## 21 IMPERFECT INFORMATION

Consumers and producers require complete information if they are to make efficient choices.

In perfectly competitive markets we assume that all agents in the market have perfect information about the availability of goods and services and also the prices charged by suppliers. Consumers can make purchasing decisions on the basis of full and free information on the products that they are buying.

### 21.1 What is Information Failure?

In reality of course, all of us experience **information deficits** which can lead to a misallocation of resources. **Information failure** occurs when people have inaccurate, incomplete, uncertain or misunderstood data and so make potentially 'wrong' choices.

Consumers can never be expected to have a full-informed view about the products they are faced with in each and every market. Searching for information is time consuming and carries an obvious opportunity cost.

Likewise, producers do not have full information about the products and prices being charged by their competitors.

Consumers might also under or over-estimate the private benefit from consuming a particular good or service. The classic case of this is the demand for health or education – where consumers may underestimate the long term private benefit from investing in extra education or buying a specific form of health treatment.

With **de-merit goods** consumers may suffer from further information failure, in particular the long term health costs of smoking or the possible consequences of dependency on alcohol.

### 21.2 Examples of information failure

Imperfect information can be caused by

- **Misunderstanding the true costs or benefits of a product**: E.g. the social costs and benefits of different classes of drugs and the private and social benefits from higher education when there are so many universities and courses to choose from
- **Uncertainty about costs and benefits** e.g. should younger workers be buying into pension schemes when we can only guess at economic conditions in 40 years time?
- **Complex information** e.g. choosing between makes of computers requires specialist knowledge of hardware. Do I buy an Apple or PC computer? The problems of choosing a quality second hand car or when deciding whether or not to buy a property
- **Inaccurate or misleading information** e.g. persuasive advertising may 'oversell' the benefits of a product leading to a higher demand and consumption than is optimal
- **Addiction** e.g. drug addicts may be unable to stop consumption of harmful substances

### 21.3 The Effects of Asymmetric Information

**Asymmetric information** occurs when somebody knows more than somebody else in the market. Such asymmetric information can make it difficult for the two people to do business together

Examples of asymmetric information include the following:

- A government selling mobile phone or broadcasting licences does not know what buyers are prepared to pay for them (an auction is usually the preferred solution to this)
- A mortgage lender does not know how likely a borrower is to repay
- A used-car seller knows more about the quality of the car being sold than do potential buyers

Asymmetric information can distort people's incentives to buy and sell goods and services at the right prices and as a result can lead to inefficiencies and market failure. One of the classic examples of asymmetric information comes from research on the used car market by the Nobel Prize winning economist George Akerlof.

**The Market for Lemons**

Take problem of buying a used car. Assume that used cars come in two types: those that are in good repair, and duds (or “lemons” as Americans and most economists call them). Suppose further that used-car shoppers would be prepared to pay $20,000 for a good one and $10,000 for a lemon. As for the sellers, lemon-owners require $8,000 to part with their old banger, while the one-owner, careful-driver old lady with the well-maintained estate won't part with hers for less than $17,000. If buyers had the information to tell wheat from chaff, they could strike fair trades with the sellers, the old lady getting a high price and the lemon-owner rather less.

If buyers cannot spot the quality difference, though, as is often the case in the real world, there will be only one market for all used cars, and buyers will be ready to pay only the average price of a good car and a lemon, or $15,000. This is below the $17,000 that good-car owners require; so they will exit the market, leaving only bad cars. This result, when bad quality pushes good quality from the market because of an information gap, is known as “adverse selection”. This was the simple but powerful insight of one of this year's laureates, George Akerlof, now a professor at Berkeley, in a seminal 1970 paper.

A great many markets, including those for shares, labour, insurance and banking, often resemble a used-car sale more closely than a McDonald's restaurant.

*Adapted from the Economist, October 2001*