

## Economics focus The lemon dilemma

## This year's Nobel prize for economics honours work inspired by a simple observation about used cars

Oct 11th 2001 | From the print edition

TODAY'S global economy is a colourful landscape. Brands are ubiquitous, sprouting from billboards, television and magazine advertisements that relentlessly tout the virtues of products. Humans themselves are not immune: American business gurus advise aspiring executives to style themselves as a product, "Brand You". Nowadays, everything seems to be a sales pitch.



But brands do help to make the world easier to navigate. A Coke or a Big Mac, say, is almost the same everywhere in the world. The customer knows the quality of a product by its brand. To understand why brands are so valuable an economic innovation—despite being pilloried by the anti-globalisation lobby—you need only imagine what happens when sellers offer a product whose quality a buyer cannot easily judge.

Take the frustratingly familiar 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.

Theories that deal with similar instances of so-called "asymmetric" information—when one party to a deal knows more than the other—link all three of this year's winners. It seems that 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.

## Sending signals, setting screens

Information gaps can be costly, as whoever has the least information can never be confident about what is being traded. But there are ways to reduce the cost. In used-car sales, for example, sellers with good cars can show convincingly that theirs is not a dud. Or used-car buyers can devise better strategies for spotting the lemons. This year's other two laureates, Michael Spence of Stanford University and Joseph Stiglitz of Columbia, won their prize for analysing how firms and consumers separate the gems from the lemons in a variety of industries.

Mr Spence's early work focused on how individuals use signalling to communicate their abilities in the labour market. Job applicants, for example, want to distinguish themselves from the mass of other hopefuls. They may try to do this in a number of ways, from a fancy suit to a fancy education. But for signals to be believable, Mr Spence observed, they need to differ substantially in their cost of acquisition. For example, for education to work as a credible signal, it must be harder for less able employees to get. Indeed, even if such an education gives a student no tangible skills—reading classics at Oxford, say—it can still be a useful signal of relative quality to employers.

Signalling is used in many markets, wherever a person, company or government wants to provide information about its intentions or strengths indirectly. Taking on debt might signal that a company is confident about future profits. Brands send valuable signals to consumers precisely because they are costly to create, and thus will not be lightly abused by their creators. Advertising may convey no information other than that the firm can afford to advertise, but that may be all a consumer needs to know to have confidence in it. Perhaps advertising, as a signal, is not money entirely wasted, as some economists argue.

The theory of signalling can also help to explain why companies pay dividends, even though they are less tax-efficient than share-price rises in compensating investors. Dividends, under the signalling theory, serve as a way of highlighting a strong profit outlook.

Mr Stiglitz is the best-known of the three winners, thanks to his outspoken stint as chief economist at the World Bank during the late 1990s. His insights then got plenty of attention, but are not the reason for his Nobel award. Rather, he has been rewarded for theories drawn from

## The lemon dilemma | The Economist

the perspective of a used-car buyer—how to get reluctant people to reveal secrets about themselves or their products. For example, how likely are individuals to repay a loan, or to drive their insured car recklessly? He has explained how insurance companies structure their prices to detect the truth about customers, using different deductibles and premiums to classify customers by their level of risk. This sort of screening of customers is also common in the banking industry.

The winners must split the \$1m prize three ways, but they are now unlikely ever again to need to use their expertise at buying lemons.

From the print edition: Finance and economics