

Agenda

Advancing economics in business

Homo economicus and Homo sapiens: the CMA experience of behavioural economics

Behavioural economics has been popping up everywhere—from the UK Prime Minister’s ‘nudge unit’ to (extremely serious) academic courses at our most ancient universities. Regulators and competition authorities are also getting in on the act. But is behavioural economics actually of any real use? David Currie, Chairman of the UK’s Competition and Markets Authority (CMA), sets out his experience so far

The last decade has seen the rise of behavioural economics as a tool for regulators and competition authorities. This is understandable, as behavioural economics holds out the prospect of providing answers to many of the shortcomings of traditional economics, particularly where markets seem to be failing consumers and traditional remedies don’t seem to be effective.

At the heart of behavioural economics is the (rather obvious) insight that ordinary consumers do not behave in the same way as the so-called perfectly rational consumer of neoclassical economics. (I will explain the ‘so-called’ shortly.) Thus, for example:

- we have limited ability to process and compute information. Faced with complexity, we often focus on just a subset of a product’s characteristics and so make bad decisions;
- we are very poor at relative probability assessment—not surprisingly, since a lot of us don’t understand percentages, and we tend to overestimate the likelihood of low-probability events;
- our decisions are often not neutral with respect to how choices are framed: thus we will be unduly influenced in our choice of a sofa by notices that say it has been discounted from £1,000 to £500 compared with if it had simply been priced at £500 at the outset;
- we are time-inconsistent and exhibit hyperbolic discounting, a lack of self-control and overconfidence. So we will definitely give up smoking and drinking—but tomorrow; we won’t go overdrawn; and we will go to the gym regularly;
- we care more about losses than gains and so can become inert. For example, fear of making a bad

decision by switching supplier outweighs the fact that we might well gain by switching, or makes us over-cautious in our choice of mobile package;

- we care about more than just profit maximisation, and value fairness as well.

Now at one level, none of this is new. Economists have understood about bounded rationality and related phenomena for centuries. In the works of that great moral philosopher and economist, Adam Smith, writing in the middle of the 18th century, you can find early formulations of the concepts of time-inconsistency, loss aversion and a tendency to overconfidence. Almost exactly a century later, John Stuart Mill discussed the implications of myopia. John Maynard Keynes, writing some 80 years ago, wrote of herd behaviour and compared investment decisions to the beauty contest: the challenge is not to choose the most beautiful person or object, but to choose the person or object that the majority of other participants will judge the most beautiful. The problem of an infinite regress and possible madness is evident. And Herbert Simon wrote compellingly about bounded rationality from a systems perspective some 60 years ago and won the Nobel Prize for Economics for that.

Who is rational?

But despite this, most standard economic analysis assumes so-called rational players. There is that ‘so-called’ again. Why? Well, the so-called rational player seems to me to be very far from rational. The complex computations required to be rational in the sense of *Homo economicus* are probably beyond the capacity of that most powerful computer, the human brain. And if that is not so, devoting so much processing power to this form of rationality is far from rational if the result is to displace energy and attention paid to such things as living, loving, enjoying and learning. How many of us

would regard as normal someone who actually read the terms and conditions for a service purchased online?

This is not a flippant debating point. The UK University of East Anglia's Centre for Competition Policy undertook fascinating research on how many of us actually read the terms and conditions online—the advantage of online purchases, unlike offline ones, is that it is possible to analyse this with great precision. It found that only one, or possibly two, of us in a thousand actually call up the terms and conditions before ticking the accept box. And of that tiny minority, the vast majority spend so little time looking at them that they cannot have read the whole text, let alone understand it. If one of us wanted to shop around and compare the terms and conditions of three or four providers, we would have to read and comprehend text as long as, and possibly more complex than, the average PhD thesis. That most definitely puts paid to the so-called 'informed-minority' hypothesis of the law and economics literature—i.e. that a minority of informed consumers can act as a discipline on the terms and contracts of firms, to the benefit of all.

Rising back above the detail, it is worth noting that our so-called biases, notably our inadequacy with probability assessment, may well go back to our evolutionary forebears. *Homo sapiens* and its wonderful brain is the product of a long process of evolution, in contrast to *Homo economicus*, which came from abstract reasoning. So should we call them biases, or just learned behaviours for survival and reproduction? It is, of course, particularly the work of Daniel Kahneman that has persuaded economists to pay attention to these behavioural characteristics, but it took a long time: the first key paper by Amos Tversky and Kahneman on anchoring, availability and representativeness biases was more than 40 years ago, in 1974.¹

So what we have learned, rather slowly, is that individual behaviour is beset with deviations from the so-called rational behaviour of neoclassical economics, and, while some of these deviations can legitimately be described as biases and less than rational, others are truly rational. What are the implications for competition analysis?

Not (neoclassical) rational, but still predictable

The key insight that this line of analysis throws up is this: consumers are not just not neoclassically rational, but they are *predictably* so—i.e. their deviations from neoclassical rationality are predictable. Smart, clued-up companies can and will exploit these predictable deviations, and their capability to do so has increased with the rise of big data and the huge computing power that can now be deployed. The result can be poor market outcomes that persist, in which consumer benefit is lower than it could be. Moreover, and critically for competition analysis, increasing the number of smart firms—i.e. increasing competition—will not necessarily improve consumer welfare; indeed, it could make it worse.

In *Seduction by Contract*, Oren Bar-Gill provides a number of examples of this.² A notable example is mobile telephony. This market displays a multitude of contract options, which are hard to compare, in part because of lack of standardisation: for example, what is the definition of the 'weekend' to which a reduced tariff applies? So confused consumers abound. Hyperbolic discounting leads telecoms operators to offer supposedly free handsets, feeding our desire for the latest gizmo—I confess to this myself—paid for by higher subsequent charges. Three-part mobile phone tariffs require us to estimate our future usage. The evidence is that only a minority of us get this estimation right. Some 10–15% of us suffer from overconfidence and select too small a package—and then pay the high charges (quite unrelated to cost) for exceeding our chosen number of minutes. But nearly half of us are very conservative in our choice and select a package with much more usage than we need, possibly because we worry about the loss of incurring the penal charges for excess usage, and possibly because we overestimate the probability of exceeding our limit. So the large majority of us are therefore paying excess charges in one form or another.

Oren Bar-Gill provides similar analysis and a wealth of empirical evidence in the markets for credit cards and mortgages. The importance of this for competition analysis is that, if we ignore the potential for firms to exploit predictable consumer biases, there will be occasions when:

- we won't understand what is driving market outcomes;
- we won't know how to correct poor market outcomes.

Spreading confusion: a competitive response?

Let me give a number of instances of this.

First, 'confusopoly': consumers can be overwhelmed by more information than they can process, thus potentially leading to poor decisions, as in the mobile example above. This is also relevant to the GB energy market, and this has led the sector regulator, Ofgem, to restrict the number of tariffs that energy customers can offer. The efficacy of this remedy is one of the issues under investigation by our current energy market inquiry.

Second, drip pricing: consumers put too much emphasis on the headline price and underestimate the cost of 'add-ons'. This concern motivated action by the UK Office of Fair Trading (OFT) in 2012 on airline payment surcharges, which were typically revealed only at the end of the online booking process.³ It is also relevant to ongoing CMA work on car hire—a sector where there are common concerns about opaque or high add-on charges and where we are working with our European colleagues to address the issue, because it so often involves car hires overseas.

Third, framing problems: consumer decisions are affected by the frame of reference of the offer, and this can lead to over-valuing the product. This was explored in depth in the

OFT's 2010 market study on advertising of prices, which included a lab-based behavioural experiment, a consumer survey, and reviews of relevant economics and psychology literature.⁴

Fourth, inert consumers: disengaged consumers can provide firms with local market power. If there are many consumers who can't or won't search or switch for a better deal then our usual assumptions about the efficacy of the competitive process may fail. This is an important issue in the CMA's current market work on energy and banking sectors, and there have been numerous initiatives by relevant regulators and government to encourage consumer search and switching in these sectors to counter inertia. They include, in the case of energy, requirements to promote information on annual usage and provide prompts to consider switching; while, in the case of banking, they include requirements for a faster current account switching service and the 'midata' current account comparison service.

Intervention or self-correction?

Now, of course, the market can self-correct. Thus intermediaries and comparison tools can help solve confusopoly problems. Consumers can learn that their biases are being exploited and respond accordingly: we all now know to look beyond airline headline prices.

There is solid empirical evidence of such learning.⁵ In the USA in 2006 there was an important expansion of Medicare, which gave millions of retired people access to subsidised prescription drugs at a cost of over \$60bn a year. Provision was by numerous competing insurers. In each of the 34 regions, older people had to choose between some 50 plans a year—and the resulting dataset provided rich pickings for econometricians. (I used to be one, so I know the buzz.) In the first year, many people chose the wrong scheme, sometimes paying an excess of \$500 or more. But importantly, analysis by Ketcham and his team showed that those who overpaid between \$300 and \$500 a year switched, and the distribution of overpayments fell significantly the following year.⁶ When it really matters, consumers can learn.

Moreover, suppliers may wish to bolster brand reputation, and this may provide an incentive not to exploit consumer biases. In some cases it may require only a minority of informed and active consumers to provide sufficient price arbitrage to ensure a good market outcome for all.

But importantly, there is the real possibility that a market correction is not forthcoming. Consumers will find it hard to adjust their biases when purchases are infrequent, so that learning is limited. If the losses are small for each individual but spread across a large number, the consumer detriment may be appreciable but not enough to trigger a response by individual consumers. And if consumers do learn and adjust, they may find the companies one step ahead as they deploy increasing processing power to find new and better ways of playing the game—in the world of big data. If consumers can be offered different prices, as can happen in offline markets but is increasingly prevalent in online

markets, active consumers will not protect the inert ones: indeed, on the contrary, competitive markets may well mean that active consumers benefit at the expense of the inert. And if all firms seek to exploit the bias, increasing the number of firms will not help—indeed, there are theoretical models that suggest that more firms may worsen the market outcome.

If that is the case then the standard competition remedies of removing barriers to entry to enhance competition, and increasing transparency and consumer information, may well not be adequate, and there is a need to look for other remedies that may shift the market equilibrium to a better place. But the design of such remedies is not straightforward, because interventions can all too easily have counterproductive effects.

Thus, for example, if firms have an incentive to create complex price structures (confusopoly) in order to generate consumer inertia—rabbits in headlights come to mind—then regulators may impose simplified pricing to cater for consumers' bounded rationality. However, care is needed: reducing complexity may harm consumers because if they have different preferences, relatively complex offers might be optimal. Simplified pricing may also facilitate tacit collusion.

With drip pricing, if consumers overestimate the importance of the headline price, firms that unilaterally advertise an honest headline price will go out of business. Increasing competition may therefore not be the solution. That is why the OFT's approach to airline payment surcharges was to ensure that enforcement action had good coverage of the main operators, shifting market practice to a better outcome. Similarly, with framing issues, fake reference pricing can lead to consumers over-valuing the product. But there is no incentive for an individual firm to price differently, as this would adversely affect the perceived value of its product. That is why the OFT had to carefully orchestrate a coordinated move by some of the major furniture retailers to conform to guidelines that required a genuine reference price.

In the case of inert consumers, where firms can price-discriminate between disengaged and engaged consumers, suppliers may have 'local' market power. This might be considered a competition problem if disengaged consumers are 'exploited'. However, it is important to ask why they are disengaged: are they lazy, or are they unable to engage? There is a danger that protecting disengaged consumers reduces the incentive for any consumers to be engaged, which would remove the disciplining effect of marginal consumers. In the case of energy in Great Britain, retail competition was introduced into a market which was hitherto made up of a set of regional monopoly supply companies (the regional electricity companies, RECs). Competition took the form of each REC competing with other monopoly incumbents, often neighbouring ones. But many inert customers simply stayed with their traditional supplier. So, inevitably, competition resulted in lower prices being offered by the RECs outside their traditional market than inside, which was a form of geographical price discrimination. But

in effect, the rationale was not geographic discrimination but rather discrimination between active and inert customers. In the face of some political pressure, Ofgem banned geographic discrimination. In the view of some analysts, this led to a considerable diminution of effective competition and increased prices. Whether this analysis is correct is part of what our energy market inquiry will establish, but the possibility is clear.

So the behavioural economics literature suggests that we should spread the search for remedies wider than the traditional ones of more information and enhanced competition—not that these should be neglected. Consideration of behavioural economics shifts the focus from simply the provision of more information to the need to help consumers to access information, assess it and act on it. Information remedies that do not meet these criteria will not solve competition problems—for example, providing information that is not read, too complicated, or perceived to be too much hassle will not have the desired effect. In the UK, information remedies have historically not always been very successful. Initial information remedies applied to the sale of extended warranties for electrical goods were considered fairly ineffective, and led to the separation in time of the sale of the product from the sale of the warranty.⁷

It is important to make sure that consumers focus on the right bit of information. Consider the US Federal Trade Commission's study of a proposed remedy on mortgage broker payments: the concern was that brokers just recommended the mortgages on which they earned the most commission. Thus the remedy was that they had to tell potential customers what their commission was on

each product. The result was that, when this proposed remedy was trialled, consumers focused on broker commissions rather than the total cost of the mortgage, and this led to worse decision-making.⁸

So policy interventions, if they are to be successful, need to be grounded in a very granular understanding of how individual markets work and how consumers behave in the particular market context that they face. Given the growing importance of online markets, a major priority for the CMA is to understand how consumers behave online and how such behaviour might be exploited to their detriment. If such detriment is found, we will explore how it may be remedied without throwing away the huge consumer benefit that we all derive from the Internet and ubiquitous connectivity.

In conclusion

Behavioural economics turns out not to be that new. The more thoughtful economists have long been trying to incorporate how people actually behave into their theories as (rather obviously) the better the theory matches reality, the more likely it is to be useful at predicting how policy interventions (by governments, competition authorities and other economic regulators) will actually turn out.

Careful design of remedies is critical when agencies seek to harness competition to deliver better outcomes for consumers. And this is where behavioural economics can really bring benefits.

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¹ Tversky, A. and Kahneman, D. (1974), 'Judgment under Uncertainty: Heuristics and Biases', *Science*, New Series, **185**:4157, pp. 1124–31.

² Bar-Gill, O. (2012), *Seduction by Contract*, Oxford University Press.

³ Office of Fair Trading (2012), 'Airlines/Payment Surcharges: Investigation into pricing practices by 14 airlines', CRE-E/27017, available at: <http://webarchive.nationalarchives.gov.uk/20140402142426/http://www.offt.gov.uk/OFTwork/consumer-enforcement/consumer-enforcement-completed/card-surcharges/>.

⁴ Office of Fair Trading (2010), 'Advertising of prices', OFT1291, available at: <http://webarchive.nationalarchives.gov.uk/20140402142426/http://www.offt.gov.uk/OFTwork/markets-work/advertising-prices/>.

⁵ See University of East Anglia Centre for Competition Policy (2014), 'Response to four questions from CMA', 25 July, provided in response to the CMA's consultation on its Strategic Assessment.

⁶ Ketcham, J.D., Lucarelli, C., Miravete, E.J. and Roebuck, M.C. (2012), 'Sinking, Swimming, or Learning to Swim in Medicare Part D?', *American Economic Review*, **102**:6, pp. 2639–73.

⁷ See, for example, Oxera (2012), 'Behavioural problem, behavioural solution: the case of extended warranties', *Agenda*, October, available at: <http://www.oxera.com/Latest-Thinking/Agenda/2012/Behavioural-problem,-behavioural-solution-the-cas.aspx>.

⁸ Lacko, J.M. and Pappalardo, J.K. (2004), 'The Effect of Mortgage Broker Compensation Disclosures on Consumers and Competition: A Controlled Experiment', Federal Trade Commission Bureau of Economics Staff Report, February.