

# Key concepts in health economics

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## Overview

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This chapter provides an introduction to the discipline of economics and to the sub-discipline of health economics. You will learn about the type of questions that economics is concerned with and some of the key concepts that it uses, particularly as applied to health and health care. If you have not studied economics before, this chapter will introduce many expressions and concepts that may be new to you. If you have problems fully understanding these concepts initially, don't worry! You will find that they are brought up throughout the book in different contexts and in relation to different types of problems. Ultimately what we expect is that, as you progress through the book, so does your understanding of these concepts and their applicability to 'real world' health issues.

## Learning objectives

After working through this chapter, you will be able to:

- explain what economics is and the problems that it seeks to solve
- define and apply a number of fundamental economic concepts
- explain why economics is applicable to health and health care

## Key terms

**Efficiency.** A general term used to describe the relationship between inputs and outputs. It is concerned with maximizing benefits with the resources available, or minimizing costs for a given level of benefit.

**Goods.** These are the outputs (such as health care) of a production process that involves the combining of different resources such as labour and equipment. Goods (including services) are valuable in the sense that they provide some utility (see below) to individual consumers. They are termed 'goods' as they are desirable, as distinct from 'bads' which you will read about later!

**Health sector.** Consists of organized public and private health services, the policies and activities of health departments and ministries, health-related non-government organizations and community groups, and professional associations.

**Health services.** The range of services undertaken primarily for health reasons and that have a direct effect on health, including health care programmes such as health promotion and specific disease prevention and treatment.

**Marginal analysis.** An examination of the additional benefits or costs arising from an extra unit of consumption or production of a 'good'.

**Market.** A situation where people who have a demand for a good come together with suppliers and agree on a price at which the good will be traded. A necessary condition for properly functioning markets is a system of property rights to ensure that people can participate in good faith.

**Opportunity cost (economic cost).** As resources are scarce, an individual, in choosing to consume a good, in principle, chooses the good which gives him or her the greatest benefit, and thus forgoes the consumption of a range of alternative goods of lesser value. The opportunity cost is the value of the benefit of the *next best* alternative.

**Resources.** These represent inputs into the process of producing goods. They can be classified into three main elements: labour, capital and land. Different goods would generally require varying combinations of these elements. Resources are generally valued in monetary terms.

**Utility.** The happiness or satisfaction an individual gains from consuming a good. The more utility an individual derives from the consumption of a good, all else being equal, the more they would be willing to spend their income on it.

**Welfare (or social welfare).** The economic criterion on which a policy change or intervention is deemed to affect the well-being of a society. In general, this is assumed to be determined by aggregation of the utilities experienced by every individual in a society.

## Types of economic problems in the health sector

The health sector consists of organized public and private health services (from surgery to health promotion programmes to dentistry), the policies and activities of health departments and ministries, health-related non-government organizations and community groups, and professional associations (WHO 1998). Those responsible for determining and managing different areas of a health sector are typically forced to consider questions such as:

- At what level should hospital fees be set?
- Are taxes on cigarettes a useful way of promoting health through reducing the prevalence of smoking?
- Which is the more effective method of increasing the take-up of health services: price controls or subsidies?
- How should doctors be paid?
- Which treatments are the most cost-effective for people with HIV?

You would probably agree that all of the above can be seen as economic problems. But what is economics and how would you define it?

Economics is the study of *scarcity* and the means by which we deal with this problem. Because resources are essentially limited, choices need to be made about how they are to be used. Economics, as a discipline, is concerned largely with how we make these choices in the context of scarcity. One of the key assumptions generally made in economics is that individuals will make these decisions *rationally*. This means that given good information they will choose to do things, such as utilize health services that will be in their best interests, where 'best interests' is defined as maximizing their *utility* given the resources they have at their disposal.

There are four specific questions that are the primary concern of economics:

- What goods are being produced and in what quantities? (For example: what types of malaria prevention measures are being implemented and how much of each type?)
- How are these goods produced? (What resources are required to produce these malaria prevention measures?)
- How is society's output of goods divided among its members? (Who has access to these measures?)
- How efficient is society's production and distribution? (Can we get the same amount of protection from malaria using fewer resources? Would an AIDS awareness campaign be a more effective use of resources than malaria prevention?)

## What is an economy?

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'The economy' refers to all the economic activities and institutions within a defined area (usually geographically, related to the political borders of a nation state). So you might refer to the performance of a specific national economy, or the global economy, or perhaps a regional economy.

'Resources' are items within the economy that can be used to produce and distribute goods. Resources can be classified as labour, capital and land:

- labour refers to human resources, manual and non-manual, skilled and unskilled;
- capital refers to goods that are used to produce other goods – for example machinery, buildings and tools;
- land generally refers to all natural resources, such as oil or iron ore.

Most resources are not, in themselves, useful to us as individuals but they can be combined to make something that is useful. This process is called production, and goods are the result of combining resources in the production process. *Goods* are either consumption goods, which are then used to directly satisfy people's wants, or else they are intermediate goods, which are goods used to make other goods. In economics the term *utility* is used to describe the satisfaction provided by the consumption of goods by individuals while *welfare* is the sum total of utility experienced across all individuals within a society.

Goods are either products that you can hold or touch (e.g. a drug) or else they are services that happen to you (e.g. a consultation). There are two essential characteristics that distinguish different goods:

- I *Physical attributes* – an ice cream and a cup of tea are clearly different commodities because they require different manufacturing techniques and because they satisfy different wants.

2. Context in which the good is consumed – for example:

- a. The time in which the good is available – an ice cream that is available on a hot summer's day is a different good from one available in the cold midwinter.
- b. The place where the commodity is available – a cup of tea available in a fashionable café is a different good from tea that is sometimes sold at a petrol station.

There are three ways in which individuals can benefit from the ownership of a good. Most immediately, it can be consumed (or used) and thus utility directly derived from it. Taking paracetamol is an example of such consumption because it increases utility by relieving the pain of a headache. Likewise, the use of a non-disposable good (i.e. not designed to be thrown away after use) such as a walking stick provides direct utility for an individual in terms of improved mobility.

The second benefit individuals can derive from (some) goods is their investment value. Although goods provide utility when consumed, goods themselves can also be used as inputs into a production process. For instance, apples might be the output from farm production and consumed immediately, or they can also be used as input into the production of apple pies or cider. People invest because they expect the good to be worth more in terms of its contribution to the production of the final product than its immediate utility. Often, an investment entails a risk such that the end return may be smaller than was expected at the time of investment.

The third benefit derived from a good is exchange value. If you do not invest or consume a commodity then you can sell it and potentially purchase other goods.

Figure 1.1 illustrates the different ways of using a resource (consumption, investment and exchange). Whichever route is taken, the result will be increased utility for the owner of the resource. The route chosen by the owner should depend on which one yields the largest increase in utility for them.

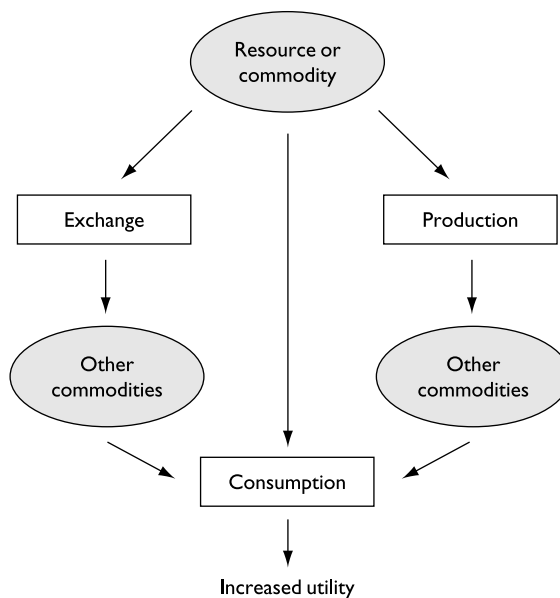


Figure 1.1 Alternative uses of a resource

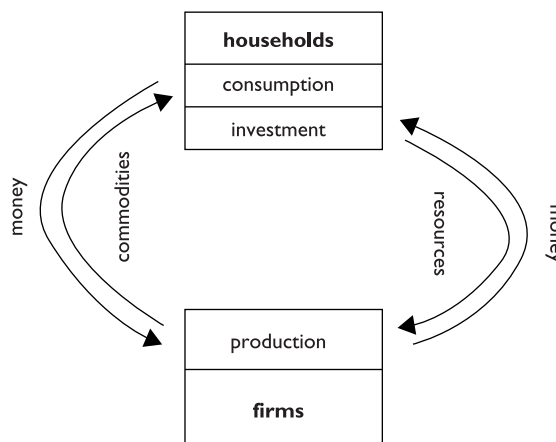
## What is a market?

In economics, the term ‘market’ is used to describe any situation where people who demand a good come together with suppliers. For it to be a market the buyers and sellers do not have to physically meet – for example, most obviously, trading on the internet can involve networks of individuals in all parts of the world who will never meet. Importantly, a necessary condition for properly functioning markets is a system of property rights to ensure that people can participate in good faith. This means that the transactions made between parties are somehow enforceable and that there are certain understood rules about how people behave in terms of providing information, making payment and delivering goods.

The amount of money that is exchanged for a good is the price. You will find in this book that the price is influenced by the number of suppliers in the market and the amount of money they are prepared to accept. The price is also influenced by the number of buyers in the market and the amount of money they are prepared to pay. Individual consumers or households are usually thought of as being buyers, while firms (or businesses) are associated with supply. However, this is not true in the cases of markets for resources and markets for intermediate goods. For example, in the labour market, households will supply and firms will demand labour.

Figure 1.2 shows a simple model of the flow of commodities, resources and money between households and firms. Households own resources (labour, land, shares in capital) and supply them to firms in return for money (wages, rent, interest and profit). Firms turn resources into goods and supply them to the households, again, in return for money. Households that supply more resources will receive more money and therefore will be able to consume more commodities.

This, essentially, describes markets – that is to say, markets that involve only firms and individuals buying and selling goods. In reality, most markets also have some kind of government intervention. Such intervention in the market might involve levying taxes, fixing prices, licensing suppliers or regulating quality. Alternatively, the government might decide to take control of demand for a commodity and prohibit private demand, or it might decide to take over supply entirely and prohibit private supply. On the other hand, a government might make laws that are intended to ‘free up’ market forces and



**Figure 1.2** The flow of money, resources and commodities

make markets more easily accessible. Ultimately, as mentioned earlier, markets are generally also underpinned by some form of state intervention through the legal system to uphold a system of property rights.

In some economies, the government plays such a large role that markets as such scarcely exist at all. Such systems are referred to as command or centrally planned economies. Because of the difficulties involved with planning a whole economy and the problem of trying to motivate workers and managers, command economies have rapidly diminished in number over the last 50 years or so. Almost every country in the world today has a mixed economy, a system in which market forces and central planning both play a role. We will return to the topic of markets in Chapters 7 and 8. For now, try refreshing your memory with the following activity.

### Activity 1.1

- 1 What is a resource, how are resources classified and what are the three ways of employing a resource?
- 2 In Table 1.1 match up the terms with their definitions.

**Table 1.1** Some economic terms and their definitions

1 Subsistence economy	a A system where exchange takes place without the use of money
2 Global economy	b The economic activities and institutions around the world
3 Barter economy	c An exchange economy with little government intervention
4 Mixed economy	d An economy with an absence of exchange
5 Command economy	e A market economy with substantial government intervention
6 Market economy	f An economic system where resource allocation decisions are directed by the state

### Feedback

- 1 Resources are inputs into the process of producing goods. They can be divided into three categories: land (including all natural resources and minerals), labour (all human resources) and capital (man-made resources used as aids to further products, e.g. equipment). A resource can be employed in one of three ways: consumed, invested or exchanged.
- 2 The terms can be matched up to the definitions as shown in Table 1.2.

**Table 1.2** Some economic terms and their definitions (solution)

1 Subsistence economy	d An economy with an absence of exchange
2 Global economy	b The economic activities and institutions around the world
3 Barter economy	a A system where exchange takes place without the use of money
4 Mixed economy	e A market economy with substantial government intervention
5 Command economy	f An economic system where resource allocation decisions are directed by the state
6 Market economy	c An exchange economy with little government intervention

## The building blocks of economics

Now that you have some idea about the problems that economists seek to solve and the ways economies function, you will learn about some of the most important concepts employed by economists. However, before reading further, you may like to bear in mind a statement made by Professor Gavin Mooney, a leading health economist.



I have sometimes suggested when teaching [health economics] that if any of the participants fall asleep during my lecture and awaken conscious that I have asked a question but that it has gone unheard, then the best response is to mutter something about *opportunity cost* and the *margin*. This has something like a 50 per cent or higher chance of being at least partly right.

(Mooney 1994: 27)

## Scarcity

Economics as a discipline exists because resources are scarce and the wants of human beings are such that the resources available now or for any foreseeable time are insufficient to meet all our wants.

Because resources are scarce, choices are involved in both production and consumption. If we use resources to produce hospitals then fewer resources are available to produce other desirable goods such as public health clinics. If we use more of our income through purchasing health insurance then we have less income to purchase education. The production and consumption processes then come together to ensure that we produce the 'right level' of both hospitals and clinics so that we do not produce an excess number of hospitals and leave unmet wants for clinics. In other words, we want the quantity supplied to match the quantity demanded. The importance of scarcity is reflected in the following quote.



Economics is not just a 'bag of tools' but it is also a set of ideas (a discipline) which together represent a coherent body of knowledge and of thinking. Economics as a discipline takes its life blood from the fact that resources are scarce in that they are never seemingly adequate to meet all human needs and wants. This is true in many walks of life. It is certainly true of health and health care.

(Mooney and Shiell 1996: 1)

## Choice and opportunity cost

These two concepts are the most important in economics. Since we cannot have all we want, then choices must be made. We all have to make choices on a daily basis. This might be about how we spend our income, how we earn our income, how we spend our time, etc. But why do we have to make choices at all? There are two basic reasons. First, our income is finite and second, given all the goods we would like to consume, our income is insufficient to finance them all. We must make choices about how best to spend our limited income. 'Best' here refers to the way that will give the individual most satisfaction or utility or maximize the population's gain in *social welfare* (or simply welfare).

Choices involve trade-offs. More hospitals means fewer clinics. More holidays means fewer cars or clothes. The *opportunity cost* (also known as the economic cost) of any good (including service) is the satisfaction or benefit forgone in not being able to use the resources involved to obtain some other good which is also desirable and provides satisfaction. Table 1.3 illustrates the relevance of this concept to the health sector by looking at the impact of increasing the number of inpatients on the number of outpatients that can be treated – i.e. the opportunity cost of treating inpatients in terms of outpatients. For example, the opportunity cost of treating 5,000 inpatients is 50,000 outpatients.

**Table 1.3** Illustration of opportunity cost: options for expenditure in a year

<i>Inpatients treated ('000s)</i>	<i>Outpatients treated ('000s)</i>	<i>Opportunity cost of treating inpatients in terms of outpatients forgone</i>
0	50	0
1	45	5
2	42	8
3	20	30
4	15	35
5	0	50

It is important to note that opportunity cost may involve something other than goods with money prices. Spending a day in the hospital waiting room may involve forgoing a day at work (measured in wages lost). But it might also involve forgoing a day in the park with your family. Time is scarce and its cost can be measured both in terms of lost income but also lost leisure time, or indeed utility. Just because there is not always a money price involved (as in the case of leisure time) this does not mean time is of zero value or that there is no associated cost.

## The margin

*Marginal* refers to 'the next unit'. It might be a health service deciding whether to expand an immunization programme or a doctor choosing whether to work an extra day. The reason why this is relevant is that, in making decisions, our interest is essentially on *change* in costs and benefits rather than their totals. Decisions are rarely made on an 'all or nothing' basis; instead they often tend to be made at *the margin*: if marginal benefit (the change in benefit) is greater than marginal cost (the change in cost), we go ahead; if marginal benefit is less than marginal cost, we do not.

One phenomenon which is generally observed is that the marginal benefits of most goods tend to diminish as the consumption of those goods increases. This is otherwise known as *diminishing marginal utility* and is intuitive – the first ice cream will generally be more enjoyable than the second, which in turn will be more enjoyable than the third and so forth. Health programmes also tend to experience diminishing marginal benefits as we will see in the next activity. After completing this activity, the importance of the concept of marginal analysis (including diminishing marginal benefits) and its relationship to efficiency should become clearer.



## Activity 1.2

- 1 Consider Table 1.4 that includes data on screening for colon cancer. Complete Column 3 (additional cases detected) and Column 6 (marginal cost per case). We have started the process for you.
- 2 Broadly speaking, why might screening exhibit diminishing marginal benefits as is the case here?
- 3 What is the most 'efficient' number of screening tests to conduct?

**Table 1.4** Screening for colon cancer

<i>Number of tests</i>	<i>Total number of cases detected</i>	<i>Additional cases detected</i>	<i>Total cost (\$)</i>	<i>Average cost per case (\$)</i>	<i>Marginal cost per case (\$)</i>
1	65.946	65.95	77,511	1,175	1,175
2	71.442	5.4956	107,690	1,507	5,492
3	71.90		130,199	1,810	
4	71.938		148,116	2,059	
5	71.94172		163,141	2,268	
6	71.942		176,331	2,451	

Source: Neuhauser and Lewicki (1976)

## Feedback

- 1 Table 1.5 presents the completed table. Additional cases detected were  $71.9004 - 71.4424 = 0.4580$  for the third test and  $0.000028$  for the sixth test. The marginal cost per case was found to be over \$47 million  $(\$176,331 - \$163,141)/0.00028$  for the sixth test.

**Table 1.5** Screening for colon cancer

<i>Number of tests</i>	<i>Total number of cases detected</i>	<i>Additional cases detected</i>	<i>Total cost (\$)</i>	<i>Average cost per case (\$)</i>	<i>Marginal cost per case (\$)</i>
1	65.946	65.95	77,511	1,175	1,175
2	71.442	5.4956	107,690	1,507	5,492
3	71.90	0.458	130,199	1,810	49,146
4	71.938	0.038	148,116	2,059	471,500
5	71.94172	0.00372	163,141	2,268	4,038,978
6	71.942	0.00028	176,331	2,451	47,107,143

Source: Neuhauser and Lewicki (1976)

Note: The results differ slightly from the original article due to rounding errors

- 2 Screening, for example, twice as frequently could theoretically double the number of cases detected but this is rarely observed in practice. Put simply, as you expand screening, it is harder to detect additional cases. It is also possible – if the screening tool was, say, painful, uncomfortable or associated with an increased risk of mortality – that expanding coverage to include otherwise healthy people could have an overall detrimental impact on health.
- 3 This example shows that the cost per additional case identified mounts rapidly with the number of additional tests. Ultimately it is *rational* for a policy-maker to continue to fund a programme when marginal benefit exceeds marginal cost but to stop once they eventually become equal. In this instance as marginal benefit diminishes. In this instance, this would mean stopping at two tests as ‘pursuing such a screening program to the last degree of perfection is inefficient’ (Shepard and Thompson 1979: 540).

In summary, marginal analysis is about getting the most value out of the resources used and in practical terms entails measuring the costs and benefits of expanding or contracting an activity, programme or service.

## Efficiency and equity

In setting economic objectives, most health care systems will want to pursue both efficiency and equity. *Efficiency* is a general term used to describe the relationship between inputs and outputs; which in turn can be valued respectively in terms of costs and benefits. Efficiency is concerned with maximizing benefits with the resources available, or minimizing costs for a given level of benefit. In health care, benefits may be interpreted as health gains, although health services produce a range of benefits including less tangible things like information and reassurance. There are a number of different types of efficiency and we will explore each of these in detail in Chapters 5, 6 and 7. Here is a short list summarizing them.

- *Technical efficiency*: where a given output is produced with the least inputs (i.e. minimizing wastage). Also known as operational efficiency;
- *Economic efficiency*: where a given output is produced at least cost. Also known as productive efficiency;
- *Allocative efficiency*: where the pattern of output matches the pattern of demand;
- *Pareto efficiency*: the point at which no one can gain without someone else being made worse off.

Every level of a health system faces questions about efficiency. For example, there are several ways in which hospitals might seek to improve the efficiency of their operations including:

- length of stay could be reduced;
- staff productivity could be increased;
- equipment could be fully utilized and maintained regularly;
- over-prescribing of drugs could be avoided;
- drug ordering and storage could be managed properly to avoid wastage and pilfering;
- nurses could replace doctors when appropriate;
- low-cost equipment could replace staff when appropriate;
- day surgery could replace inpatient stays.

If you have worked in a hospital, perhaps you have already experienced or attempted some of these measures. Were they successful? Implementation might be difficult, although some measures will be harder to enforce than others. To encourage the efficient use of resources, hospitals should collect financial data and managers should be trained to carry out cost analyses. There is also a need for staff to be aware of the financial constraints of the hospital if implementation is to be effective.

*Equity* is another important concern of economists as well as of health services. Equity is about the distribution of benefits as opposed to their maximization (as in efficiency). In Chapter 17 we go into the finer details of how equity has been defined and applied in the health sector. At this point, it is worth noting three things. First, equity usually has something to do with fairness and justice. It is subjective, as it will mean different things to different people and different communities. Second, *equity* is different to *equality*. Equity is about fairness but this may or may not mean the equal sharing of a good or service. It may for example be deemed fair that a disadvantaged group in society receive a greater share of resources. Third, equity and efficiency are often conflicting objectives. For instance, it may be efficient to fund health services concentrated in a small number of large centres but more equitable in terms of access to services to fund a larger number of dispersed, smaller services.

### Activity 1.3

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Try to answer the following questions without referring back to the text.

- 1 What terms are used to describe the satisfaction gained from consuming a good?
- 2 Explain the concept of *opportunity cost* and its relevance to public health.

### Feedback

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- 1 'Utility' is the word most often used by economists to refer to the happiness or satisfaction gained from consuming a good or service. The terms 'welfare' and 'social welfare' are in turn the aggregate utility of a population. 'Quality of life' and 'well-being' are other commonly used terms with roughly the same meaning. It is important to note that the core of economic theory is dependent only on the assumption that people can differentiate between states that have higher or lower utility (it is not necessary to be able to measure utility).
- 2 Because resources are limited, choices have to be made on how to best allocate these finite resources among investments. For governments, investment choices have to be made between alternative public services. Examples of investment choices include: between malaria prevention and malaria treatment programmes; or, more broadly, between TB, malaria and HIV programmes; or even more broadly between education and housing programmes. Choices involve opportunity costs. These costs refer to the benefits of the second best investment that are forgone as a result of using resources in the first best investment. For example, if the alternative investments in malaria were ordered according to the benefit that they generate, from highest to lowest, the first alternative might be malaria treatment and the second might be malaria prevention. If all the available resources were committed to the malaria treatment programme, the opportunity costs would be the benefits of the malaria prevention programme.

## Categorizing the discipline of economics

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Like any academic field, economics has a number of sub-disciplines, defined either by the types of questions that are examined or by the methods that are used – health economics being one of them. Two other important categorizations of economic thought are as follows.

### Microeconomics and macroeconomics

Microeconomics is concerned with the decisions taken by individual consumers, households and firms and with the way these decisions contribute to the setting of prices and output in various kinds of market ('micro' implies small scale); in other words, individual decision-making units. This is the focus of most of this book.

Macroeconomics is concerned with the interaction of broad economic aggregates (such as general price inflation, unemployment of resources in the economy and the growth of national output). It is also concerned with the interaction between different sectors of the economy ('macro' implies large scale). You will learn more about macroeconomics in Chapter 2.

### Positive and normative economics

Positive economics refers to economic statements that describe how things *are*. Such statements can be universally true, true in some circumstances or universally false. This can be established through empirical research.

Normative economics refers to economic statements that prescribe how things *should be*. Such statements can be informed by positive economics but can never be shown to be true or false since they depend on value judgements. For example, the following statement is positive:

*The presence of patents for drugs has led to greater expenditure on research and development in the pharmaceutical industry.*

In principle the presence of drug patents can be observed and so can the level of expenditure on research. With the appropriate statistical techniques we may or may not find that this is the case or it might be the case only in some countries or under certain circumstances. The following statement is normative:

*Patenting should be implemented in the pharmaceutical industry.*

To be useful to policy-makers, economists make use of both positive and normative economics. Positive statements can describe what will happen (or not happen) if a particular policy is carried out, but in order to make a recommendation we need to evaluate the policy according to one or more criteria. Two such criteria that you've already encountered are efficiency and equity. Other criteria often encountered in economics are economic growth and macroeconomic stability (which you will read about in Chapter 2). Be aware that studies often contain both positive and normative statements; in everything you read you should try to spot statements that go beyond description (like this one!).

Economists have a reputation for disagreeing with each other. This is understandable when one considers that:

- economists are keen to influence policy;
- policy recommendations are normative and are underpinned by value judgements;
- value judgements vary between individuals.

On this basis one should expect a great deal of disagreement among economists, reflecting disagreement in the wider world. Reassuringly, surveys, such as those reported by Alston *et al.* (1993) or Fuller and Geide-Stevenson (2003) seem to confirm that there is more agreement among economists on positive issues than there is on normative ones. Economists are slow at reaching a consensus on particular ideas because, due to the nature of the topics under study, it is either impossible or difficult to conduct experiments that can monitor changes in the variables of interest and at the same time hold all other potential influencing factors constant.

### Can economics be applied to the health sector?

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Anyone who has worked in the health sector will be well aware of the scarcity of resources. There are various reasons why the demand for health services continues to exceed supply:

- an *ageing population* in which the elderly potentially require more health services than younger adults;
- *new health technologies* which mean more conditions have become treatable;
- increased *expectations* from people.

Choices are inevitably made about what treatments are provided and about who receives treatment; that is, there is some form of rationing. Economists advocate making such rationing decisions explicit. Most importantly in the context of limited resources, the provision of one service, X, necessarily means that a second service, Y, is displaced. The health gain that we would have got from service Y is the opportunity cost of our decision to provide service X. Economists try to ensure that the opportunity cost of providing X (i.e. health gain from Y) does not exceed the health gain from X.

As economics is the study of scarcity and choice it follows that if economics is relevant anywhere then it should be relevant in the health sector. However, health services have some interesting characteristics that mean crude economic models should be used cautiously (Arrow 1963). None of these characteristics is unique to the health sector but the combination of characteristics together with their sheer number has contributed to health economics becoming a distinct sub-discipline of economics. One characteristic of many health economists that has moved them away somewhat from mainstream economics is their focus on health or health-related utility as the *maximand* or objective of health services. This approach is often referred to as 'extra-welfarism' and is distinct from 'welfarism' which focuses on the objective of maximizing utility or welfare. In the context of evaluating health services, 'welfarism' is potentially a much broader objective in so far as it can include a wide range of non-health benefits such as reassurance and choice.

The aim of health economists is often to inform decision-makers so that the choices they make maximize health benefits to the population. Health economics is not

concerned with 'saving money' but with improving the level and distribution of population health with the resources available. Over the course of this book you will be able to decide for yourself the extent to which the specific methods of health economics provide useful insights for health policy.

## Summary

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In this chapter you have read about some of the fundamental concepts of economics, not least of which are scarcity and opportunity cost. The premise of economic analyses is that there are never enough resources to do everything that we might like (scarcity) and thus once we make a choice as to how a resource is to be used, something else must be given up (opportunity cost). Economics provides us with a framework for rationally addressing this problem. You have also gained an understanding of the types of questions economists can help to address in the health sector and the different perspectives they take. For example, economics may adopt a micro or macro perspective, and be positive or normative. Health economics is a sub-discipline of economics, which applies the theories and methods of economics to all aspects of health and health care.

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## Further reading

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