downward sloping. As quantity consumed of a good rises, each additional good provides the consumer with a diminished level of utility. It is therefore logical that a rational consumer will be prepared to pay a lower price for the second good than the first good, a lower price for the third good than the second good, and so on. This leads to a demand curve that slopes downwards from left to right (Figure 1.1).

Utility maximisation

A rational consumer will try to achieve as much happiness as possible. This means that they will try to maximise their utility. In Table 1.1 total utility from bottles of water has been maximised (at 260 utils) when consumption is 4 units. However, this does not mean that the consumer will buy 4 units. The decision to consume a good

Key term

The **hypothesis (or law) of diminishing marginal utility** states that, as consumption of a good increases, each additional unit of the good provides less utility than that provided by the previous unit.

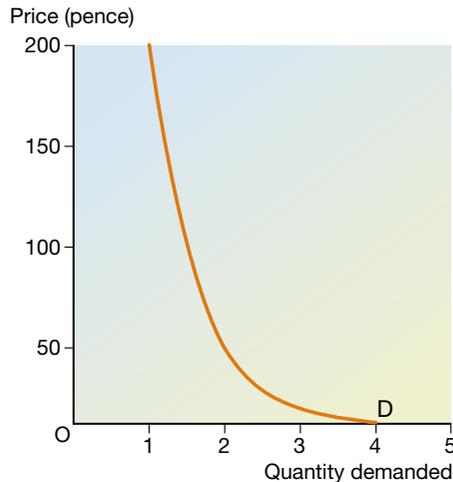


Figure 1.1 *Diminishing marginal utility and the individual's demand curve*

has an opportunity cost measured by the alternative foregone. The consumer has limited resources and has gained very little utility from the third and fourth bottles of water. Thus, unless the price is very low, it is probable that greater utility could be achieved by purchasing other goods.

It is not necessary to prove at A-level, but an individual consumer will maximise their utility by ensuring that the ratio between the additional (marginal) utility of a good and its price is the same for every good. Where MU_a is the marginal utility of good 'a' and P_a is the price of good 'a', a consumer's utility is maximised when:

$$\frac{MU_a}{P_a} = \frac{MU_b}{P_b} = \frac{MU_c}{P_c}, \text{ etc.}$$

This is known as the principle of equi-marginal utility.

The importance of the margin when making choices

The idea of maximisation is a common one in economic theory. For example, in the first year we saw that firms aim to maximise profits and factors of production aim to maximise their rewards. In this chapter we have seen that consumers wish to maximise their utility.

How can an individual consumer be sure that they are maximising their utility? This is where the importance of the margin can be shown. For each decision they make, such as the purchasing of a good, a consumer can measure the additional (marginal) benefit that they gain and compare it to the marginal cost of that decision. If the marginal benefit (MB) exceeds the marginal cost (MC), then their total utility has increased; if the marginal benefit (MB) is below the marginal cost (MC), then their total utility has decreased. Logically, a consumer will buy a good if $MB > MC$ and keep buying additional units until $MB = MC$. At this point total satisfaction is maximised and buying more of the good will cause total satisfaction to fall.

If we take the water purchases as our example and assume that each bottle of water costs 50p, the first bottle improves utility because $MB = 200p$ and $MC = 50p$. For the second bottle, $MB = 50p$ and $MC = 50p$; this is worthwhile because the benefit (just) matches the cost – overall total utility has not changed. For the third bottle, $MB = 10p$ and $MC = 50p$; this bottle should not be purchased since it reduces

overall satisfaction because the additional cost is higher than the additional benefit. Utility is maximised where $MB = MC$. This use of the margin when making choices will be examined in much more detail when studying topic areas such as profit maximisation, labour markets and market failure.

REALWORLD ECONOMICS 1.1

Airlines and the margin

Airlines frequently use the margin when selling 'last-minute' tickets. A typical plane has high fixed costs and low variable costs. As a rule they charge high prices to ensure that both fixed costs and variable costs are covered and profit can be made. One additional passenger adds little to total costs. Thus if a

seat is empty and unlikely to be filled, profit can be increased by charging a very low price provided the price covers the additional cost of flying the passenger.

Discussion points

1 Can you think of other examples of organisations/situations that might lead to this approach to pricing?

2 What is the danger of using this approach to pricing?

3 Ryanair uses a different approach. It charges lower prices initially to ensure that it sells all or most seats in its aircraft. Last-minute seats are sold at a higher price. Why might this be a logical approach for a firm aiming to maximise profit?

Review questions

Total: 20 marks

- 1** When making a decision, a rational consumer (economic man) will:
 - A Accept that their knowledge will be imperfect
 - B Aim to maximise individual utility
 - C Consider the impact of their decision on third parties
 - D Make the same purchasing decisions every time

(1 mark)
- 2** What is meant by the term 'rational decision making'? *(3 marks)*
- 3** Define the term 'total utility'. *(3 marks)*
- 4** The table below shows the total utility and marginal utility of baked beans to an individual.

Quantity consumed	Total utility (utils)	Marginal utility (utils)
0	0	–
1	20	20
2	35	(b)
3	(a)	9
4	51	7

- (a) Calculate the total utility of 3 units. *(2 marks)*
- (b) Calculate the marginal utility of the second unit. *(2 marks)*
- 5** Explain why a rational decision maker would respond to economic incentives. *(4 marks)*
- 6** Explain the importance of the margin to a consumer who is trying to maximise their utility. *(5 marks)*