



# MAKING THE RIGHT MOVES

Behavioural economics is becoming popular because it promises to improve competition and consumer outcomes. But as **TIM HOGG** asks, is it a paradigm shift, a passing fad – or somewhere in between?

**R**egulators are waking up to the power of behavioural economics to understand markets, assess competition and improve consumer outcomes. Is it a passing fad or will it replace traditional economics? This article argues for a middle way – that behavioural economics is a valuable new arrow in the quiver of a modern telecoms regulator, one that complements and brings out the best from traditional regulatory frameworks.

Behavioural economics is the incorporation of psychological insights into economics – a process that has been underway for a long time (see timeline on page 19). Behavioural insights can complement the traditional economic understanding of markets and add to the telecoms regulator's toolbox.

Throughout the 20th century economists assumed a number of mathematically useful characteristics about consumers – that they are perfectly rational and consistent, able to compute

the optimal decision no matter how complex the choice, are unaffected by how a choice is framed, able to accurately predict future behaviour, and are never a prisoner of inertia. Behavioural economics is the pursuit of more realistic economic models.

Incorporating behavioural economics into regulation is an opportunity to improve competition, ensure that consumers are not exploited, and achieve more with less: it opens up the exciting prospect of using less intrusive, less costly regulation.

This article outlines key behavioural insights and explores how regulators in telecoms and other sectors are using behavioural economics to improve competition and consumer outcomes.

## HOW DO CONSUMERS THINK ABOUT DECISIONS?

A huge number of behavioural biases and quirks have been documented, but this article focuses on just those that are most relevant to new behavioural approaches in regulation. Some psychological

## TWO MODES OF THOUGHT

The Nobel award winning psychologist Daniel Kahneman introduced the helpful theory that there are two modes of thought: **System 1 and System 2:**

**SYSTEM 1** is automatic and uncontrolled – it is unconscious, fast and effortless, relying on habit, emotion and first impressions. System 1 is always deployed and readily produces an answer, which is often not sense checked using System 2.

**SYSTEM 2** is reflective and controlled – it is slow, deductive and requires effort. System 2 makes judgements where required, and is deployed where System 1 is unsure or where otherwise prompted.

System 1 makes life manageable (we make thousands of small decisions every day) and often uses rules of thumb to simplify decisions. While System 1 often leads to the right answer, it also produces systematic mistakes. For example, consider the following problem:

*A bat and a ball cost \$1.10 in total.  
The bat costs \$1 more than the ball.  
How much does the ball cost?*

The intuitive answer that first springs to mind is 10 cents, but on reflection this is obviously wrong!

Kahneman D (2003). Maps of bounded rationality: psychology for behavioural economics. The American Economic Review 93 (5): 1449-75. bit.ly/2pJJPSI

observations may seem obvious but the application of them in a robust economic framework yields valuable new insights for regulation.

One of the core insights is that people have limited cognitive power and only use it where necessary. Not only does this mean that we are vulnerable to information overload and the subsequent inertia, but that the way cognitive effort is rationed can lead us to make poor decisions, as described in the panel above.

### RULES OF THUMB AND MENTAL SHORTCUTS

Decisions can be complicated, especially over complex products like those in telecoms. People use rules of thumb (or heuristics) to simplify choices. These mental shortcuts are often very useful, but can lead to systematic mistakes. Common heuristics include:

**Confirmation bias** – people look for evidence that confirms their prior beliefs. For example, if a consumer believes that switching provider is too complex, they may prematurely stop searching for a new package if they cannot immediately find a better one.

**Availability bias** – people make decisions based on information that is easily available or recalled. For example, when deciding whether to renew a TV package, a consumer may think about their recent TV viewing rather than their consumption over a longer period of time. This may lead them to under-

or overestimate the value of the package to them.

**Representative bias** – people tend to focus on one salient dimension that they consider to be representative of the product, and to ignore others. For example, when choosing a mobile contract the consumer needs to consider factors such as price; quantity of minutes, text messages and data; quality of service; data speed; coverage; and duration of contract. The consumer may simplify this choice by focusing on representative product dimensions like price and quantity of data. This could lead to less competition by mobile operators on other product dimensions. The representativeness bias could be especially relevant when evaluating bundles.

**Overconfidence bias** – people are often too optimistic about their own ability. For example, someone may sign up to a mobile contract with the intention of staying below the data cap (and therefore

## TIMELINE OF BEHAVIOURAL ECONOMICS

<b>18th and 19th centuries</b>	Early economists such as Adam Smith and Jeremy Bentham regularly incorporate psychological insights into their analysis.
<b>Early 20th century</b>	Economists focus on mathematical models that assume super-rational consumers, and in so doing jettison some of the psychological reality.
<b>1940s-50s</b>	Herbert Simon introduces the idea of 'bounded rationality' and that consumers 'satisfice' rather than optimise.
<b>1960s-70s</b>	Psychologists demonstrate that choice is influenced by the 'frame' in which it is presented.
<b>1979</b>	Daniel Kahneman and Amos Tversky introduce prospect theory, which explains many behavioural 'anomalies'.
<b>1980s</b>	Economists find that people are inconsistent in how they value future costs and benefits – 'time inconsistencies'.
<b>1985</b>	Richard Thaler introduces the theory of mental accounting, which describes how individuals divide their money into separate budgets and use them in different ways.
<b>1990s</b>	Economists find people behaving in ways predicted by behavioural economics in a variety of contexts, such as labour and financial markets.
<b>2002</b>	Daniel Kahneman wins the Nobel Memorial Prize in Economic Sciences for his work on behavioural economics.
<b>2008</b>	'Nudge' by Richard Thaler and Cass Sunstein launches an era of using behavioural economics in public policy to improve decision making through changing 'choice architecture'.
<b>2010–present</b>	Financial regulation increasingly incorporates behavioural economics, and regulators in other sectors begin to follow suit.

### REFERENCE-DEPENDENT PREFERENCES

Consumer preferences are not set in stone – they are often influenced by both the choice environment and relevant ‘reference points’. Rather than an independent, self-contained and dispassionate evaluation, consumers tend to evaluate outcomes by comparing them with their expectations, the status quo and other people’s outcomes.

Moreover, consumers are also often ‘loss averse’: they are more sensitive to losses than equally sized gains. The value a consumer places on a product depends on whether they currently purchase the product or not: consumers are less willing to give something up (lose it) than forego something they never had. For example, this ‘endowment effect’ might nudge people towards renewing telecoms contracts that they would not otherwise have purchased (if they did not already have the service).

Reference dependence also leads to ‘framing effects’ where the frame in which a choice is presented impacts the decision that people make. Whether a choice is framed as a loss or a gain can be important.

◀ avoiding overage charges), but they might be overestimating their ability to control their consumption.

**Status quo bias** – people are often biased towards keeping the status quo. This could be due to loss aversion (see box above) or inertia due to information overload. Status quo bias can lead to low switching rates, and increases the likelihood that the auto-enrolment of contracts is effective at retaining customers.

Ultimately, if people have unstable preferences then it is difficult for them to ‘optimise’.

### MENTAL ACCOUNTING AND NOW VERSUS LATER DECISIONS

Consumers often simplify their budgeting by thinking about their expenditure in categories, or budgets. This is ‘mental accounting’ – the thought process through which individuals classify, appraise and keep track of their financial activities. For example, they might have a budget for their mobile phone bill and a separate budget for their fixed broadband. These budgets may be explicit or implicit, and vary in their strictness. In an extreme case, a consumer will not take from one budget to add to another budget, even if it would be beneficial.

Whether consumers have a single broad telecoms budget or multiple narrower budgets affects how likely they are to bundle. Certain types of customers are more likely to have a single telecoms budget: for example, education is positively correlated with bundling in Turkey,<sup>1</sup> and household income is positively correlated with bundling in Sweden,<sup>2</sup> Turkey and the UK.<sup>3</sup>

A combination of factors means that consumers



**Several factors mean consumers find ‘now versus later’ decisions difficult.**



consumption patterns. Third, people often fail to act as they earlier intended. For example, people may sign up to a contract with the intention of leaving after the low teaser price ends. While some remember to switch, many do not.

### NEW REGULATORY APPROACHES USING BEHAVIOURAL ECONOMICS

Regulators in a variety of sectors are increasingly incorporating insights from behavioural economics into their understanding of consumer behaviour and markets. Behavioural policies and remedies take into account the way that consumers actually make decisions and the factors that influence them. Effective remedies harness behavioural biases and quirks, rather than work against them, and are thoroughly tested before implementation.

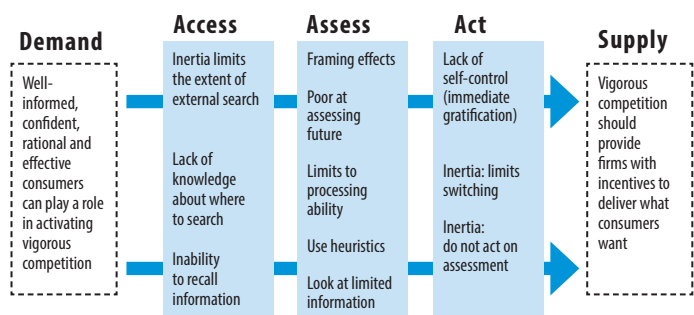
Next I discuss some examples of competition authorities and regulators applying insights from behavioural economics to assess competition, improve customer communications, tackle choice complexity in the retail market, and assess business models.

### ASSESSING COMPETITION

Behavioural economics is increasingly used by regulators to understand the nature of competition in the market.<sup>4</sup> The access-assess-act framework, first used by the UK Office of Fair Trading, incorporates various insights from behavioural economics into a competition policy tool. It has been adopted by a number of regulators, and focuses on whether consumers are able to fully engage in the market. Figure 1 lists some key behavioural reasons why consumers might fail to correctly access market information, assess it or act upon it.

This framework can be easily applied in telecoms markets, and should take account of learning

**FIGURE 1**  
**THE ACCESS-ASSESS-ACT FRAMEWORK**



Source: Office of Fair Trading (2010). Behavioural economics and competition policy. Presentation by Amelia Fletcher, OFT Behavioural economics seminar, 22 April.

opportunities. If consumers face the same choices repeatedly and are able to learn from experiences, then they may become more sophisticated and less prone to biases, leading to better market outcomes.

It is also possible for behavioural biases and insights to be incorporated in agent-based models of consumers switching.<sup>5</sup> Such modelling gives new insights on the state of competition and informs where effort should be focused to increase switching.

**IMPROVING COMMUNICATION**

Effective product disclosure is informed by and aware of behavioural insights.<sup>6</sup> The way in which information is presented affects switching behaviour, but this should always be tested as it is likely to depend on the situation.<sup>7</sup>

The timing of information provision is also likely to be important, with consumers more receptive at certain salient points in time. For example, the effect of information designed to encourage switching will be greater if it is delivered close to when the consumer’s existing contract ends.

Telecoms regulators have started to mandate clearer, simpler information to consumers. For example, in December 2016 the German parliament passed BNetzA’s (the telecoms regulator) Transparency Ordinance for telecommunications with the aim of improving transparency and promoting competition. This forces telecoms providers to provide information to consumers:

- On all key contract terms (e.g. duration, data speeds, prices) displayed on a customer information sheet before the contract is signed
- On minimum term and contract notice periods, displayed on customer invoices
- On how to test the actual data speeds experienced by the consumer.<sup>8</sup>

Similarly, in 2016 the Colombian telecoms regulator, Comisión de Regulación de Comunicaciones (CRC), consulted on reform of the telecoms consumer protection regime using behavioural insights,<sup>9</sup> supported by the OECD.<sup>10</sup> The remedies included:

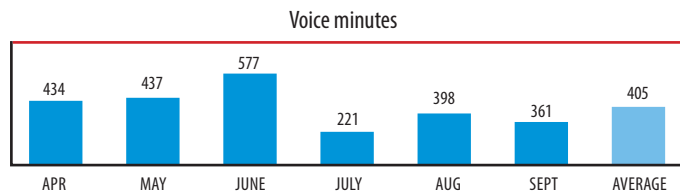
- Monthly invoices will have to display past usage in visual formats. For example, if a consumer’s monthly limit was 700 minutes they would be presented with the chart in figure 2
- Operators will have to show the prices of the individual components of bundles and the level of discount that the bundle offers
- Operators will have to pay greater attention to consumer communication through social media platforms.

The effectiveness of these remedies will depend on the extent to which they do not impede competition or overload consumers with too much information.

**TACKLING COMPLEXITY**

Consumers in telecoms markets face increasingly complex decisions as technology advances and the number of choices expands. Such complexity is a by-product of technological progress, convergence, and product bundling – all of which can have

**FIGURE 2**  
**CONSUMPTION STATUS ON COLOMBIAN TELECOMS INVOICES**



**TOTAL MINUTES PLAN: 700**

Source: Comisión de Regulación de Comunicaciones (2016). Revisión Integral del Régimen de Protección de los Derechos de los Usuarios de Servicios de Comunicaciones.

pro-competitive and welfare-enhancing attributes and effects. However, it is not always easy for consumers to figure out the best option for them, even with the growing role of price comparison websites.<sup>11</sup>

In this context regulators have started to seek opportunities to simplify decisions for consumers. For example, in November 2015, the UK telecoms regulator Ofcom and the UK Advertising Standards Authority (ASA) acted to simplify fixed broadband pricing. They conducted a survey to see whether there was a problem with excessive complexity and implemented an evidence-based remedy.

In the UK, fixed broadband prices were divided into two: line rental, and broadband service. Fixed broadband could not be purchased without the line rental fee. Ofcom and the ASA’s survey tested



**Regulation aimed at reduced complexity backfired in one situation in the UK.**



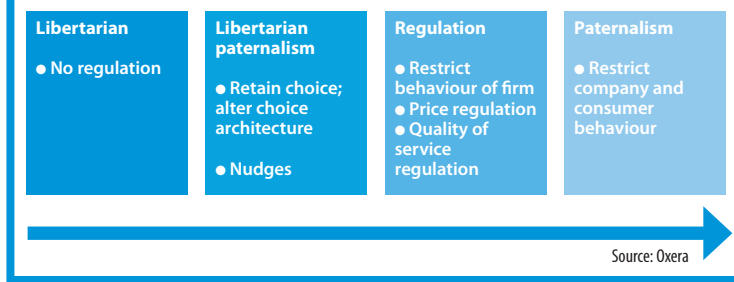
whether this division caused confusion among consumers. The results confirmed the regulators’ hypothesis: 24% of consumers were unable to state correctly the total cost of broadband. Additionally, the survey found that consumers struggled to distinguish upfront costs from monthly costs, and

found teaser rates confusing.

Ofcom and the ASA judged that there was a case for regulation, and ruled that fixed broadband advertising had to show all-inclusive costs and no longer separate out line rental; give greater prominence to the contract length and any post-discount pricing; and give greater prominence to upfront costs.<sup>12</sup>

However, in another situation, regulation that aimed to reduce complexity backfired. In 2013, the UK energy regulator Ofgem acted to simplify energy retail markets by banning complex tariffs and mandating that no firm could offer more than four separate tariffs.<sup>13</sup> This intervention was later judged by the Competition and Markets Authority (CMA) to “restrict the behaviour of suppliers and constrain the choices of consumers in a way that may have distorted competition and reduced consumer welfare”. In particular, the remedy was considered to reduce the ability of retail energy

**FIGURE 3  
REMEDY DESIGN**



suppliers to implement innovative tariff structures that better meet consumer demand.<sup>14</sup> The rules will be removed following the CMA's investigation.<sup>15</sup> This example highlights the importance of testing hypotheses before regulating and illustrates how behavioural economics is a complement to standard competition economics rather than a substitute.

**ASSESSING BUSINESS MODELS**

Analysis of a firm's business model by itself can indicate whether consumer and commercial objectives are aligned. Aligned incentives are less likely to lead to consumer harm.

In the UK, the Financial Conduct Authority (FCA) found that the commercial and consumer objectives were not aligned in the high-cost short-term credit market ('payday loans').<sup>16</sup> Consumers who paid back the credit on time (i.e. behaved 'well') were unprofitable for the firms, while consumers who did not pay back on time (i.e. behaved to their own detriment) paid penalty fees and were thus profitable for the firms.

The business model relied on consumer biases: it was in the firms' interests to attract only those customers who behaved 'poorly' and encourage those 'poor' behaviours and biases (e.g. present bias, overconfidence bias). In effect, the consumers who behaved 'poorly' were subsidising the consumers who behaved 'well'.

A cross-subsidy from one group of consumers to another may be efficient (Ramsey pricing)<sup>17</sup> or have other societal benefits – cross-subsidies should be judged on a case by case basis. In the case of payday loans the FCA found that the customers who behaved poorly needed protection and therefore it imposed interventionist remedies.

In a similar case, the FCA explored whether consumer and commercial objectives were aligned in the credit card business model. Here the FCA found that consumers who behaved in their own best interests and paid back on time were indeed profitable for the firms. Therefore the incentives were aligned and no such interventionist regulation was imposed, although some light-touch nudges were introduced to encourage consumers to behave 'well' and pay back on time.<sup>18</sup>

This framework could be applied by telecoms regulators in assessing whether incentives are aligned and whether cross-subsidies from one type of consumers to another are problematic.

**WHAT DOES GOOD BEHAVIOURAL REGULATION LOOK LIKE?**

Consumer harm might justify the introduction of regulation; if this is the case, there remains a question over the appropriate extent of this regulation. In general, regulators have a continuum of approaches open to them, ranging from light-touch nudges to interventionist restrictions on company and consumer behaviour, as shown in figure 3. Different regulation might be appropriate in increasing competition, improving communication, reducing complexity and aligning commercial and consumer interests.

According to the European Commission, proportionate regulation should be as simple as possible and should not go beyond what is necessary to achieve the objective.<sup>19</sup> Therefore, before using traditional regulatory tools, regulators should first see if there are behavioural remedies or nudges that would accomplish the same goal. Preferably, such nudges should alter behaviour in predictable ways but without forcibly restricting choice by mandating or forbidding options – this principle is often called 'libertarian paternalism' (as in figure 3).<sup>20</sup>

Evidence-based policy requires that behavioural remedies be thoroughly tested before implementation. Does the remedy alleviate the identified theory of consumer harm? Does it have unintended consequences, such as stifling competition or innovation? Does it help naïve consumers but hurt sophisticated consumers? Testing could involve laboratory experiments, online experiments or field experiments. Given the dynamic nature of the telecoms industry, regulators should regularly review the appropriateness and effectiveness of behavioural remedies.

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