



# Behavioural Insights and Public Policy

LESSONS FROM AROUND THE WORLD





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## *Foreword*

“Behavioural insights” – lessons derived from the behavioural and social sciences, including decision making, psychology, cognitive science, neuroscience, organisational and group behaviour – are being applied by governments with the aim of making public policies work better. As behavioural insights increasingly contribute to shaping and implementing public policies, questions are being raised about the effectiveness as well as the philosophical underpinnings of some of these applications. Can small-scale experiments be scaled up and applied widely? Can policies based on the use of behavioural insights stand the test of time? How can unethical uses of behavioural insights be avoided? Can behavioural insights make inroads into policy areas beyond consumer policy, which has so far witnessed the largest application of behavioural insights?

The report opens up this debate on the use and reach of behavioural insights through the first comprehensive international overview of their application. It draws on responses to a survey conducted among 60 public bodies in 23 OECD and partner countries and two international organisations. The survey addresses questions related to the applications, institutions, barriers and methods related to the use of behavioural insights. One hundred and twelve case studies are included in this report and were collected in the survey responses as well as additional cases provided to the OECD. The case studies cover a wide range of sectors and policy areas, including consumer protection, education, energy, environment, finance, health and safety, labour market policies, public service delivery, taxes and telecommunications. The case studies are for the benefit of public officials and practitioners when applying behavioural insights. The case studies are also made available through online platforms working on behavioural insights, including the European Nudge Network (TEN) and ideas42’s B-Hub. Case studies will also contribute to enriching the OECD’s Observatory on Public Sector Innovation (OPSI).

The report finds that the use of behavioural insights has moved beyond a trend. Leaders of public bodies support the use of behavioural insights, and there is limited resistance within government to applying behavioural insights. Where some opposition or criticism emerges, this is mostly related to organisational resistance to change rather than to the behavioural insight approach itself. Neither the lack of resources for conducting tests and experiments nor ethical concerns are perceived as significant barriers for the use of behavioural insights within public bodies. In a number of countries, ethical principles have been integrated into the design and development of behaviourally informed approaches, which must conform to criteria pertaining to both the public interest and the preservation of choice.

Behavioural insights are still mostly applied to the areas where they were first introduced, namely consumer protection and choice in diverse areas. There is great potential for applying behavioural insights more broadly, for example to decisions by regulated organisations and behavioural change by public and private organisations.

If behavioural insights are to realise their full potential, guiding principles and standards must be set to guide future applications and maintain the trust of public bodies and citizens. Good or reliable data is also required if behavioural insights are to become a robust policy tool, and results should be published and shared. Experimentation and the use of academic findings are fundamental to behavioural practitioners in public policy.

This report is part of the OECD work programme on regulatory policy led by the OECD Regulatory Policy Committee and the OECD Network of Economic Regulators with the support of the Regulatory Policy Division of the OECD Public Governance and Territorial Development Directorate. The Directorate's mission is to help government at all levels design and implement strategic, evidence-based and innovative policies. The goal is to support countries in building better government systems and implementing policies at both national and regional level that lead to sustainable economic and social development.

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## Acronyms and abbreviations

<b>BEAR</b>	Behavioural Economics in Action at Rotman, University of Toronto, Canada
<b>BI</b>	Behavioural insights
<b>BIAP</b>	Behavioural Insights Applied to Policy: European Report 2016, European Commission
<b>BIG</b>	Behavioural Insights Group, Center for Public Leadership, Harvard Kennedy School, United States
<b>BIT</b>	The Behavioural Insights Team, United Kingdom
<b>CARR</b>	Centre for Analysis of Risk and Regulation, London School of Economics, United Kingdom
<b>CRC</b>	<i>Comisión de Regulación de Comunicaciones</i> (Colombian Communications Regulation Commission)
<b>DAF</b>	Directorate for Financial and Enterprise Affairs, OECD
<b>ENV</b>	Environmental Directorate, OECD
<b>EU</b>	European Union
<b>GOV</b>	Public Governance and Territorial Development Directorate, OECD
<b>HMCTS</b>	Her Majesty's Courts and Tribunal Service, United Kingdom
<b>ISSP</b>	Initiative for Science, Society and Policy, Denmark
<b>JRC</b>	Joint Research Council, European Commission
<b>NAEC</b>	New Approaches to Economic Challenges, OECD Initiative
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>OPSI</b>	Observatory on Public Sector Innovation, OECD
<b>RCTs</b>	Randomised Control Trials
<b>SBST</b>	Social and Behavioural Sciences Team, United States
<b>STI</b>	Directorate for Science, Technology and Innovation, OECD
<b>TEN</b>	The European Nudge Network
<b>UNDP</b>	United Nations Development Programme
<b>WDR</b>	World Development Report 2015, World Bank



## Executive summary

Public policy needs to understand human behaviour better and promote behavioural change through a more scientific approach. Both practitioners and researchers have actively embraced ‘behavioural insights’, leading to the creation of high-level policy initiatives and shifts in research attention across disciplines. Equally, there has been growth of a more critical literature, questioning the philosophical underpinnings of the move towards behavioural economics, commenting on the wider range of interventions that have been labelled “behavioural”, or questioning the wider applicability of behavioural insights for policy making.

Following this phase of initial discovery and curiosity, attention is now moving to a set of different questions. These include questions about embedding behavioural insights in organisational decision-making across government bodies, about the implementation of behavioural insight-related work, and about the experiences and potential limitations of behavioural insights in informing different stages of the policy cycle. Potential areas for further exploring the application of behavioural insights include implementation and enforcement by public governance institutions, as well as decision making in public bodies such as (independent) regulatory authorities.

So far, behavioural insights appear to be used relatively late in the design of policy, for example to fine-tune and improve implementation and compliance. There is potential to do more. At the end of the policy cycle, behavioural insights can be applied to evaluate the effectiveness of implementation to feed lessons on what works and what does not into the early design of policies. This use would also reduce the need for correcting issues once a policy is in the implementation stage.

Behavioural insights can no longer be seen as a fashionable short-term foray by public bodies. They have taken root in many ways across many countries around the world and across a wide range of sectors and policy areas. There are over 100 case studies informing the analysis of this report including applications related to consumer protection, education, energy, environment, finance, health and safety, labour market policies, public service delivery, taxes and telecommunications. In addition, there is great potential for applying behavioural insights in areas beyond their current scope. In particular, the report recommends that public institutions and practitioners:

- Consider applications of behavioural insights to the formal rules and practices that govern the work of public organisations to strengthen the effectiveness of these organisations.
- Broaden the application to include the behaviour of regulated firms, for instance the behaviour of capital markets/banks; energy consumption for large industrial firms; means of transportation used by big business, etc.
- Develop some consistency in the organisation, methodologies, quality controls and capacity support functions of the different behavioural initiatives.

- Encourage the development of knowledge and capacity among public officials to understand and apply behavioural insights within public bodies, for example through mainstreaming, training and information.
- Take into consideration behavioural insights when designing and evaluating policy implementation.
- Develop processes to determine when there is a behavioural issue that can be successfully addressed through the application of behavioural sciences. Equally, determine when a behavioural intervention may not be appropriate and understand why.
- Exploit the full potential of behavioural insights as a tool for engaging with stakeholders and collect feedback on what works.

There is an emerging need for guiding principles or standards to ensure that the continued use of behavioural insights by public bodies is open to abuse or unethical utilisation – or perceived to be so. This report suggests that behavioural practitioners in public policy should consider taking the following steps:

- Strategy: engage in a multi-staged strategy for implementing behavioural insights with a menu of types of assistance for all appetites.
- Data and evidence: undertake robust calculations before engaging in testing and experimentation to ensure the use of sufficiently large sample sizes, so that effects can be detected. Use of data should be based on the recognition that good and reliable data is key to applying behavioural insights and upholding its integrity. It should also build on the recognition that data are not the same as evidence; it is also necessary to understand the limitations of data for public policy.
- Validity of results: replicate to ensure the observed results are correct in the same context and setting (internal validity) and also test the application of the same approach to other contexts and settings (external validity).
- Segmentation: consider applications that could work for a part of the population but not for the entire population and whether these applications can be implemented given the legal and cultural context.
- Evaluation: conduct ongoing monitoring to identify short-term and long-term effects: as with all policy interventions, results of behaviourally informed interventions should be monitored and evaluated over a period of time.
- Transparency and accountability: publish work (successful and unsuccessful trials) for transparency and accountability: a number of countries already publish in journals or produce annual reports of their activities. This level of transparency is good practice that should be adopted by all behavioural practitioners in public policy. Transparency should also inform the actual practice of applying behavioural insights, by disclosing and understanding more about the actual costs (to be compared against the benefits) of applying behavioural insights in order to deploy it appropriately.



## *Chapter 1*

### **Why bother? Context and approach**

*This chapter discusses the state of play regarding the application of behavioural insights to policy in a global context, providing examples from within and outside government. It then presents the methodology adopted for collecting case studies from government, academic and practitioner networks around the world.*

## What are behavioural insights, economics and science?

*Behavioural insights aim at improving the welfare of citizens and consumers through policies and regulations that are formed based on empirically-tested results, derived using sound experimental methods. Behavioural insights is one discipline in a family of three, the others being behavioural sciences and behavioural economics, which mix traditional economic strategies with insights from psychology, cognitive science and other social sciences to discover the many “irrational” factors that influence decision making. (Lunn, 2014; OECD, 2016)*

The application of behavioural insights to policy has its origins in the relationship between cognitive science, psychology and economics and the use of methods imported from experimental psychology. It often involves the use of experiment and observation to identify patterns of behaviour and use these findings to inform policies and regulation. It is about taking an inductive approach to policy-making, where experiments replace and challenge established assumptions based on what is thought to be the rational behaviour of citizens and business. In this way, behavioural insights inform decision makers with evidence of “actual” behaviours for policy making and implementation, while not substituting their role or competence to make decisions with models and calculations.

Over the years, the OECD has been working closely on the use and adoption of behavioural insights across governments, regulatory bodies, public organisations, and different sectors globally. This use of behavioural sciences has become commonplace in many countries to help institutions better design, implement, and enhance market interventions through factoring behaviour and embedding experimentation across a range of topics such as consumer protection, energy, environment, health, finance, and taxation, among others.

Yet, existing literature on the application of these interventions is limited and regular exchanges among practitioners are necessary to help understand the implications – including the benefits and risks – of mainstreaming behavioural approaches to policy making. In 2014, the OECD published a report on *Regulatory Policy and Behavioural Economics* that provides a brief overview of the applications of behavioural economics to regulatory policy and the extent of its influence on OECD countries. In 2016, the European Commission published a report unveiling a wealth of policy initiatives either implicitly or explicitly informed by behavioural insights, at national, regional and local levels across 32 European countries. However, in-depth information on the institutions, methodology, and barriers to applying behavioural sciences are still lacking. In addition, the variety of concepts within psychology and other sciences may have further and varying contributions to make.

To fill this gap, the OECD and the London School of Economics, in collaboration with ideas42 and the European Nudging Network (TEN), developed a survey and derived a series of case studies from across the world to build on the work that is being independently carried out by central and local governments, administrative and regulatory agencies, as well as legislators. The bulk of the results is included in this publication and will also be featured on online platforms in order to highlight the experiences of practitioners across countries and sectors.

## What's happening with behavioural insights within and outside Organisations

Demands for more effective and efficient government interventions have given rise to the importance of applying behavioural insights in public policy. In particular, governments are searching for simple and effective regulatory solutions to promote more efficient outcomes without resorting to additional rules or sanctions. An example is tax compliance, where experimental trials show that non-compliance can be reduced by changing the nature of the wording of communications with those who fail to file tax returns on time. Behavioural economics has also made inroads into consumer policy, especially in markets with relatively complex products, such as financial services, health insurance and other markets involving service contracts.

As governments focus on improving the design and delivery of more efficient regulatory and non-regulatory measures, the body of actors and institutions producing knowledge about behavioural insights into policy making is also growing. The OECD, along with international partners and institutions, have rapidly built their knowledge base of what works, and what does not, in regard to behaviourally-inspired policy. The OECD, the EU and the World Bank have each recently engaged in mapping exercises to determine how and where behavioural insights can be applied to their given policy fields (Box 1.1). As this knowledge base grows, more work is being done to apply these insights to practical policy issues. This is furthered by the growing community of practitioners inside and outside government, who have also built networks to share knowledge and grow the field.

### Box 1.1. Mapping trends: Applying behavioural economics to OECD, the World Bank and EU policy streams

#### Regulatory Policy and Behavioural Economics (OECD, 2014)

In 2014, the OECD conducted a first mapping of the application of behavioural insights to regulatory policy. The 2014 mapping showed that behavioural economics is influencing policy in a number of OECD countries, but most explicitly in the United States and the United Kingdom. Looking across these early applications of behavioural economics to regulatory design, the report found that it is much easier to identify behavioural problems and to devise potential solutions than it is to judge or to measure the associated impacts. This means that behaviourally informed policies to date have concentrated on interventions that are relatively uncontroversial and likely to be popular – decision makers tend to welcome simplification, convenience and the highlighting of important factors, even if they may not appreciate the costs of the policy.

However, there are other areas where behavioural economic findings suggest the possibility that individuals make substantial costly errors, including when gambling, trading in financial markets, purchasing insurance, or engaging in behaviours with long-term health consequences. Orthodox microeconomics may be unreliable for modelling these decisions, which involve uncertainty and/or long time horizons. The possibility of substantial detriment coupled with the difficulty of determining the size of such effects implies a need for more research and for regulatory design to take an empirical approach that generates evidence specific to the application of behavioural insights and being able to measure the impacts of policy measures.

In other countries, it was also found that the application of behavioural economics to policy is increasingly common in certain policy areas, especially pensions, tax and consumer protection. The European Commission has engaged in several behaviourally-informed initiatives, most notably the ban in the EU Consumer Rights Directive of pre-ticked boxes in online sales, based on evidence that default settings can have powerful influences on choices.

### Box 1.1. Mapping trends: Applying behavioural economics to OECD, the World Bank and EU policy streams (*cont.*)

#### World Development Report 2015 (World Bank, 2015)

The World Bank's World Development Report (WDR) 2015 focused on the application of behavioural insights to development policy. The report aims to integrate recent findings on the psychological and social underpinnings of behaviour to make them available for more systematic use by both researchers and practitioners in development communities. From the hundreds of empirical papers on human decision-making that formed the basis of the report, the World Bank identified three principles that provide direction for applying new behavioural insights to designing and implementing development policy:

- *Thinking automatically*: People make most judgements and choices automatically, not deliberately. As a result, minor changes to the choice architecture (i.e. framing and default choices) in which decisions are made can have strong effects on behaviour.
- *Thinking socially*: How people act and think often depends on what others around them do and think. Understanding how social meanings, norms and networks affect individuals can help policy makers to understand how these social constructs can pull people towards certain frames and patterns of collective behaviour, as well as help in devising more innovative and effective interventions.
- *Thinking with mental models*: Individuals in a given society share a common perspective on making sense of the world around them and understanding themselves. Mental models often come from the cognitive side of social interactions, which people often refer to as culture. An established example of a mental model is the stereotype, which affects processes of inclusion and exclusion. However, mental models are malleable and behavioural insights interventions can be targeted to promote development objectives.

The report takes these three principles of human decision making and applies them to both improving development policy, as well as to improving how development professionals themselves can become more aware of their biases and how organisations can implement procedures to mitigate these biases.

#### Behavioural Insights Applied to Policy 2016 (European Commission, 2016)

The European Commission's Joint Research Center (JRC) established the Foresight and Behavioural Insights Unit in 2014 (currently Foresight, Behavioural Insights and Design for Policy Unit). Their first report, Behavioural Insights Applied to Policy (BIAP) 2016, provides a review of behavioural policy initiatives, classified according to whether they are behaviourally-tested, behaviourally-informed, or behaviourally-aligned. Initiatives cover topics that include competition, consumer protection, employment, energy, environment, health, finance, taxation, and transport from all over the EU and EFTA countries. The report worked with 900 policy-makers, researchers, NGOs and businesses in 32 EU member countries, which result in over 200 behavioural policy initiatives and an account of institutional developments across Europe.

In regards to institutional developments, the report analyses seven EU member states that created dedicated teams interested in harnessing the potential of behavioural insights for policy making. The report employs the PRECIS model to evaluate the Political support, Resources, Expertise, Coverage, Integration and Structure of the various member state behavioural units. The report lists the United Kingdom, Netherlands, Germany, France and Denmark as EU leaders in the institutionalisation of behavioural insight practices.

The report reaches four key conclusions:

1. In terms of capacity-building, there is significant dynamism and growing appetite to apply behavioural insights to policy making.
2. There is certainly room for improved exchange and knowledge sharing between the policy-making and the academic communities. For instance, there is great potential in analysing large datasets for extrapolating useful insights for policy with the associated challenge of making more publicly-owned data available for research.

**Box 1.1. Mapping trends: Applying behavioural economics to OECD,  
the World Bank and EU policy streams (cont.)**

3. Behavioural Insights should be applied throughout the policy cycle – including in anticipating implementation and enforcement issues – to generate useful evidence in the most effective way. There is still little awareness of the insightful evidence that could come from a more systematic analysis of the impact of policy solutions.
4. There is space to undertake more actions to improve the effectiveness of behavioural policy initiatives, shedding light on their long-term impact and increasing transparency, namely through more effective communication and evidence sharing with citizens.

*Source:* Lunn, P. (2014), *Regulatory Policy and Behavioural Economics*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264207851-en>; Lourenco, J.S. et al. (2016), “Behavioural Insights Applied to Policy”, European Report 2016, European Commission Joint Research Centre, EUR 27726 EN, <http://dx.doi.org/10.2760/903938>; World Bank (2015), “Mind, Society and Behaviour”, World Development Report 2015, World Bank, Washington, D.C., [www.worldbank.org/en/publication/wdr2015](http://www.worldbank.org/en/publication/wdr2015) (accessed 18 January 2017).

Inside the OECD, the Public Governance and Territorial Development directorate (GOV), as part of the OECD initiative on “New Approaches to Economic Challenges” (NAEC), organised an international seminar on the institutional practice of behavioural insights and the overall practice of applying them to policy design (OECD, 2015a). More than 150 central and local government officials, regulators, staff of international organisations and academics met to discuss the challenges and opportunities of applying behavioural insights to policy making. Participants agreed that behavioural insights are a powerful tool, which are currently being used by governments to enhance the effectiveness of interventions. Nevertheless, institutionalising, or “mainstreaming”, the practice will require buy-in from political leadership and the public administration, as well as establishing a platform for researchers and practitioners to share what works, and what does not.

However, there is a concern among practitioners that knowledge transfer will not happen. Networks of practitioners have experienced a certain resistance from some of their members in sharing the results of their work. To solve this, international and supranational organisations can help diffuse good practices and connect different areas and sectors where behavioural insights can be applied, creating positive externalities. The peer nature of the OECD can help by providing a knowledge sharing platform, such as through the Observatory of Public Sector Integrity (OPSI), which spreads innovation through examples of results. In addition, the OECD Recommendations on Regulatory Policy and Governance (2012) calls for the adherence to the principles of open government, including transparency and participation in the regulatory process.”

In addition, the Environment Directorate (ENV) established the Behavioural and Experimental Economics for Environmental Policy database as part of a broader project that seeks to identify areas where behavioural economics can have the greatest impact on environmental policy design. The overall objective is to facilitate the search and identification of studies most relevant for a given policy question. The database organises behavioural economics studies in a way that facilitates the search and identification of studies most relevant for a given policy question, such as by context, policy domain and type of intervention analysed. Most important, behavioural impacts and economic outcomes are tracked.

Adding to the knowledge of institutions and the overall practice of applying behavioural insights, Shogren (2012) identifies a series of lessons learned regarding behavioural economics for environmental policy design in two broad areas – risk, conflict and co-operation; and mechanism design. Alternatively, the Directorate for Financial and Enterprise Affairs (DAF) Competition Committee found that behavioural economics provides two reasons consumers need protection (OECD, 2012): first, consumers are not perfectly informed so they need information to be disclosed; and, second, consumers are not perfectly rational and have imperfect willpower. As a result, firms may want to exploit these defects, which create inefficiencies. Since neither of these situations is considered in the standard economic model, behavioural economics provides an alternative rationale for government intervention in the market.

### ***Applying behavioural insights – examples from around the OECD***

In addition to the discussion on how behavioural insights can inform policy design, OECD directorates have also focused on providing specific guidance on behavioural insights and applying them to practical and sector-specific policy fields. In 2016, the Public Governance and Territorial Development Directorate (GOV) worked with the Colombian Communications Regulatory Commission (*Comisión de Regulación de Comunicaciones*, CRC) to help them strengthen the consumer protection regime in the Colombian communications market. The CRC worked with the School of Psychology at the Konrad Lorenz University Foundation to conduct 25 consumer psychology exercises between 2013 and 2014 across 17 regions in Colombia. These exercises explored user decision-making processes in a number of scenarios specific to the cultural and contextual characteristics of Colombia. The report (OECD, 2016a) recommends instances regarding information provision, customer service, managing consumer consumption and bundled services where the CRC can use a mix of behaviourally-informed regulation and non-regulatory tools to shape the incentives that could change both provider and user behaviour, with a view to improving consumer welfare in the communications market (Box 1.2).

#### **Box 1.2. Protecting Consumers through Behavioural Insights: Recommendations**

Working with the CRC, the OECD recommended the use of behavioural insights in the following four dimensions:

##### ***Information provision***

- Implement a system of “summary” and “full” disclosure of information that should be standardised by CRC;
- Increase the use of choice aids, such as checklists or factsheets, to help the end-user make better decisions; and,
- Information should be provided just in time at key decision points and, where possible, include comparative information on peers in similar situations, such as geographic location, demographic, etc.

##### ***Customer service***

- Customer service information, including on complaints, should be made easily accessible and timely and, where possible, incentives for using them should be developed, such as entering a prize draw or extra call time rewards.



**Box 1.2. Protecting Consumers through Behavioural Insights: Recommendations (cont.)**

- Incentivise the improvement of customer service through a ranking or grading system that can be provided to consumers at key decision points, such as at the point of purchase.

***Managing consumer consumption***

- Improve feedback mechanisms to consumers about their consumption patterns by i) simplifying information on invoices, ii) framing opportunity costs, and iii) identifying the most appropriate plan by the service provider.
- Create a digital-based solution that allows consumers to compare in real time price plans that are on the market with their own consumption data on a personalised mobile application.
- Encourage or mandate a default “emergency plan” for consumers who do not respond to prompts about their consumption patterns, where their existing plan is not in their best interest.

***Bundled services***

- Provide consumers with salient prices of components within bundled packages and enable them to compare different bundled offers with like for like information available. Consider making operators provide prices of separate services as well provided this does not create choice-overload.

Source: OECD (2016a), *Protecting Consumers through Behavioural Insights: Regulating the Communications Market in Colombia*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264255463-en>.

The OECD Environment Directorate (ENV) also published a selection of working papers that test specific behaviourally-informed policy interventions. First, Brown et al. (2012) found that a small 1°C decrease in the default temperature setting in an OECD office building resulted in a 0.38°C reduction in average office temperature. However, a large reduction (3°C) had no effect, pointing to a conclusion that large reductions in the default setting caused occupants to respond actively, over-riding the effect. Second, Vringer et al. (2015) found that consumers are willing to commit to buying sustainable product varieties if they think others would buy them too. Therefore, to stimulate the consumption of sustainable products, governments can emphasise the “feel good” effect of individual contributions to sustainability and leverage the fact that consumers are “conditionally co-operative” by convincing individual consumers that enough others are switching to sustainable products. Finally, Brown et al. (2015) examined a variety of policy instruments used in Victoria, Australia to achieve conservation objectives, including voluntary programmes, conservation grants and reverse auctions for the provision of ecosystem services.

The OECD Directorate for Financial and Enterprise Affairs (DAF) has also written reports analysing the impact of behavioural economics on the firm. Armstrong and Huck (2012) discussed situations where behavioural economics can be used to explain non-standard approaches to firm behaviour whereby firms sometimes depart from the profit-maximising paradigm presented in the standard economic model. For instance, firms may be content with “satisfactory”, rather than optimal, profiles. Alternatively, among other irrational behaviours, firms may rely on simple rules of thumb rather than complex optimal strategies, base pricing decisions on sunk costs, CEOs may be overly optimistic about actions they take, and firms may want to punish rivals who they believe acted “unfairly” towards them.

Stucke (2012) discusses how behavioural economics can be applied to competition agencies, specifically in regards to anti-trust. He states that competition authorities can consider the implication of behavioural economics on four levels: first, as a gap filler to explain “real world” evidence that neoclassical economic theory cannot; second, to critically assess the assumptions of specific antitrust policies; third, to revisit fundamental antitrust questions, namely what is competition, what are the goals of competition law, and what should be the legal standards to promote those goals; and, last, to assess how behavioural economics will affect the degree of convergence/divergence of competition law among the more than 100 jurisdictions with competition laws today. He argues that behavioural economics has mostly been used by competition authorities in level one, arguing that companies setting the default option can often determine the outcome, even when transaction costs are nominal. In antitrust cases, the default option can then foreclose rivals (for example, Microsoft setting their own Windows Media Player as the default drives out rivals from the market).<sup>1</sup>

In 2010, the Directorate for Science, Technology and Innovation (STI) released the Consumer Policy Toolkit, which examines how markets have evolved and provides insights for improved consumer policy making (OECD, 2010a). While the publication relies on the standard economic model as the main logic for government intervention, it presents behavioural economics as a complement to the standard model to help governments make and implement more effective policies. It presents policy interventions regarding information interventions, default settings and choice framing as significant areas where governments can have tangible impact on consumer welfare.

Behavioural insights are also being used to improve pension systems and financial education programmes. Tapia and Yermo (2007) examine behavioural economics literature, which finds that people are not particularly good at handling their retirement savings for a variety of reasons, such as lacking the necessary cognitive ability to determine the optimal amount of savings, having insufficient willpower to execute a retirement savings plan, or sometimes being overconfident with their finances. Designing a better and less complicated menu of retirement options and setting default options have both been identified as possible policy solutions. Similarly, OECD (2013b) argues that applying behavioural economics to the development and implementation of financial education programmes can make them more effective.

Additionally, behavioural economics is being applied to health policy to address the issue of growing obesity in OECD countries. Analysing national policies in 2007-08 in OECD and EU countries, OECD (2010b) found that governments acknowledge that individuals are often exposed to large amounts of potentially confusing information on health and lifestyles from a variety of sources, and assert that it is primarily the job of government to act as a balanced and authoritative source of information by providing clear guidance to individuals. The report finds that governments have a series of behaviourally-based regulatory and non-regulatory measures available to promote

1. A subsequent case involved Microsoft tying its web browser, Internet Explorer, to its PC operating system Windows. Behavioural evidence on the significant impact of defaults on consumer choice was used to increase competition. This was done by requiring that users are provided with a “Choice Screen” for the web browser, thus prompting them to make an active choice and counteracting the default effect. For more information, see [http://europa.eu/rapid/press-release\\_IP-09-1941\\_en.htm?locale=en](http://europa.eu/rapid/press-release_IP-09-1941_en.htm?locale=en), Ciriolo (2011) and Lourenco et al. (2016).



healthier living, such as increasing healthier choices, information campaigns to influence established preferences, raising prices on unhealthy choices and banning unhealthy behaviours. These strategies should benefit from active collaboration between the public and private sectors to enhance the impact of prevention strategies and spread the costs involved more widely.

The Committee on Consumer Policy (CCP) has also examined the use of behavioural insights in consumer policy in OECD Member countries during this decade. The report concludes that behavioural insights have helped make consumer policy making more evidence-based and effective, while its use is still limited in terms of number of jurisdictions applying and range of policy areas applied. Use of behavioural insights has been mainly observed in areas of labelling and information disclosure, typically for price representation in e-commerce (OECD, 2016b).

In March 2016, the OECD Council revised its Recommendation on Consumer Protection in E-commerce which was developed by the Committee on Consumer Policy (CCP). The revised OECD Recommendation recognises the important role of behavioural economics. It includes a provision encouraging Member countries to work towards improving the evidence base for e-commerce policy-making through empirical research based on the insights gained from information and behavioural economics. It also includes new provisions aimed at addressing drip pricing and hidden costs practices (OECD, 2016c).

### ***Behavioural insights inside and outside government***

To support the implementation of behavioural insights in policy making, various behavioural insights units are being built inside and outside government, as well as at the international level. The first unit created inside government was the UK's Behavioural Insights Team (BIT), which was established to provide advice to UK policy makers on applying behavioural sciences to policy and contributing to strategy and policy development. Originally, BIT was located within the Cabinet Office but was made quasi-independent of government in 2014, while still performing its same function. BIT takes an empirical approach, using local policy trials and experiments to test behaviourally informed ideas. Some successful interventions have been in the areas of public health, employment activation, tax evasion, fine recovery, consumer policy, energy conservation and charitable giving.

For example, BIT worked with Her Majesty's Courts and Tribunal Service (HMCTS) to use behavioural insights to improve non-payment rates for fines imposed by the court. The evidence suggested that the small, but immediate, costs in terms of time, effort and money had a disproportionate effect on whether people would see it as beneficial to pay fines on time or not, despite the penalties involved. Employing this insight, HMCTS initially increased the rate of fine collection simply by making it more convenient for people to pay by numerous methods, and by issuing reminders by texts and telephones. Furthermore, BIT ran randomised controlled trials to assess the effectiveness of personalised communications to fine defaulters. Initial results found that the personalised messages were more effective, demonstrating two ways to improve policy effectiveness without increasing regulations.

In the United States, President Barack Obama established the practice of using behavioural science through Executive Order 13707 (2015). This executive order directs Federal Government agencies to apply behavioural science insights to the design of their policies and programs. The order also created the Social and Behavioural Sciences Team

(SBST) under the National Science and Technology Council. The SBST is a cross-agency group of applied behavioural scientists, program officials and policy makers with the direction to provide policy guidance and advice to Federal agencies in pursuit of this directive. The SBST have released annual reports in 2015 and 2016, highlighting their progress in supporting the President's directive. The two reports built on each other, providing updates on new trials and data on several topics, including promoting retirement security and improving college access and affordability (see Chapters 4 to 14 for case studies).

The Behavioural Economics Team of the Australian Government (BETA) is the Australian Government's first central unit dedicated to the application of behavioural economics to policy, programme and administrative design. BETA is hosted by the Department of the Prime Minister and Cabinet, but is a joint initiative of 17 agencies across the Australian Public Service. BETA aims at building behavioural economics capability across the Australian Public Service and drives its use in policy design and delivery, using randomised control trials to test what works. They are doing this through building capability, applying behavioural economics expertise to improve policies and programmes working with partners on specific projects, establishing links between the Australian Public Service and the behavioural economics research communities in academia in Australia and overseas, and producing tools and guides relevant to applying behavioural economics and randomised controlled trials to government policy and programs. Similar units exist in other central governments such as Germany, but capabilities and initiatives also exist at local level governments such as in Western Cape Government of South Africa or the City of Philadelphia.

Outside government, several behavioural insights organisations exist to bring public, private, voluntary and academic sectors together as well. For example, The European Nudging Network (TEN), managed by the Initiative for Science, Society and Policy (ISSP) in collaboration with the OECD and HEC Paris, was created in 2014 to ensure a scientifically and ethically responsible dissemination of applied behavioural insights in Europe and elsewhere. TEN accomplishes this task primarily through a range of Open Access (OA) online resources and member activities. The most prominent of these OA resources is the Nudge Database, which seeks to provide resources as well as a validation system for stakeholders and practitioners. Also, ideas42 – a non-profit organisation initially formed at Harvard in 2008 – was the first behavioural design lab created in the world. Ideas42 brings together professionals from different backgrounds and disciplines to work on projects worldwide to solve problems in health, education, criminal justice, international development, and government efficiency. There are also many others such as the Behavioural Science and Policy Association (BSPA) and various national networks.

Inside academia, there are a number of centres and behavioural labs, with associated behavioural scientists, set up around the world. For example, the Behavioural Insights Group (BIG) was launched at Harvard in 2013 and brings together researchers, behavioural economists and other behavioural scientists to focus on improving education and health systems, reducing discrimination, protecting the environment and improving personal and organisational finance management. BIG has a 35-member faculty, a programme for students, and a 700-member Behavioural Insights Student Group. BIG also works with governments and organisations that engage in behavioural science applications to policy. Similarly, the Centre for Analysis of Risk and Regulation (CARR), located at the London School of Economics (LSE) is an interdisciplinary research centre

whose core work focuses on the organisational and institutional settings for risk management and regulatory practices.

In Canada, the Behavioural Economics in Action at Rotman (BEAR) centre, one of the earliest and biggest academic research groups, combines decades of research in decision-making with empirically-tested tools to facilitate behavioural change. They examine social and economic problems from a behavioural science lens and design solutions that go beyond the traditional approaches of applying incentives, penalties or provisioning information. And in France, the French Nudge Project at Sciences Po seeks to analyse the emergence of behavioural economics from the legal and philosophical point of view. The project brings together an interdisciplinary team to work on understanding the source (genealogy), conceptual framework (new normative tools) and practical implications of behavioural economics for public policy, with a focus on proposing and designing new modes of public policy creation.

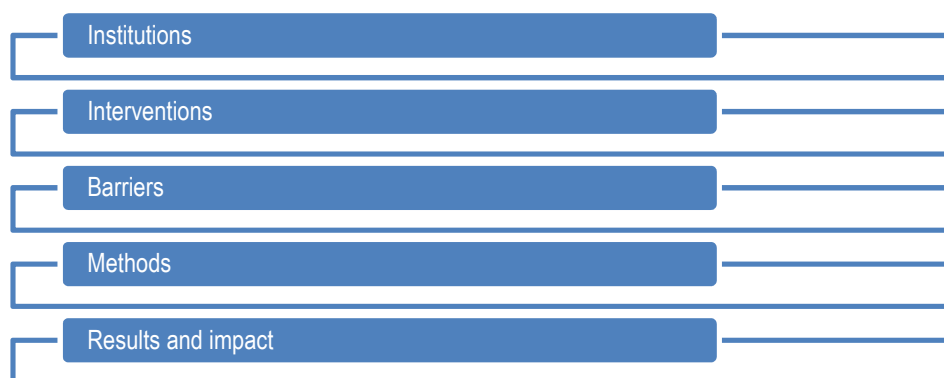
Building on this work, this report seeks to further the discussion by adding additional evidence on the applied aspects of using behavioural insights in policy making. Presenting the results of the OECD Behavioural Insights Survey, this report provides evidence regarding the adoption and utilisation of behavioural insights-orientated thinking internationally across regulatory and other government bodies. To finish, a collection of case studies exhibits the cross-sectoral and cross-jurisdictional application of behavioural insights.

## The reality: Collecting case studies on applying behavioural insights

### *Survey approach*

This report draws on a case study survey that was jointly developed by the OECD's Directorate for Public Governance and Territorial Development with inputs from the Environment, Science, Technology and Innovation and Financial Affairs Directorates, and researchers at the Centre for Analysis of Risk and Regulation (CARR) at the London School of Economics, with inputs from the European Nudge Network (TEN) and ideas42. The survey builds on the earlier work conducted by the OECD and reports on individual countries' activities in this field, as well as the long experience of the OECD in developing cross-country surveys in other policy areas.

Figure 1.1. **Structure of the case study survey**



Source: OECD 2016 Behavioural Insights Case Study Survey.

The survey was designed to capture two key aspects of the application of behavioural insights to policy making: i) institutions and processes aimed at supporting the application of behavioural insights with a view to understanding the extent to which applications are embedded in policy making; ii) types and practices of behavioural insight-oriented practices (Figure 1.1). Write-ups reflecting a selection of the case studies collected are included in Chapters 4 to 14.

### ***Strengths and limitations***

Surveys have advantages and limitations. In general, surveys are problematic when researching the conduct and behaviour of organisations. Response rates are, in most jurisdictions, low. It is not clear who responds to these surveys and on what basis. Varied response rates in terms of types of organisations deform results.

These limitations are partly addressed within the OECD context. Surveying organisations that are related to the working of the OECD brings the advantage of greater organisational attention, and therefore a potentially higher response rate. However, the universe of potential respondents is hard to specify as surveys were sent to organisations within OECD member and other countries where the survey was disseminated further (in some countries at least). This “snow-ball” effect has certainly contributed to the large number and diversity of the responses received, but it makes it virtually impossible to pin down an exact response rate!

A further advantage provided by the OECD context is that OECD surveys are well-known and therefore are designed to respond to the “needs” of the surveyed population. At the same time, survey respondents are more likely to present “positive” experiences rather than negative ones or report on the non-presence of particular phenomena – even when invited to do so.

Ultimately, however, these potential biases can in fact strengthen the conclusions drawn from the survey: even with all the limitations acknowledged above, if certain trends can be identified in this sample, then it is worth probing more deeply into the causes and implications of these findings.

### ***Country and sector coverage***

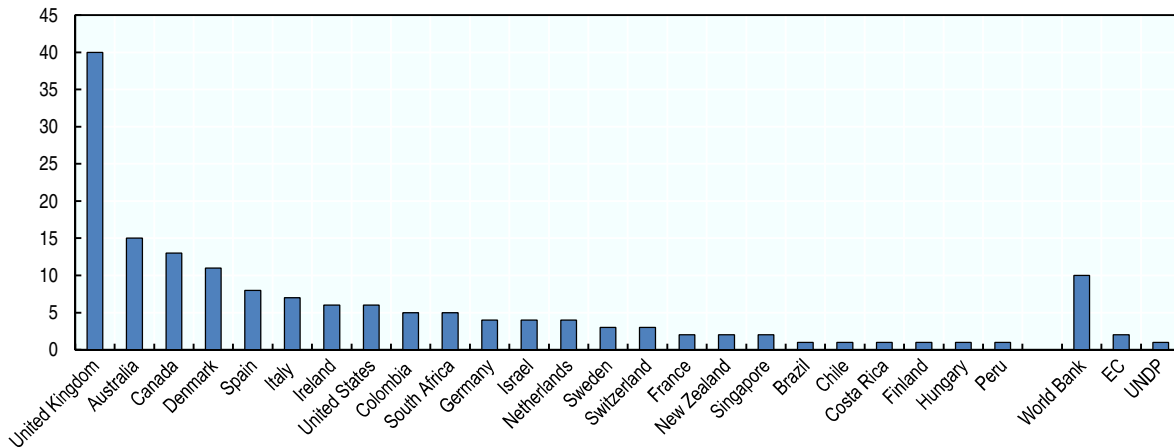
The survey was circulated widely, using not only the OECD institutional channels but also academic and practitioner networks, in order to capture the diversity of behavioural insight applications and get a snapshot of the state of play across countries and sectors.

The survey was sent to OECD member and partner countries participating in the Regulatory Policy Committee, the Network of Economic Regulators, the Consumer Policy Committee and the Competition Committee. The survey was circulated through the London School of Economics directly to practitioners and regulators in the United Kingdom (with initial findings discussed in a seminar organised by the London School of Economics). The survey was also sent directly to behavioural insight units across the world and shared with platforms of practitioners and academics such as the Behavioural Science and Policy Association (BSPA).

Responses were received from 23 countries, a UN agency, the United Nations Development Programme (UNDP), and an international financial institution, the World Bank. Overall, 159 case studies were provided on the application of behavioural insights.<sup>2</sup> However, the quality of reporting of the case studies varied considerably. Most responses only included limited information while some reported more developed applications to policy work, particularly from more experienced institutions that have been using the instruments of behavioural sciences for a longer period (Figure 1.2).

Figure 1.2. **Case studies reported by country**

Total number of case studies = 159



Source: OECD 2016 Behavioural Insights Case Study Survey Dataset.

The United Kingdom, Canada and Australia are among the countries which submitted the greatest number of case studies. Since 2010, the United Kingdom has taken an increasingly systematic approach towards testing behaviourally-informed ideas on policies, with successful outcomes that are being replicated in several countries, including through the work of the BIT. Australia and Canada have also successfully advanced the use of behavioural approaches to public policy and service delivery at local and national levels. A number of sub-national and city-level departments across countries have also started to adapt the use of behavioural insights and have tailored these policies and programmes to the local context. A substantial number of these applications have then been successfully scaled-up at regional and national levels.

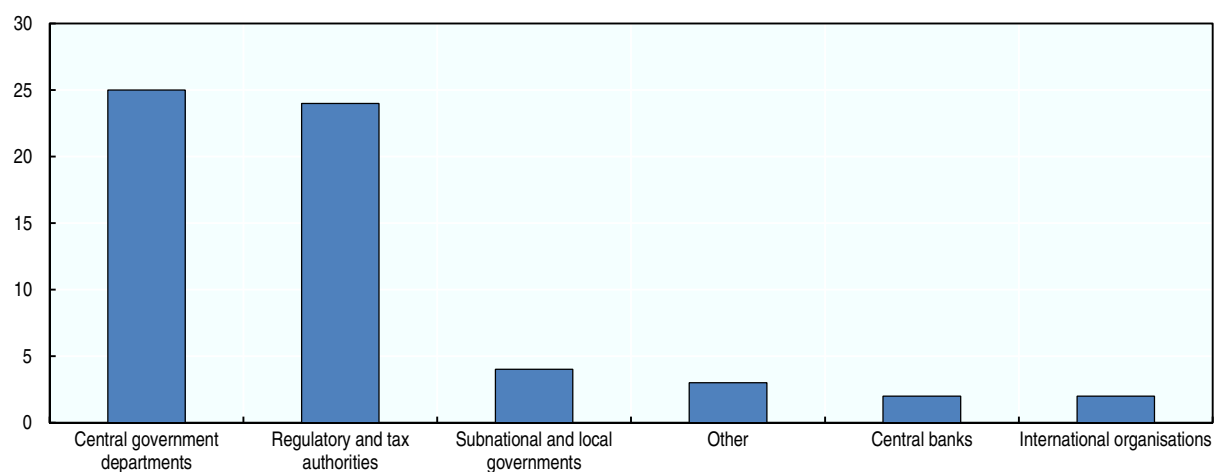
Sixty public bodies responded to the survey. Eighty-two percent of respondents were central government departments and regulatory and tax authorities (evenly split between these two categories). Government departments included a wide range of portfolios, from health and social affairs to finance and economy. Regulators also covered a number of

2. The survey, which was sent out in December 2015, received responses from 60 institutions, representing the 23 countries, a UN agency, the UNDP, and the World Bank noted above. These 60 institutions provided information on 129 cases where behavioural insights were applied to policy interventions. After the closing of the survey, 30 additional cases were provided to the OECD, bringing the total to 159 cases. However, since the sources for these additional case studies did not answer the survey, their data is not reflected in the institutional data, only the case study data.

sectors, with a strong representation of financial regulators but also including telecommunications and energy as well as competition authorities. Central government departments also included free-standing units such as the Behavioural Insights Team (BIT) in the United Kingdom (originally created as part of the UK Cabinet Office and currently a social purpose company jointly owned by the UK Cabinet Office, the innovation foundation Nesta and BIT employees) and the Social and Behavioural Sciences Team in the United States (created by executive order 13707 and placed under the National Science and Technology Council) (Figure 1.3). The United States also included two of the four local government examples, from Boston and Philadelphia.

Figure 1.3. **Which institutions responded to the survey?**

Total number of respondents = 60



*Note:* Others include government programmes or bodies set up with a highly specialised purpose.

*Source:* OECD 2016 Behavioural Insights Case Study Dataset.

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## Chapter 2

### What's going on? Insights from the behavioural insight case studies

*This chapter provides evidence on the extensive practice of behavioural insights, as well as the wide range of institutional models and practices present in OECD member and partner countries. Results also show that there is room for improvement, particularly in regard to evaluation, transparency and applying behavioural insights throughout the policy cycle.*

The survey provides evidence on the extensive practice of behavioural insights (BI) and the organisational eco-system around BI practice internationally. The survey also shows a wide range of institutional models for integrating behavioural insights into the daily work of the public administration, which is dependent on the administrative and cultural context of the country since no single model exists.

Interventions focus largely on individual transactions by individuals in the market place. In some cases, however, behavioural insights are also being applied to the development of a policy or regulation, indicating an unexplored area for further development. Surprisingly, most applications involve either the use of randomised control trials or the use of literature reviews, suggesting either an intensive, fully-fledged application or an early step approach. This may depend on the sample coverage and the experience of the institution in applying such approaches. It can also suggest the existence of a “missing methodological middle”, where applications might be amenable to applications that are more resource-intensive and potentially results-rich than literature reviews but falls short of an experiment.

The survey responses also raise a number of major questions. These questions include issues of ethical concern (surprisingly few), resources (very low cost of interventions), evaluation, mainstreaming and follow up and, in particular, the extent to which the application of behavioural insights is moving from its initial experimental phase to a policy tool, the effectiveness of which is being assessed, evaluated and mainstreamed.

## **Institutions**

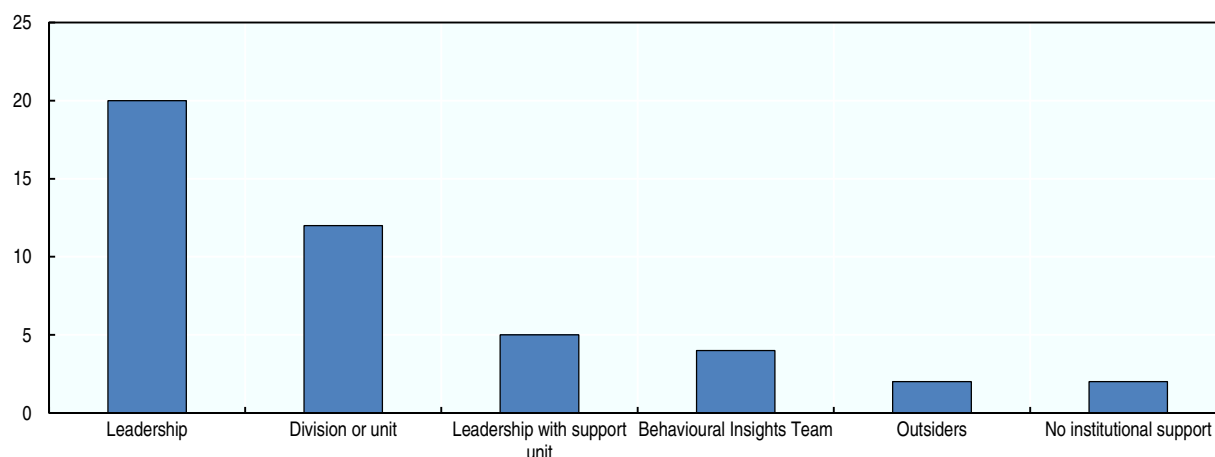
What can be said about the degree to which BI are embedded in the daily practices and culture of organisations? This question can be approached in two ways, first in terms of who promotes behavioural insights and how, secondly to explore at what point in the policy process behavioural insights are used to inform decision-making (see following section for further information).

### ***Leadership and promotion of behavioural insights***

Turning to the promotion aspects first, the survey suggests that BI are introduced largely as a result of the organisations’ leadership, where there has been some high-level support within the organisation for the use of behavioural insights. This is often with the support of partnerships with academic institutions that can help build capacity and capabilities within the government, such as BIT, BEAR, BIG and SBST. In 20 institutions, this support can come from agency heads and senior management or directly from ministers. BI applications can also be driven by units or divisions within the institution, often dedicated to economic analysis and statistics (12 institutions), or a combination of leadership’s commitment paired with some push from a unit or division. For four institutions, applications have been driven by a dedicated BI or innovation unit. Where there has been no leadership or particularly strong institutional support (four institutions), applications have been driven by individual initiatives or some external support (usually in the form of external funding) (Figure 2.1).

Figure 2.1. **Who have been the main institutional supporters of the use of behavioural insights?**

Total number of respondents = 60



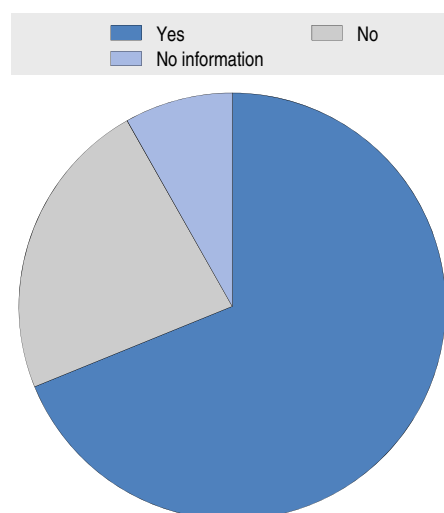
*Note:* Out of 44 institutions which are applying behavioural insights and responded to the question; no response for six institutions; nine institutions declared that they are not yet applying behavioural insights.

*Source:* OECD 2016 Behavioural Insights Case Study Survey Dataset.

In the majority of organisations, BI application was part of a wider organisational reform and change agenda (Figure 2.2).

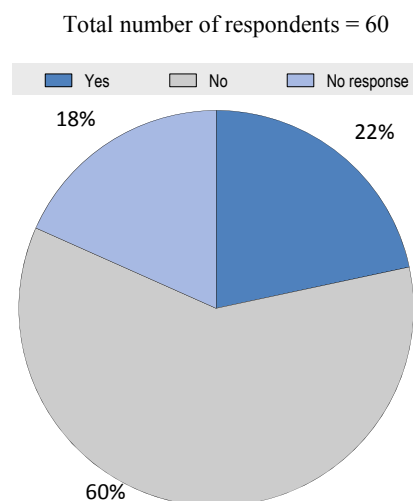
Figure 2.2. **Is the application of BI related to any other organisational priority, changes or reform or agenda?**

Total number of respondents = 60



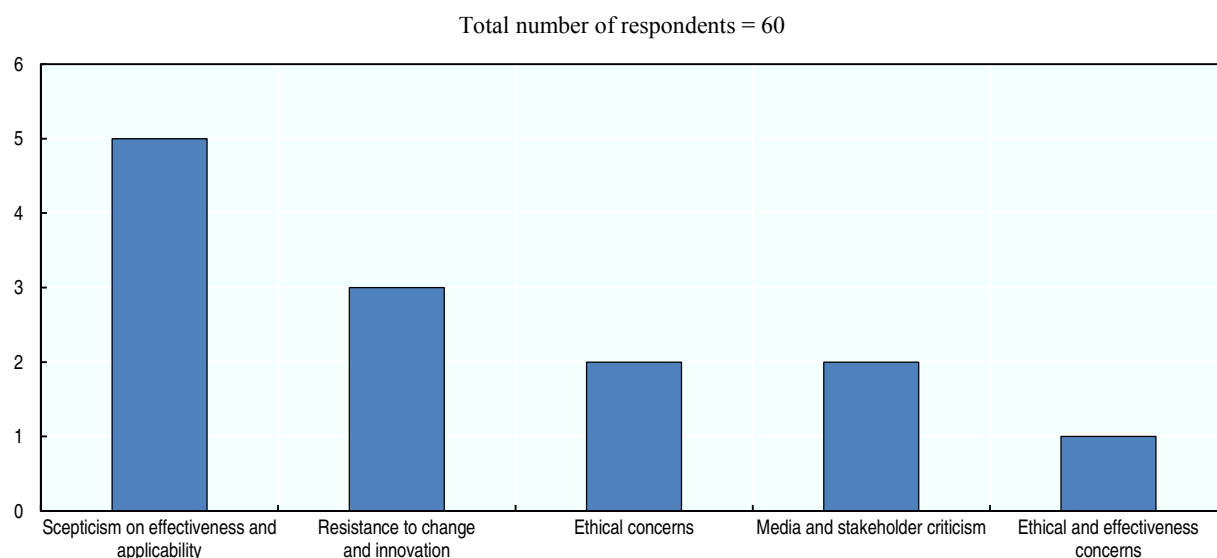
*Source:* OECD 2016 Behavioural Insights Case Study Survey Dataset.

One question that arises from these observations is whether BI applications are moving beyond the “flavour of the month” towards a broader interest in considering BI applicability to wider areas of organisational decision-making. In this respect, and possibly suggesting an organisational environment ripe for mainstreaming the use of behavioural insights, it is notable that only some resistance to applying BI was reported (Figure 2.3).

Figure 2.3. **Has there been any opposition/criticism about the application of BI?**

Source: OECD 2016 Behavioural Insights Case Study Survey Dataset.

Where some opposition or criticism was recorded, this was mostly internal to the organisation and partly related to organisational resistance to change, although concerns were also expressed on the effectiveness of the BI tool and whether it is appropriate to address complex problems. In only two cases external opposition and criticism, from the media and concerned stakeholders, were reported (Figure 2.4).

Figure 2.4. **Type of opposition/criticism to applying BI**

Source: OECD 2016 Behavioural Insights Case Study Survey Dataset.

### ***Organisational set up***

The survey confirms the evidence that had emerged, for example, at the 2015 OECD Seminar on New Approaches to Policy Design that countries have been experimenting with different institutional models to apply BI. Across the case study collection, three institutional models seem to emerge:

- **Diffuse model:** existing units within a department or specialised agency at the central government or local government level applying BI.
- **Central steering model:** specialised units usually within the Centre of Government (for example, chancellery, president's office, prime minister's or cabinet office) focusing fully or in part on applying, supporting and advocating the use of BI across government; functions that are usually paired with BI are strategic foresight and planning and fostering innovation across the public sector.
- **Project model:** BI are used for specific projects and initiatives through specialised teams.

These models are not mutually exclusive. They co-exist, evolve over time with different gradients of diffusion, co-ordination (both formal and informal) and central steering. For example, in the United Kingdom, where the level of use of BI is quite extensive, the central steering model seems to have evolved into a diffuse model, with central steering (external) support. The Centre of Government unit, BIT, was established to foster the use of BI across government and contributes to policy/strategy development. BIT has then become an entity partly outside government, providing support to government departments and agencies, which have also their own BI units or specialised teams.

Australia appears to have evolved from a purely diffuse to a diffuse plus central steering model. BI has developed across different departments through existing units that have progressively experimented with BI, along a diffuse model. Different departments have come together to support and fund a central BI unit in the Department of the Prime Minister and Cabinet (BETA, described above), which is expected to further support the use of BI across government and facilitate cross-linkages and exchange of experience. BETA is currently working on up to 30 RCTs, with two completed or in the field this year, and a steady stream of results available in 2017.

Canada offers yet another approach, where diffusion and ad-hoc and project initiatives exist not only at federal government level but also at local level, notably in the Province of Ontario where the Behavioural Insights Unit (BIU) was created with the support of BEAR, who was instrumental in building capacity within the BIU team. To create cross-linkages and support the application of BI, the Federal Government has established a BI team within the Innovation Lab of the Privy Council Office that works with both Federal and provincial institutions.

Singapore has more of a combination of a diffuse and project model that provides another approach. While there is currently no formal central steering unit, there is a network of the various practitioners who support and co-ordinate activities, for instance through an annual conference or forum and ongoing engagement.

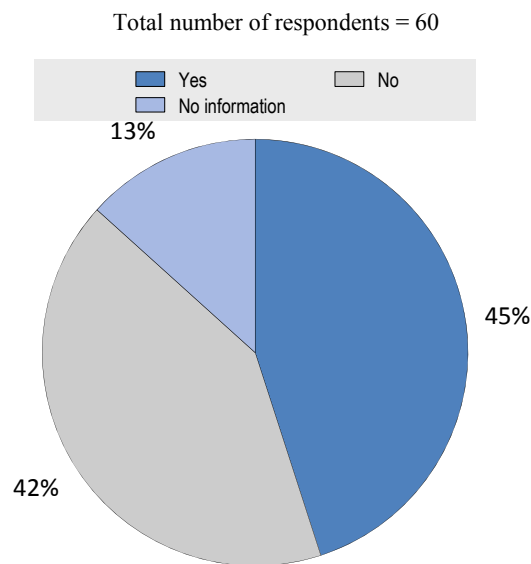
Ultimately, the model(s) chosen might depend on the institutional and administrative culture of the country (for example, strong centre vs. strong departments) as well as the degree of use of BI. Nevertheless, as the use of BI progresses and applying BI becomes one of the tools in the box of the analyst and policy maker when forming and elaborating policies and decisions, the steering and advocacy role becomes less relevant in replacing the need for cross-support, advice and co-ordination.

### Expertise

An additional measure of the degree of institutionalisation of BI within organisations is the extent to which expertise and competences for using BI have been acquired and developed.

The presence of behavioural scientists or experts varies among the surveyed institutions. Around 45% of the institutions employ experts with degrees in psychology, social sciences, anthropology, economics, and neuroscience, among others, to work on behavioural issues within the organisation. Other institutions have either recruited experts to work part-time or have engaged external experts on a consultancy basis to help advice, design, develop and conduct the research, surveys, experiments and trials for behaviourally-informed initiatives (Figure 2.5).

Figure 2.5. **Does your organisation employ behavioural scientists/behavioural experts?**



Source: OECD 2016 Behavioural Insights Case Study Survey Dataset.

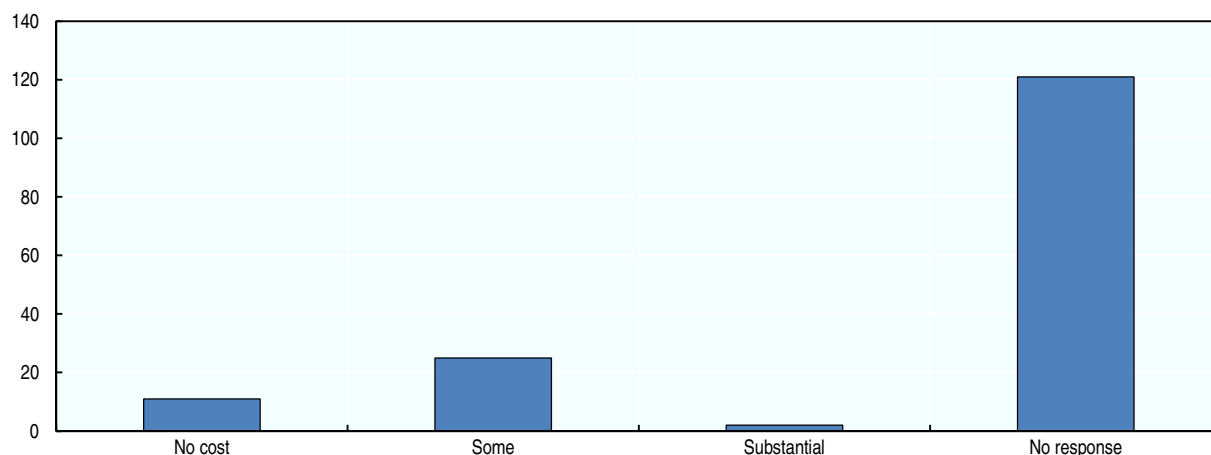
### Resources

One of the main barriers for the application of BI is said to be the lack of resources. The survey, however, does not substantiate this statement. Survey respondents do not regard cost as an issue: 121 responses did not provide any information on cost. For 25 interventions, cost was not an issue, with only some minimal costs reported (of the order of few thousands). In 11 cases, interventions were said to have had no cost, and in only 2 cases costs were substantial (of the order of few millions) (Figure 2.6).

This response may have to do with the phrasing of the question or the information available to the official completing the survey. In part, this might also be an indicator of the embedded, but nevertheless informal nature in which BI are being operationalised within government: governments are notoriously resistant to full economic costing (“why cost something that one should be doing anyway?”). Utilising (and applying BI might therefore be regarded as already “costed for”. Furthermore, those case studies that do include costs suggest that only a few are particularly large-scale initiatives.

Figure 2.6. The costs of BI interventions

Total number of case studies = 159



Source: OECD 2016 Behavioural Insights Case Study Survey Dataset.

## Interventions

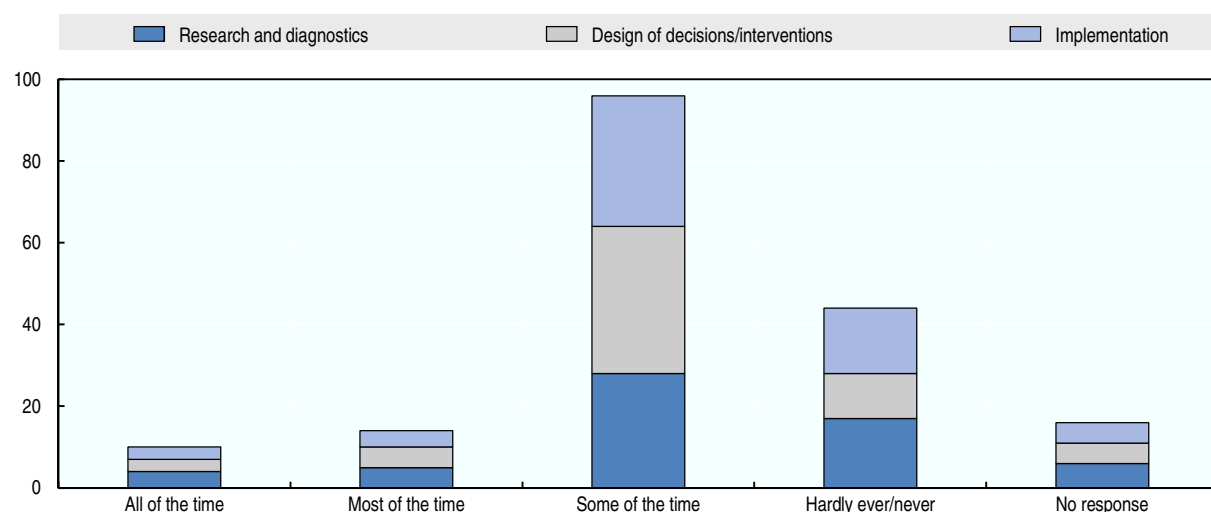
### Policy stage

Besides the promotion and the institutions supporting the use of BI, the degree to which BI are embedded in organisational life can be assessed by looking at what stage in the policy process behavioural insights are used to inform decision-making.

In terms of “when” BI are being utilised, the survey shows some clearer patterns. Figure 2.7 notes the key tendencies around a stage-based model of decision-making (research/diagnosis, design of decisions/interventions, and implementation). Behavioural insights seem to be utilised some of the time primarily at the later design and implementation stages than the initial “research/diagnostics” stage.

Figure 2.7. Use of behavioural insights by policy stage

Total number of respondents = 60



Source: OECD 2016 Behavioural Insights Case Study Survey Dataset.

One central question that involves debates about BI concerns its potential reach: does the survey find that behavioural insights are utilised in areas that go beyond the “usual suspect” areas of enhancing consumer choice, either by changing defaults or by reducing information and transaction costs?

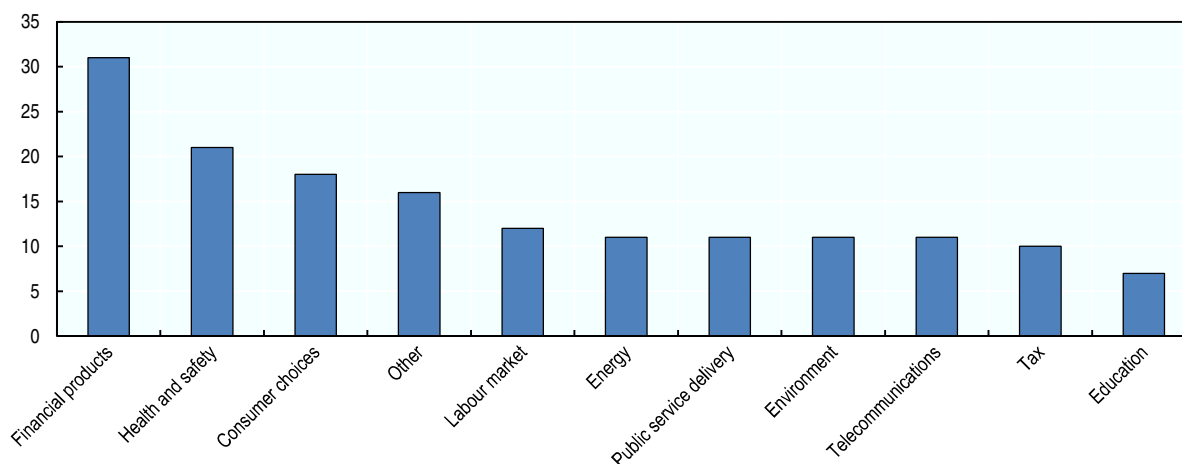
The survey suggests that this is not the case. Case studies focus on the traditional areas of consumer protection and choice, namely enhancing consumer information and choice in diverse areas, such as financial markets, energy, telecommunications, public health and taxation. Others focused on administrative simplification (such as in authorisation processes). Few of the cases were directed at decision-making of the regulated organisations and changing the behaviour of regulated organisations.

The case studies highlighted the use of BI in the financial sector. The majority of these are novel applications that are geared towards informing consumer choices and improving consumer protection. Another increasingly popular sector that has been using behaviourally-informed innovations is the health sector. Behaviourally-informed policies and programmes have been used to promote healthier lifestyles or improve the well-being of the population through subtly influencing choices and decisions. Some popular examples include the United Kingdom’s application of BI to encourage organ donation among individuals registering for a driver’s license or renewing their vehicle tax. A more conventional example of using BI is on regulating tobacco consumption in Colombia. This exercise found that warnings on cigarette packages can potentially reduce tobacco consumption if properly framed.

Taxes are essential to help develop and expand vital public services. A number of BI techniques are also used to improve tax administration through improving collection services or reducing tax avoidance. A case study from New Zealand underscored the importance of improving the performance of collection teams to better acknowledge poor customer understanding, among other behavioural drivers, in improving tax compliance outcomes. Other cases included personalisation of request letters and the simplification of procedures to help stimulate prompt repayment (Figure 2.8).

Figure 2.8. Case studies reported by policy area

Total number of case studies = 129



Source: OECD 2016 Behavioural Insights Case Study Survey Dataset.

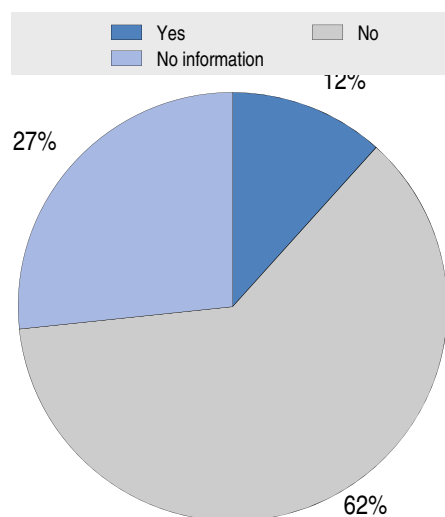


## ***Ethical issues***

Surprisingly few countries highlighted ethical concerns as a barrier to the use of behavioural insights. This might be due to the fact that the respondents to the survey are mainly those that have been supported to implement behavioural insights by senior or political leadership. In gaining this support they might have already addressed a number of these issues to anticipate its possibility and to ensure that no ethical issues arise. They might have done so by, for example, relying on existing ethical frameworks like those in place in research institutions. This, in turn, bodes the question of what is an appropriate framework for dealing with ethical issues related to behavioural insights (Figure 2.9).

Figure 2.9. **Ethical concerns**

Total number of respondents = 60



Source: OECD 2016 Behavioural Insights Case Study Survey Dataset.

In cases where ethical issues have arisen, institutions have created mechanisms and guidelines to help address future ethical concerns (Box 2.1). For instance, in a number of countries, ethical principles have been integrated in the design and development of behaviourally-informed approaches and these approaches are only applied as long as it is within the interest of the community and its citizens and that freedom of choice is respected.

### **Box 2.1. Mechanisms and guidelines for dealing with ethical issues**

Respondents to the survey identified a variety of mechanisms and guidelines employed to help deal with ethical concerns, or prevent them from arising in the first place:

- Australian Government Department of Human Services (DHS). The DHS prevents ethical concerns from arising by considering ethical issues in the initial planning stages. Following a co-design approach, DHS ensures that all parties are fully informed and actively involved throughout the entire process and potential issues are worked through with all relevant parties if/when they arise.
- Employment and Social Development Canada (ESDC). ESDC has experienced ethical concerns from government officials regarding the perception of unequal treatment during testing and testing alternative

### Box 2.1. Mechanisms and guidelines for dealing with ethical issues (*cont.*)

messaging to large groups of Canadians leading to unequal outcomes. To address these concerns, ESDC has made, for instance, significant efforts to clarify (using concrete examples) the "light touch" nature of most, if not all, of the BI-related interventions the department is implementing. As well, significant efforts have been made to educate various departmental stakeholders with respect to the importance of testing innovative approaches on smaller population before full implementation, so as to avoid the large scale implementation of bad ideas.

- Ministry of the Interior and Kingdom Relations, Netherlands. Ethical concerns have not yet been a problem, as, from the beginning, the Director-General level provided tacit understanding that nudging was "no sin to do".
- New Zealand Inland Revenue. New Zealand agencies are strongly guided by legislative and ethical constraints that limit the ethical issues.

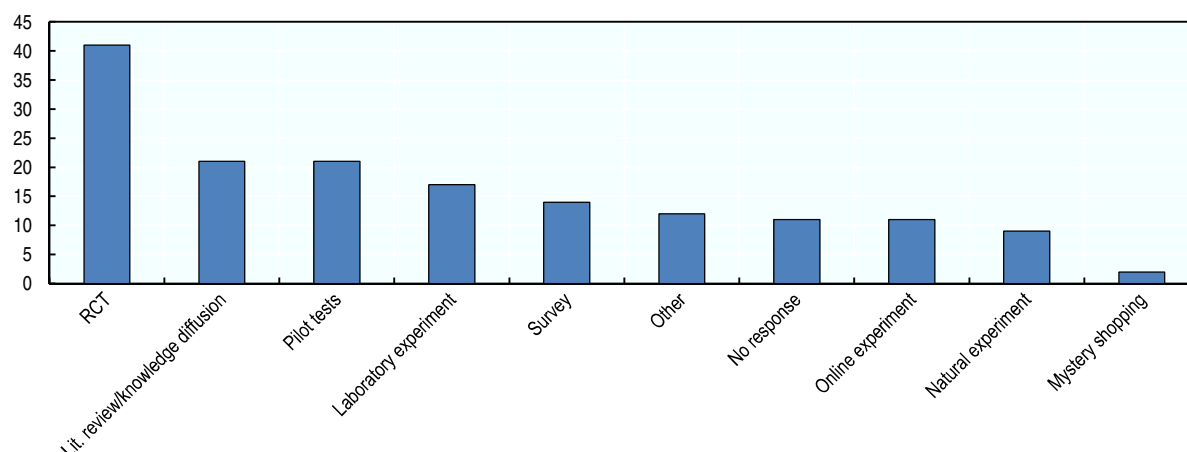
Source: OECD Behavioural Insights Survey.

### Methodology

In terms of knowledge acquisition, there are two ways in which BI influence organisational decision-making. One is via diffuse knowledge, such as the exposure to the literature (whether through accidental discovery or intentional searches), the other is by direct knowledge generation through the use of experiments of different kinds, whether random control trials, laboratory work or surveys. As noted already, only few organisations report concern with ethical criteria. One potential explanation for this response might be that these research efforts are conducted by third parties that are therefore assumed to be safeguarding ethics themselves.

Figure 2.10. Methods used for BI applications

Total number of case studies = 159



Source: OECD 2016 Behavioural Insights Case Study Survey Dataset.

Randomised Control Trials (RCTs) are among the most tried and tested ways to assess the effectiveness of an intervention (Box 2.2). RCT is more commonly used in the medical field and only in recent years was it applied in the area of public policy. RCTs

are particularly relevant in testing cost-effectiveness or value-for-money for programmes and policies. The use of RCTs is apparent among more experienced institutions. The majority of the case studies that have used RCTs are also replications of previous trials that have been conducted by other institutions or countries. Around 19 of the 41 RCT case studies have been previously drawn from past trials, of which some have been adapted to local context and 10 are novel applications (no information on this is provided in one case) (Figure 2.10).

Interestingly, the two most widely used methodologies are a relatively resource-intensive, experimental technique like RCT and a relatively less resource-intensive activity of desk-based, non-experimental acquisition of existing knowledge. This might reflect the different stages in the application of BI at which the reporting organisations are, with the majority either very advanced or at a relatively early stage.

### Box 2.2. Randomised Controlled Trials

Randomised Controlled Trials (RCTs) can be traced back to 1747 when James Lind tested treatments for a cure for scurvy. This methodology continued to be used in medical science to determine effective cures and treatments.

The randomised controlled trial is a scientific method to induce a cause-effect relationship exists between an intervention or treatment and outcome. Its strength is in the ability to reduce or eliminate bias through the process of randomly allocating subjects to treatment and control groups and maintaining all other variables are consistently allocated across the groups. Behavioural science in public policy uses RCTs to determine whether a particular intervention results in a desired change of behaviour for the benefit or betterment of the subject's, in this case people's, welfare.

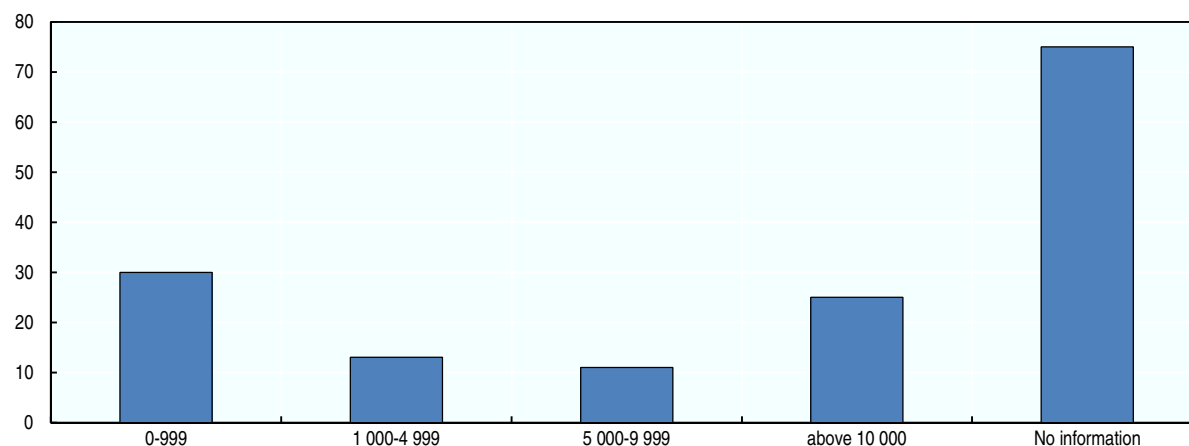
*Source:* Dunn, P.M. (1997), “James Lind (1716-94) of Edinburgh and the treatment of scurvy”, *Archives of Disease in Childhood-Fetal and Neonatal Edition*, Vol. 76/1, F64-5, <http://dx.doi.org/10.1136/fn.76.1.f64>; Kendall, J.M. (2003), “Designing a research project: Randomised Controlled trials and their principles”, *Emergency Medicine Journal: EMJ*, Vol. 20/2, pp. 164-168.

An area for further investigation is in the multiple uses of the various methodologies. It may be that “one size does not fit all” and that the type of methodology should be based on the issue at hand. As such there may be a wider and potentially incremental phasing in the use of methodologies that could be developed and applied. This may mean that public institutions employ a variety of support activities that may start with initial consultations or design workshops with behavioural experts and then increase in resource requirements on a needs basis as discovery continues.

Sample size can also offer an indication of the depth of BI applications, with the use of larger samples indicating a greater investment in the use of BI. The large majority of cases did not include any information on the size of the sample. This might be simply the result of an oversight or lack of knowledge on the part of the official responding to the survey. It might also reflect a tendency not to report or record the sample size, especially if this is too small or not sufficiently significant to make inferences on scalability and wider applications. Among the cases where sample sizes were reported, samples were either relatively small (less than 100) or large (above 10 000) (Figure 2.11).

Figure 2.11. **Sample sizes for applying behavioural insights**

Total number of case studies = 159



Source: OECD 2016 Behavioural Insights Case Study Survey Dataset.

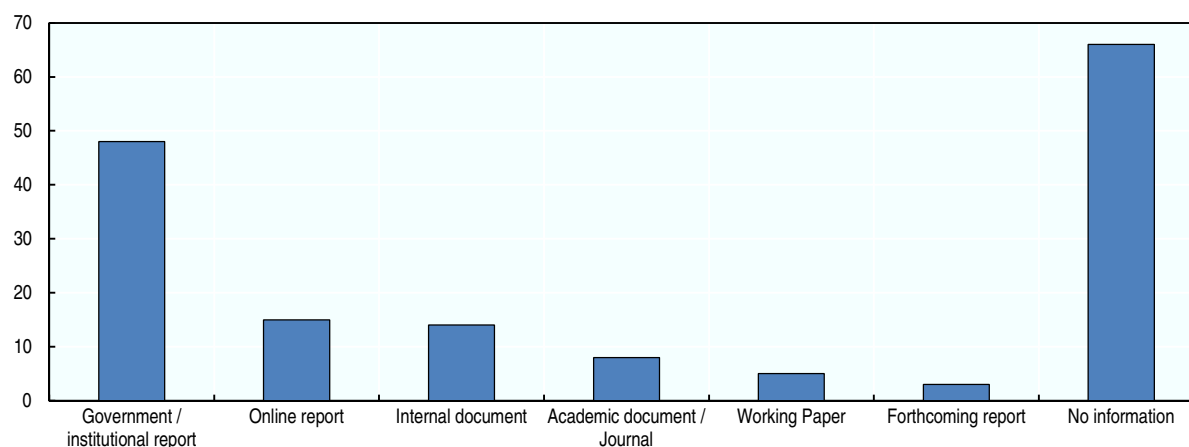
## Results and impact

### Transparency

Questions about transparency attracted mixed responses. Approximately half of the case studies were reported to be published and 48 reported that they publish research results as a government or institutional report, although information on where to find case study results was sparse (Figure 2.12). In those cases where information was published, this was on an official government report. Fourteen cases were published in internal documents (not for public release). Meanwhile, 15 cases were published online, often by a consulting firm, international institution or academic partner. Other, less common means of publishing results include academic journals and working papers. Other, less common means of publishing results include academic journals and working papers.

Figure 2.12. **Publication of BI case studies**

Total number of case studies = 159



Source: OECD 2016 Behavioural Insights Case Study Survey Database.

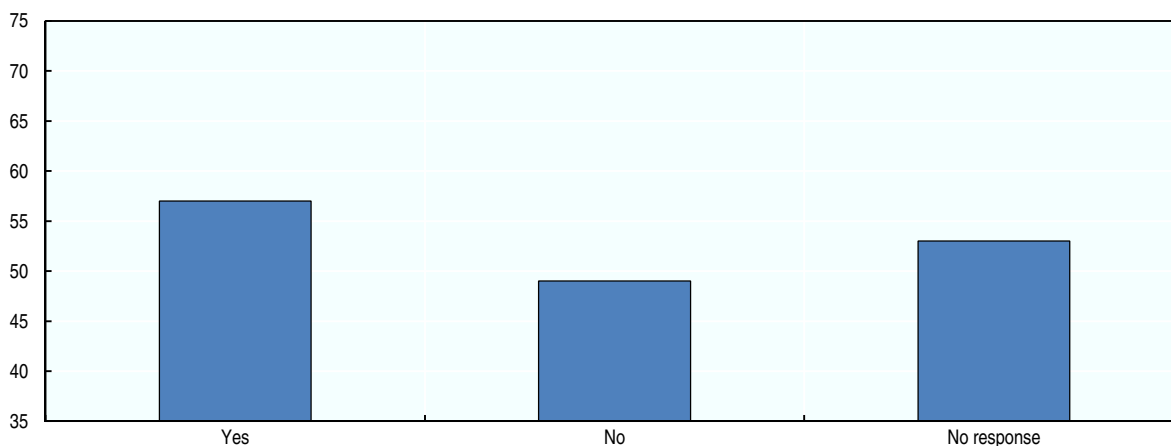
The White House's Social and Behavioural Sciences Team (SBST) in the United States and the Behavioural Insights Team (BIT) in the United Kingdom produce annual reports. BIT has been producing annual reports since 2010-11. The SBST and BIT reports provide information on the programme of activities within the teams. They provide information on the partner bodies that they work with, such as ministries, agencies, academic institutions and non-government bodies. The reports give information about the trials that have been conducted and their results. Importantly, they also provided information on trials that did not work or had unexpected results, which is important for public bodies to publish alongside successful work.

### ***Evaluation and impact***

A key feature of applying BI is testing on a sample which is a different approach to the “norm” in public policy. Evaluating the results and impacts of the experiment is particularly important to make any assumption on what can or cannot work. It is also important to continue monitoring policies over time to assess whether the intervention causes a one-time effect or can enable habitual change. Fifty-seven of the reported cases underwent an evaluation, but 49 did not. But most did not provide a response on this. The result of the survey seems consistent with the OECD's findings in general rule making and the lack of systemic *ex post* evaluation on new regulatory policies (OECD, 2015). As for non-behavioural policies, the lack of evaluation in BI work suggests that this is an area in need for further development as it can weaken the potential effectiveness of applying BI (Figure 2.13).

Figure 2.13. **Was the implemented action or decision evaluated?**

Total number of case studies = 159



Source: OECD 2016 Behavioural Insights Case Study Survey Database.

But what about the extent to which experimenting leads to tangible policy change? Evidence is mixed. Countries that have been dealing with behavioural insights for longer have largely focused on changes mostly on improving implementation (e.g. letter to tax payers, access to information, default options, etc.). While there is now a shift towards the design of policies this is not as prevalent, or at least not yet. There are also little if any examples of using behavioural insights to foster organisational change, either within the public administration or external entities regulated by the public sector.

The same also held for questions regarding the utilisation of initial initiatives – in what way has the introduction of behavioural insight-related *thinking* altered policy? Not surprisingly given the early stage of application of BI among institutions, there was hardly any information in the survey about examples where insights-related initiatives had been transferred to policy thinking generally, and whether there had ever been an evaluation of its success. This will however be an interesting area for future investigation.

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- Dunn, P.M. (1997), “James Lind (1716-94) of Edinburgh and the treatment of scurvy”, *Archives of Disease in Childhood-Fetal and Neonatal Edition*, Vol. 76/1, F64–5, <http://dx.doi.org/10.1136/fn.76.1.f64>.
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## *Chapter 3*

### **Where to go next? Shaping a policy and research agenda**

*This chapter discusses the key questions and issues raised by the survey, with suggestions of a way forward to solving them. It provides recommendations for new frontier thinking regarding the application of behavioural insights to policy, as well as recommendations for setting guiding principles or standards for its continued use by public bodies.*

Which are the issues and policy problems that applying behavioural insights can help to resolve? What is the most effective institutional set up for supporting the use of behavioural insights across government (central, local, de-concentrated and arm's length)? How can an acute interest in applying behavioural insights be translated into policies that affect public and regulated organisations? How can behavioural insights support experimentation and evaluation in policy design and implementation? What methodologies can help embed behavioural insights into policy making when their use is appropriate?

These are some of the questions and issues that the survey raises. The following sections address some of them and make some suggestions on a path forward.

### **Where to apply behavioural insights?**

Applying behavioural insights is first and foremost an approach to policy making that embeds experimentation into the development of policy and regulation (OECD, 2015b). It starts with the recognition that individuals do not behave as the theories of rational choice may suggest, and that increasingly public bodies endeavour to create evidence-based policies and interventions with a more realistic, and proven, understanding of human behaviour. This understanding of “actual human behaviour” can be applied to end users of public services and, more broadly, consumers and also decision-makers, public or private service providers and regulated entities.

The evidence in this report confirms that behavioural insight has largely been applied to areas of policy implementation, but there are signs that it is now beginning to be used more for policy design. This should be encouraged further as well as the more general use of behavioural and social sciences in policy thinking. It may not always be appropriate or there be a lack of evidence proving that a behaviourally informed policy is necessary or better than one not influenced by behavioural science. However it may be useful to apply behavioural insights in understanding and defining the problem that is being addressed.

The potential for applying behavioural science in public bodies is huge. There are also varying degrees in which public institutions may find a use for behaviourally informed activities. It is important to recognise the need for the appropriate governance of applying behavioural science, which is addressed further in this chapter.

#### ***Carrying on with end-users and consumers***

So far, the application of behavioural insights has been mostly focused on end users and consumers. These findings are largely consistent with the mapping exercise conducted in 2014 (Lunn, 2014) as well as work conducted by the European Commission and the World Bank.

The survey clearly points to applications that are aimed at changing consumption patterns and consumer choices be they in the area of financial decisions, energy consumption, and healthy choices related to food or making the best use of job searching tools. In these areas, there seems to be a well-developed expertise, especially in those countries like Australia, Canada, United Kingdom and United States that have been applying behavioural insights for longer than others. However expertise in these areas and others also exists in countries that initiated specific BI projects even earlier such as Colombia, South Africa and New Zealand. Some of these applications have been published and disseminated and reliance on literature reviews and dissemination is triggering applications in other countries.

The focus on end-users is usually through “nudges”, that is, interventions that steer people in a particular direction while preserving freedom of choice (Thaler & Sunstein, 2008). Automatic enrolment in a pension plan or in green energy, for example, counts as a nudge (Ebeling & Lotz, 2015). This maintains the sovereignty of choice by consumers based on the options presented. These are often non-regulatory types of interventions. However there is also recognition in some jurisdictions for a more regulatory approach that may limit choice complexity. This is based on the understanding that no matter how the information is presented, there is simply too much information negatively affecting consumer welfare by making it difficult to discern relevant from irrelevant information.

Yet behavioural science also provides support for a distinct kind of interventions, namely, “boosts” (Grüne-Yanoff and Hertwig, 2015). The objective of boosts is to foster people’s capacity, for instance in an educative way, to make their own choices. To this end, interventions can foster an individual’s skills and knowledge, expand the available set of decision tools, or target the environment in which decisions are made. Examples are the transparent design of health statistics so that patients can decide for themselves whether the potential benefits of a recommended medical test outweigh its potential harm. Similarly, patients can be equipped with simple cognitive strategies to transform non-transparent and misleading health statistics into transparent ones, an ability that can be generalised from the medical to other domains. Individuals can also be equipped, for instance, with simple financial accounting rules or simple strategies enabling them to arrange, for instance, a family meal environment in ways conducive to nutritional health. Since boosts aim at preserving agency or even enable individuals to exercise their own agency, they either avoid making assumptions about people’s preferences and goals or, if necessary, make those assumptions transparent. One important issue is to identify the conditions under which public bodies may appropriately consider boosts, nudges or other behavioural approaches (see Hertwig, in press).

An area which remains largely unexplored and where applications remains rare if not inexistent (at least in the large sample collected through the survey) is the application of behavioural insights to change organisational behaviour within and outside government. This is a large opportunity. Ministries, departments and regulators can encourage the sustained improvement not only of their own organisation but also of the behaviour of the organisations they regulate, both private and public (for example, hospitals or doctors). The issue is how to move from the behaviour of individual citizens in their transactions with the state and the market to the behaviour of professionals in the routine work in providing services to the public.

### ***Expanding into organisational change within and outside government***

Behavioural insights could be applied in two potential areas: i) the behaviour of public organisations; ii) the behaviour of regulated entities.

On the behaviour of public organisations, the OECD has been working on the independence of regulators, drawing on a survey on the formal aspects of independence, accountability and scope of action of economic regulators from 33 OECD member countries. This survey was followed by an in-depth analysis of how formal independence is translated into practice among 48 regulators from 26 OECD and partner countries. The results clearly point to the importance of formal governance arrangements such as an appropriate funding mechanism, conflict of interest rules, leadership recruitment and terms, accountability and reporting arrangements that safeguard the independence of the institution. However, these arrangements risk being mute unless there is a *culture of*

*independence* within and outside the regulator that can effectively protect the regulator from any undue influence (OECD, 2016a; OECD, 2016b).

The OECD is exploring some of the institutional features that can trigger an organisational change that supports the emergence of a *culture of independence*. For instance, making the nomination process more transparent can help recruit chairs and agency heads who have the necessary technical skills and credibility to enhance the performance of the regulator. Such institutional change would also signal the willingness to protect the regulator from undue influence. This signal is the condition for nurturing a culture of independence that enables the regulator's leadership and staff to behave and act independently. Ultimately, however, the impact of these formal changes on the behaviour of the organisation, including on its decisions, would need to be tested to identify the expected and unexpected impact on the behaviour of the organisation.

Another potential area for applying behavioural insights to organisational behaviour is in the work of enforcement agencies. Regulatory enforcement agencies could adopt a differentiated enforcement strategy based on the behaviour and history of the businesses they deal with. Used properly, responsive enforcement promotes compliance more effectively, while reducing the burden posed on the “best performing” businesses (OECD, 2014).

An additional area for applying behavioural insights relates to co-ordination and steering within government. This would concern, for example, “soft” incentives and ways of steering departments in applying cross-government agendas such as diversity, open government or good regulatory practice without reducing efforts to purely prescriptive or burdensome solutions for bodies and officials. Experimenting could be complemented by meta-analyses to find appropriate solutions that could fit different administrative and institutional cultures.

The purpose of laws, policies and regulations as well as non-regulatory interventions, is often to manage or change the behaviour of regulated entities. There are different philosophies of approaching either from a negative or positive permissibility. A positive permissibility approach stipulates what regulated entities are allowed to do only what is prescribed, and they cannot do anything else. A negative permissibility approach provides direction on what regulated entities are not allowed to, and everything else is allowed. In areas of innovation, rapid scientific change and long term uncertainty, a negative permissibility approach is being preferred. It is here that behavioural insights may be used to “manage” regulated entities.

A related area for potential applications is on regulatory capture and more broadly building a culture of integrity within public organisations. The focus so far has been on creating strict rules that prevent a conflict of interest *ex ante* and then punish cases of conflict of interest when they emerge. The jury is out on the real effectiveness of this approach. Increasing controls can decrease an individual's motivation and desire to be honest. Heavier controls can ultimately trigger mistrust (Schulze and Frank, 2003). Ethical reminders at a point of decision-making could in fact trigger that sense of honesty and engagement (Ariely, 2012). This would imply a significant change of approach, where integrity is rather the result of trust and the belief that what is being done is honest rather than the result of strict controls. How can this culture of integrity emerge in public (but also in private) sector organisations?

The other area which seems to be largely unexplored is the application of behavioural insights to change the behaviour of private organisations that are somehow regulated either directly by the government or by arm's length institutions.

The survey points to some cases where behavioural insights are being used to facilitate compliance of employers with labour regulation (this is the case for Singapore) or compliance with bankruptcy rules (Australia). However, there were no cases where the primary focus of the application was to trigger a substantive organisational change in the behaviour of a regulated entity. Regulation tends to be prescriptive (and in part reactive). Behavioural approaches can help influence how regulated organisations translate prescriptions into practice and help achieve the intended objective of the regulation (which a purely prescriptive approach might fail to achieve).

Also in financial and capital markets, where applications of behavioural insights have been extensive, the focus has been on information and distribution of products to end-users rather than on the incentive structure that trigger the provision of those products and information by the regulated entities.

Haiss (2010) has suggested possible applications to the behaviour of banks and how decisions that are micro-functional can lead to macro-dysfunctional decisions and trigger a banking crisis. Could applications be taken a step further into the behaviour of firms? This could include, for example, understanding and addressing excessive risk behaviour or moral hazard. It could also extend to changing the behaviour of firms in relation to energy consumption patterns, instilling a culture of health and safety or the use of specific means of transportation for freight.

### *Path forward*

- **Consider testing formal changes in rules that govern organisations and their impact on the practical behaviour of public organisations as a whole. For instance, potential areas that could be addressed include behaviour and effectiveness of arm's length bodies and inspection bodies and integrity of organisations, anti-corruption and co-ordination and steering within government.**
- **Do not stop at users and consumers but broaden the perspective to the behaviour of regulated firms: capital markets/banks; energy consumption for large industrial firms; means of transportation used by big business, etc. Greater study into the influencing of organisations and its application by public policy makers should be explored further.**

## Who applies behavioural insights?

### *Institutions and functions*

There is no single institutional model for applying behavioural insights within public bodies. In fact, different institutions can co-exist even within a single government. Also in those countries and governments where a behavioural insights team or unit exists within the centre of government, this co-exists with a myriad of other units and initiatives. The level of what may be seen as “organised mess” may rather be an indicator of the organic nature with which initiatives are taking root and have been applied in public institutions.

The mere existence of units and departments applying behavioural insights cannot be the only criterion for measuring the degree of institutionalisation. So far, there has been less consideration given to the role and the functions of these various units and organisations and a possible typology of who does what more systemically.

In the initial, pioneering phase of applying behavioural insights, the focus simply seems to be on “doing it” and advocating its use. However, as the use of behavioural insights becomes more embedded in the policy-making process, there is also a greater need for capacity and cross-sectoral support as well as systemic quality controls on the reliability and rightness of fit for certain applications. Without stifling the innovative character of behavioural insights, this role seems to be currently missing. While this may be happening in an informal nature through networks, some degree of officialdom would benefit and encourage others to continue in the same vein. It might be the understandable consequence of the still pioneering nature of applying behavioural insights. Yet, as applications of behavioural insights become more widespread and established, some attention should be paid to who does what and how.

### *People and expertise*

More than two-fifths of the institutions who responded to the survey employ experts with knowledge or qualifications in behavioural sciences. This investment suggests a certain commitment to using behavioural insights, with specialist resources and incorporating them into the work of the organisations.

In-house expertise exists side by side with partnerships with think-tanks, universities and research institutions which support public organisations in applying behavioural insights. Inudgeyou working with the Danish Business Authority, Konrad Lorenz University Institute in partnership with the Colombian Communications Regulator, Harvard Business School and the Mayor of Boston or the UK Financial Conduct Authority with University College London are only some of the examples of government and research institutions working together in the survey.

These partnerships can provide the necessary technical expertise that government does not have and might not need to acquire as long as it has the capacity to (i) identify potential areas for applications, (ii) decide who outside government is most appropriate to do the job, and (iii) evaluate the results and transfer them to policy making. The technical expertise on designing and running experiments can be quite easily outsourced. The job of government should be increasingly focused on the next steps and in particular how to move from often small-scale experiments to the design of policies that can be applied on a real scale.

### *Path forward*

- **Consider the different initiatives and general organisation of behavioural insights to have some consistency in methodologies, quality controls and capacity to support functions to foster innovation and further applications.**
- **Encourage the human capacity in-house to understand and apply behavioural insights through mainstreaming for officials and the provision of training and information. But maintain specialisation internally and by building partnerships and links with external bodies that have relevant expertise and or are at the cutting edge of research.**

- **Public bodies should look beyond experimenting but on the utilisation of behavioural insights in planning policy design and transposing experimental results into policy.**

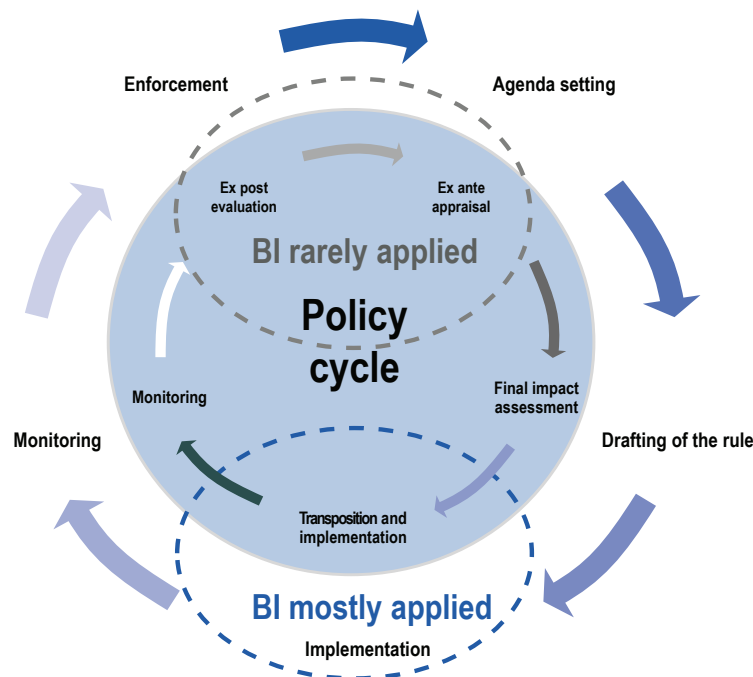
### When to apply behavioural insights?

#### *Closing the policy cycle*

So far, behavioural insights appear to be used at a relatively late stage in the design of policy and regulation, mostly when a policy is already in place, to fine-tune and improve implementation and compliance. Behavioural insights are helping to enhance the effectiveness of policy and regulation and fill an implementation gap that is far too often overlooked by governments (OECD, 2015b).

There is potential to do even more. At the end of the policy cycle, behavioural insights can be applied to evaluate the effectiveness of implementation. To a certain degree, applications already do this as the cases collected through the survey suggest. A number of cases start from the realisation that a policy or its implementation is not reaching the original objectives. The next step would be to take behavioural insights into consideration when designing and conducting an evaluation of policy implementation (Figure 3.1).

Figure 3.1. Behavioural insights and the policy cycle



There is an extra step that could be taken. Lessons on what works and what does not work in the implementation of policy and regulation could feed into the early design of policies where the traditional assumptions on perfect knowledge and rationality could be relaxed. Data and information on compliance and intake and the use of certain services by users combined with surveys and experiments can point to those behavioural barriers that undermine the effective implementation of policy and regulation and the achievement of

the intended objectives. This approach would also reduce the need for correcting some of the implementation issues once a policy is under implementation.

Evidence collected through other OECD work (OECD, 2016c) and some cases in the survey point to the significant potential of such applications. For example, in Colombia, the communications regulator used surveys and lab experiments to identify problems in the provision of information to consumers under the existing consumer protection framework. Those insights were used to start redesigning the regulation, with more experiments being conducted to test some of the identified solutions.

### ***Integrating behavioural insights into decision-making tools***

There needs to be filters that help policy makers decide when there is a behavioural issue that can be successfully addressed through the application of behavioural sciences. Experimentation and behaviourally informed solutions are not necessary and appropriate to address any policy problem. Equally behavioural science should not be expected to find solutions to complex problems where all other attempts have failed. It may be able to contribute but should not be held solely responsible.

Filters for deciding when applying behavioural insights are appropriate can be integrated into decision-making tools like the preparation of impact assessments for the development of new policy and regulation. For example, in the United States, the need to take into consideration behavioural insights has been integrated in the Executive Order mandating the evaluation of costs and benefits of new regulation. To effectively evaluate the opportunity to apply behavioural insights, it is particularly important to assess the policy problem to be addressed. This evaluation should take place in the initial scoping and assessment of the policy problem in the very early phases of decision making. There should be some room for creativity here and consider the use of behavioural insights for example through scoping exercises and the preparation of scoping papers that evaluate the problem even before a cost-benefit analysis of possible solutions.

Another filter for determining the applicability of behavioural insights is the process of engaging with stakeholders. Feedback from stakeholders can provide useful signals on the existence of a behavioural problem. Surveys and feedback provided by users can help identify problems. For example, complaint mechanisms can help identify problems related to poor, or too much or distorted information. Behavioural barriers to compliance and decision-making may also be identified that could be amenable to behavioural experimentation. Experimentation and testing can also become an effective way to conduct targeted engagement with stakeholders and collect inputs and feedback on policies and interventions “in the making”.

### ***Path forward***

- **Take into consideration behavioural insights when designing and conducting evaluation of policy implementation. Lessons on what works and what does not work in the implementation of policy and regulation should feed into the early design of policies where the traditional assumptions can be challenged.**
- **Develop filters to determine when there is a behavioural issue that can be successfully addressed through the application of behavioural sciences. It is particularly important to assess the policy problem to be addressed. This evaluation should take place in the initial scoping and assessment of the policy problem in the very early phases of decision making.**



- **Exploit the full potential of behavioural insights as a tool for engaging with stakeholders and collect feedback on what works and meets citizens’ needs. Behavioural insights can provide a targeted engagement tool. There has to be clarity on the scope of the engagement, transparency on the way in which stakeholders are being involved to dispel any suspicion of manipulation or “tricking” citizens and the results of the engagement process.**

### Setting standards for behavioural insights?

Behavioural insights can no longer be seen as a fashionable short term public policy trend. It has taken root in many ways across many countries from across the world. In addition, it has greater potential than its current application and this report points to possible areas to explore by public institutions and practitioners.

In order to continue to utilise behavioural insights there is an emerging need for some guiding principles or a set of standards to ensure that its continued use by public bodies is not perceived or actually open to abuse or unethical utilisation. The case studies collected that informed this report already point to some considerations for behavioural practitioners in public policy.

Engage in a multiple-staged strategy for implementing behavioural insights with a menu of types of assistance for all appetites. Public bodies may employ a strategy to mainstream behavioural insights through a menu of types of “behavioural initiatives” to support policy making and implementation. This may involve a design workshop, user testing, and laboratory experimentation. This may then lead to field experiments, which may not always be possible. And this multiple-staged process also improves the quality of field experimentation through the refinement of ideas in less resource intensive activities. However, care must be taken to appropriately acknowledge and provide information on the level of “behavioural assistance” and a commitment to proceed to more resource intensive activities if appropriate.

**The necessity of good or reliable data is key to applying behavioural insights.** Experimentation and the use of academic findings are fundamental to behavioural practitioners in public policy. The credibility of applying the science relies on good quality activities that are based on reliable data that can stand up to scrutiny in public.

**Data does not equal “Evidence”.** While good and reliable data is needed it is also necessary to understand the limitations of data in being sufficient for public policy. Insights and application of behavioural sciences can assist public bodies to refine their existing data-generating systems to be more useable and be actual evidence, for instance with treatment and control conditions.

Undertake robust calculations beforehand to ensure the use of sufficiently large sample sizes in experimentation, so that effects can be detected. As interventions by public bodies will affect a sizable proportion of the population it is important that trials and experiments have statistical significance with the problem being addressed and people affected.

**Replicate to ensure the observed results are correct in the same context and setting (internal validity).** Behavioural insights use the inductive scientific method to obtain findings. To ensure the results are accurate, it is important to replicate the trials to make sure the results are reliable.

Replicate also to test the application of the same approach to other contexts and settings (external validity). Replication is important not only to ensure that results are correct in a given context but also in a different context. Behaviour can be shaped by social norms and other factors that vary across contexts and can make an intervention that is effective in a context less effective in another.

**Consider applications that could work for a part of the population but not for the entire population.** There could be cases of segmentation, where what works for a part of the population might not work for the general population. Environments and influences can work on a particular part of the population but not on a larger group. Careful consideration should be given to these cases and their implementation, given also the legal and cultural context.

**Conduct ongoing monitoring to identify short-term and long-term effects.** It is sometimes argued that behavioural interventions may only have one-time effects. However ongoing monitoring of behavioural interventions may actually show more habitual changes in human behaviour or even unintended consequences. In addition an intervention may provide a solution but then another issue may then be revealed. And contexts change through time, which creates new environments and influences. As with all policy interventions, behaviourally informed ones should monitor and evaluate the results of the intervention over a period of time.

**Publish work for transparency and accountability.** The ethical issues that may be raised about the appropriateness for public bodies to apply behavioural science can be addressed through regular reporting on activities. Some practitioners have argued that revealing the trials and nudges may dilute or erode the potential effects of interventions. However, on the other hand, this may be a necessary cost for public institutions to maintain credibility and high standards in the application of behavioural insights.

A number of countries already publish in journals or produce annual reports of their activities. The United Kingdom's Behavioural Insights Team has been publishing reports on its activities since 2010 and the United States White House Social and Behavioural Science Team has also published on its activities. It is important to provide information not only on the successful trials but also on those that either had no effect at all or had unintended effects. This level of transparency is good practice that should be adopted by all behavioural practitioners in public policy.

**Disclose more about the actual costs of applying behavioural insights.** In the survey the costs associated with behaviourally informed interventions were not well reported. This is partly due to a reluctance to disclose organisational information or commercially sensitive information. However it also revealed a perception among behavioural practitioners that there is a *zero or minimal cost* associated with a change in policy design or implementation. While this may be true, this should still be costed, if not for accountability purposes, as one of the obstacles for public institutions is the unknown costs involved with applying behavioural insights. This costing also goes in hand with measuring the benefits of behavioural interventions. In evaluations, behavioural interventions should be subject to similar evaluation criteria as other policy interventions.

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## Chapter 4

### Behavioural insights case studies: Consumer protection

*This chapter provides a series of case studies detailing how behavioural insights have been applied in OECD member and partner countries as a tool for ensuring that markets operate fairly and to help consumers make good choices. Case studies presented utilise a breadth of experimental methods, ranging from resource-intensive randomised controlled trials to relatively less resource-intensive literature reviews. The open and transparent sharing of what works, and what does not, is vital to ensuring that good quality research and findings are shared widely.*

## Supermarket shopper dockets: keeping fuel competitive

<b>Country</b>	Australia
<b>Sector</b>	Consumer protection / Petrol
<b>Institution</b>	Australian Consumer and Competition Commission (ACCC)
<b>Start of intervention</b>	November 2009
<b>End of intervention</b>	–
<b>Objective</b>	Preventing anti-competitive effects in the fuel market caused by supermarkets selling petrol
<b>Method</b>	Survey of 775 motorists in the greater urban areas of Australian capital cities
<b>Application</b>	Evidence from the survey was used by the ACCC to agree court enforceable undertakings concerning the level of fuel savings offers made by supermarkets

### Problem

Since the early-2000s, supermarkets in Australia such as Woolworths and Coles have branched out from grocery retailing into petrol retailing. Woolworths, which started the trend in the late 1990s, operates a range of Caltex/Woolworths branded outlets. Coles has a similar arrangement with Shell. As a result, the supermarkets have been able to link grocery sales and petrol sales. If a customer spends more than a specified amount on groceries, the customer receives a “voucher” that allows him or her to receive a discount at the supermarket’s petrol outlets.

The Australian Consumer and Competition Commission (ACCC) was concerned that these large supermarkets such as Coles’ and Woolworths would be able to leverage their strong positions in the grocery sector into the petrol retailing sector, leading to anticompetitive effects in the market. This is because “bundling” provides the incentive of both lower price and convenience to the consumer, making them more likely to buy petrol from supermarket petrol outlets, at the expense of petrol retailers not connected to the supermarkets.

The ACCC was concerned that fuel savings offers (“shopper dockets”) could have both longer-term effects on the structure of the retail fuel markets and the short term effects of reducing competition in relation to undiscounted prices in those markets.

### Intervention

The ACCC set out to verify its concerns by conducting a survey amongst motorists in Australia investigating their fuel purchasing habits. It commissioned ANOP Research Services to interview motorists in the greater urban areas of mainland Australian capital cities and compile information about consumer attitudes on a range of issues relating to the price and purchasing of unleaded petrol, and their use of shopper dockets.

## Results and impact

The survey found the following:

- More than 75% of motorists had used a shopper docket
- 49% of motorists regularly used shopper dockets
- There are more shopper docket users (41%) who buy petrol only when they need it, rather than on the basis of price
- Nearly 3 in 10 (29%) of motorists do not check at other service stations before using a shopper docket.

The consumer behaviours exposed by the survey validated the ACCC's concerns regarding the potential anti-competitive impact of shopper dockets on the fuel market in Australia, as shopper dockets were shown to exhibit an advantage over other petrol retailers in consumer preferences. The ACCC was able to use the survey results to support a subsequent investigation. The investigation caused Coles and Woolworths to each provide court enforceable undertakings concerning the level of fuel savings offers made by the supermarkets.

## Institution

The Australian Competition and Consumer Commission (ACCC) is Australia's competition regulator and national consumer law champion. It promotes competition and fair trading and regulates national infrastructure for the welfare of the Australian public.

The ACCC frequently considers and incorporates past and likely prospective behaviours of market participants, and consumer preferences in its decision making, particularly when designing compliance programmes.

Behavioural insights are applied informally in the course of enforcement work. For example, in the case of authorisations, whereby the ACCC authorises conduct that would otherwise be in contravention of the Competition and Consumer Act on public benefit grounds, behavioural biases are recognised as a source of market failure and as such are deemed a relevant consideration. In this case, evidence of market failure caused by behavioural bias in the fuel market was used to limit the undue advantage large supermarkets hold over other retailers.

The organisation employs economists who are familiar with behavioural economics and theories of behavioural bias.

*Source:* OECD (2016), OECD Behavioural Insights Survey: Dataset.

## Disrupting scams

Country	Australia
Sector	Consumer Protection
Institution	Australia Consumer and Competition Commission (ACCC)
Start of intervention	August 2014
End of intervention	December 2015
Objective	Protecting consumers against fraudulent scams
Method	Implementing a policy of sending warning letters to potential victims of fraud.
Application	Reducing instances of fraud by encouraging potential victims to contact the ACCC and preventing them from making a transfer of funds where they might risk losing the money sent.

### Problem

In 2014, the Australian Consumer and Competition Commission (ACCC) received more than 91 000 scam reports with just over AUD 81 million in losses, which was consistent with the number and losses reported in previous years also. Could this number be reduced?

The Consumer and Competition Commission set out to find a way to prevent fraud before it happened by identifying and warning potential victims in advance of their making a transaction.

### Intervention

The ACCC sent over 5 520 warning letters to potential victims of fraud, representing AUD 16.7 million in transactions from Australia to high risk West African jurisdictions. Using data from the Australian Transaction Reports and Analysis Centre (AUSTRAC) to track funds and identify scam victims, the ACCC was able to determine the extent to which funds transfers ceased as a result of its letters.

The project also included a **nudge** experience to identify the most effective messaging that would prompt scam victims to contact the ACCC. The letters sent to potential victims were split equally into four different versions using either:

1. Direct Language appealing to Loss Aversion
2. Direct Language appealing to Desire for Gain
3. Indirect Language appealing to Loss Aversion
4. Indirect Language appealing to Desire for Gain.



## Results and impact

Seventy-five per cent of potentially risky funds transfers ceased as a result of the ACCC's warning letters. After six weeks, the potential victims were also sent a second warning letter.

Of 4 700 letters sent, the ACCC received 233 responses. Results showed a slightly better response rate where direct language was used but the small sample size and earlier results suggested the variance was not significant enough to draw any firm conclusions. The actual variance over time was fairly consistent, with each letter eliciting a response rate approaching 25%. This suggests that the actual receipt of the letter itself outweighed any impact tailored language within the letter might have.

## Institution

The Australian Consumer and Competition Commission (ACCC) is Australia's competition regulator and national consumer law champion. It promotes competition and fair trading and regulates national infrastructure for the welfare of the Australian public.

The ACCC frequently considers and incorporates past and likely prospective behaviours of market participants, and consumer preferences in its decision making, particularly when designing compliance programmes.

Behavioural insights are applied informally in the course of enforcement work. For example, in the case of authorisations, whereby the ACCC authorises conduct that would otherwise be in contravention of the Competition and Consumer Act on public benefit grounds, behavioural biases are recognised as a source of market failure and as such are deemed a relevant consideration.

The organisation employs economists who are familiar with behavioural economics and theories of behavioural bias.

## Clearer, simpler and more transparent bills

Country	Chile
Sector	Consumer protection / electricity
Institution	Servicio Nacional del Consumidor (SERNAC / Consumer Authority), Superintendencia de Electricidad y Combustibles (SEC / Superintendent of Electricity), and Laboratorio de Gobierno (LabGob / National Laboratory Centre)
Start of intervention	August 2015
End of intervention	March 2017
Objective	To design and test an electricity bill to improve the way information is presented in the bill and consumers' understanding of the content.
Method	Survey, workshop, interview, trial
Application	Re-designing electricity bill

### Problem

The Chilean Government decided to improve its electric bill following the receipt of more than 30 000 consumer complaints regarding electricity in 2015, primarily raising issues related to bills. In Chile, the existing 34 electricity providers each provide different form of bill to consumers that are difficult for them to understand. The government considered the issue as being related to **information asymmetry** and **bounded rationality**, which had resulted in less transparency; distrust in the measurement and in the billing, and use of technical language that are difficult to understand for consumers.

### Intervention

The initiative was jointly conducted by SERNAC, SEC and LabGob in three stages. The first stage (August – October 2015) involved the diagnosis and formulation of the issue. SERNAC did a baseline survey on the level of knowledge, comprehension, use and satisfaction of electric bills and revealed that consumers do not understand well what is written on the bill. SERNAC also conducted a survey to determine which part of the bill consumers focus on and created a “heat map,” which shows that consumers pay most attention to the final payment in the bill but not much to other parts.

Based on the results of the survey, the Chilean Government set the goals of this initiative: to improve the distribution of information on the bill and thereby improve consumers understanding of its contents.

The second stage of the initiative (October 2015 – April 2016) involved the design and testing of prototypes. This has been done by LabGob through a consumer survey to more than 800 consumers, workshops and trials, and interviews with consumer organisations and businesses. This stage resulted in 30 ideas to improve the bill. Testing and implementation of the first new prototype began in December 2015.

The third and final stage of the project (May-August 2016) was the launch of a pilot that had been developed based on the prototype. The pilot was launched in June 2016 in the municipality of Puente Alto, in Santiago. Two additional pilots were launched in two communities (Arica (north) and Coyhaique (south) in August 2016. A consumer survey followed by the pilots showed that the new prototype resulted in higher confidence in the bill (47.2% of good level of confidence), a higher level of clarity in the bill (50.6%), a higher level of understanding of the bill (49.3%) and also higher level of satisfaction with the bill (47.3%) compared to the previous bills. The national launch of the new bill is scheduled in December 2016. The new bill will be under examination until March 2017 for potential improvements.

## Results and impact

Various methods used in the second stage helped identifying two main challenges (communication and semantic failures, and a lack of knowledge about the service) and ways to mitigate impacts of information asymmetry and bounded rationality.

The proposed new bill which has been developed under this initiative and has been tested at the pilot presents six main differences compared to the previous bill:

- Using plain language and providing definitions of terms used in the bill
- Hierarchical presentation of information based on relevance, such as total amount due and date of payment
- Providing explicit information on amount of payments and different charges that apply
- Adding detailed information on personalised energy consumption
- Including clearer information on authority of the services, and
- Adding information on energy savings.

This initiative is replicable to bills in other markets such as gas, water, and telecommunications.

## Institution

SERNAC is the State Agency in Chile responsible for ensuring the protection of consumer rights.

SEC is Chile's regulatory body for fuel and electric power production, promotion and sales.

LabGob is a government innovation lab set up by the Chilean Government in 2014 as a cross-disciplinary group.

## Personal loan choices

Country	Ireland
Sector	Consumer choices / personal loans
Institution	The Economic and Social Research Institute (ESRI)
Start of intervention	Summer 2015
End of intervention	Spring 2016
Objective	To investigate the effect of price transparency and price framing on consumers' decision-making regarding personal loans
Method	Laboratory experiment
Application	Regulatory policy

### Problem

ESRI, in collaboration with PRICE Lab's funding bodies,<sup>1</sup> selected the market for personal loans for study for two reasons. First, there are indications that some consumers may be making disadvantageous choices of loan, given the large difference between interest rates offered by different providers in the market and the focus of some current marketing campaigns. Second, taking out a loan for a specific purchase requires the consumer to resolve a trade-off between present consumption and future payments. How consumers negotiate the central trade-off is relevant for other markets of interest. Choosing a personal loan (for a given principal sum) involves negotiating a relatively complex non-linear relationship between the term of the loan, the annual percentage rate (APR), the monthly repayment (MR) and the financial cost (FC) (or, equivalently, the cost of credit). During a pilot phase of the project, researchers found that these relationships were far from intuitively obvious to most people, including some professional economists.

Irish providers are bound to an extensive regulatory framework involving both EU and domestic rules. These regulations have evolved in response to evidence regarding how consumers make decisions and understand products. To continue building on the empirical findings regarding consumer behaviour, ESRI created two incentivised laboratory experiments with samples of Irish customers to reveal influences on consumers' choices of loan that might be important from a consumer protection perspective. These experiments examined **price framing** and **price transparency**, according to the following research questions:

- To what extent do consumers' choices of personal loans differ according to the information made explicit at the point of decision?

1. Central Bank of Ireland, Commission for Energy Regulation, Commission for Communications Regulation, Competition and Consumer Protection Commission.

- Given the non-linear relationship between MR and term, does the effect of making MR and FC information explicit depend on the term of the loan?
- Does the available information alter the precision with which consumers are able to choose between personal loans?

The experimental methods used allowed ESRI to address the impact of two potential “**nudge**” interventions that might assist consumers in choosing loans. Specifically, they tested:

- Does the application of a “high cost loan” warning deter consumers from opting for higher rate personal loans?
- Does the availability of an example designed explicitly to highlight the nonlinear nature of the MR-term relationship help to reduce biases in personal loan choice?

## Intervention

Experiment 1 presented multiple pairs of offerings for a personal loan of EUR 7 000, using images based on current marketing practice. On each presentation, participants had to decide which of the two offerings they would prefer, assuming that they had to meet the repayments from their current monthly income. The pairs differed in APR and by plus or minus one or two years with respect the term of the loan. Choices were made in one of four conditions in which different information was explicit:

- Term + APR (“APR” condition)
- Term + APR + MR (“MR” condition)
- Term + APR + FC (“FC” condition), and
- Term + APR + MR + FC (full information, “FI”, condition).

The experiment tested, using the same set of loans, whether choices were consistent across the conditions or whether they were influenced by which information was made explicit and which kept non-explicit. In addition, the experiment tested whether choices were affected by making loans with an APR of over 15% subject to a “high cost loan” warning. The participants consisted of 25 adults aged between 18 and 70 years and undertook 39 trials across four conditions, for a total of 156 decisions.

In Experiment 2, consumers were given an opportunity to examine a table designed to illustrate how MR and FC vary as the term of a personal loan increases. The participants then completed two tasks:

1. **Choice task** similar to Experiment 1, using the APR, MR and FC conditions
2. “**Surplus identification task**”, in which they repeatedly had to choose one of a pair of loans on behalf of a young couple with a particular set of preferences seeking to fund home improvements.

This second task was objective, i.e. there was a right and a wrong answer. Participants were given examples, practice and feedback in relation to which loans the couple preferred. The experiment then measured how accurately participants could identify which of the pair was the better loan for the couple. The aim was to test how accurately participants could integrate information into their decisions, depending on whether the

APR, MR and FC information was made explicit. Forty eight participants took part in Experiment 2.

## Results and impact

The results of Experiment 1 showed that choices depended strongly on which information about the loans was explicit and which was left implicit, i.e. choices were not consistent across conditions. The results showed that:

1. Consumers were more likely to opt for longer loans in the MR condition and shorter loans in the FC condition, compared with the APR and FI conditions. The size of this effect was large. Especially for terms of less than five years, a high proportion of decisions switched direction according to whether MR and/or FC information was explicitly presented
2. The consumers also displayed a second (unanticipated) form of inconsistency in their decisions. Of the pair of offerings, the longer loan proved to be more attractive when it was just one year longer than when it was two years longer. This inconsistency in decision-making was substantial
3. The experiment also confirmed that the “high cost loan” warning had a small but significant deterrent effect.

Experiment 1 provides good initial evidence that the non-linear nature of the trade-off between MR and FC when choosing a personal loan causes consumers substantial difficulty. The primary implication is that where FC information is not explicit at the point of decision, consumers will tend to opt for longer loans. The analysis of order effects above shows that where consumers have the opportunity to learn about the relationship between APR, term and FC, this effect is reduced.

Experiment 2 results revealed that:

- The example table was partially effective in making consumers’ choices more consistent, suggesting that it improved understanding of the key relationships behind a loan. However, participants continued to opt for longer loans in the MR condition
- In the surplus identification task revealed that consumers struggle to integrate information on the key attributes of a personal loan into decisions. There was some evidence that providing explicit MR and FC information marginally reduced the precision of decisions, but this effect was small and overall decisions were quite inaccurate
- More strikingly, the results confirmed that even in a repeated, objective task with feedback, consumers were unable to avoid placing too much weight on information that was presented explicitly, as opposed to information that was left implicit.

The findings suggest that consumers are prone to mistakes when choosing among offerings in the personal loan market. Furthermore, they show consumers’ choices can be influenced by how and when information is presented.

However, the implications of the two experiments for policy are not straightforward. The findings provide evidence for potential benefits associated with the two “nudges” tested, though the impact of these interventions would be unlikely to be large. The results

also suggest a number of possible regulatory interventions that have the potential to help consumers to make better decisions, by exposing them to useful information at key points in the decision process. However, the likely outcomes are far from definitive.

### **Institution**

Results were published by the Economic and Social Research Institute (ESRI). The ESRI produces research that contributes to understanding economic and social change in the new international context and that informs public policymaking and civil society in Ireland.

This research was conducted as part of the PRICE Lab research programme, co-funded by the Central Bank of Ireland, Commission for Energy Regulation, Commission for Communications Regulation, and the Competition and Consumer Protection Commission.

## Price transparency in residential electricity

Country	Ireland
Sector	Consumer choices / Energy
Institution	The Economic and Social Research Institute (ESRI), in co-operation with the Commission for Energy Regulation (CER)
Start of intervention	2016
End of intervention	2016
Objective	To investigate the effect of price transparency and price framing on consumers' decision-making in residential electricity markets
Method	Laboratory experiment
Application	Regulatory policy

### Problem

The underlying assumption of a competitive market is that consumers are able to choose the product from among those available that best suits them. For this reason and for reasons of fairness, **price transparency** is an important principle of consumer protection policy. Whether prices in any given market are, in fact, transparent is an empirical matter. Even if no component of the price is hidden, empirical evidence shows that marketing practices that simply split the full price into two or more components can affect consumers' abilities to make good decisions.

In this context, two experimental investigations of a specific pricing practice in Ireland's residential energy market were launched, which raises concerns about price transparency. Suppliers aim to entice consumers to switch by framing unit prices as discounts from standard prices, which are expressed as percentages or annual cash savings.<sup>1</sup> However, while discounts may generally be attractive and may prompt switching and other forms of consumer activity, from the consumer's perspective there is a potential difficulty with this **price framing**. The discounts are offered relative to the standard unit rate (SUR) for the specific company concerned. Because SURs vary across companies, the size of any discount is not a reliable guide to the underlying unit price, which is what ultimately affects bills.

### Intervention

The first study investigated whether framing prices in this way causes consumers problems. This study consisted of multiple decision tasks carried out by the same

1. Regulation stipulates that the advertised cash savings must be applicable to a customer with average usage levels, with the annual average usage set by regulatory standard to ensure comparability across offerings. During the period of study, it stood at 5 300 kWh.



participants under different price frames and when confronted with different volumes of information. 36 participants took part, aged between 18 and 70 years and representative by age, gender and working status, and were selected from a list of individuals who signed up online in response to adverts asking for volunteers to participate in experiments in consumer choice.

Two primary types of tasks were employed:

1. **Binary choice task:** Participants faced 24 trials in which they had to choose which of two hypothetical electricity packages they preferred, each trial with multiple combinations of prices and suppliers. These trials were repeated through five stages where attributes of the packages were changed. The packages were displayed on a computer screen in a similar manner to online marketing material, with large fonts, bright colours and logos. Primary measure was the likelihood participants opted for the package with the lower priced unit, provided an empirical measure of the extent to which changing the price frame altered the attractiveness of packages with lower unit prices
2. **Surplus Identification (S-ID) task:** Rather than testing for bias in what consumers prefer, the S-ID task tested how accurately they could combine product information to judge which of two products was superior. The participant was told that their job was to choose a package for a friend or relative. They were given a description of what the buyer was looking for and multiple examples of kinds of packages the buyer liked and the trade-off between attributes involved. They then undertook trials in which their task was to select one of two products for the buyer, receiving feedback after each choice.

The second study was conducted in close collaboration with CER and was designed to pre-test an intervention under consideration by the regulator via consultation. This consisted of a mandatory “Estimated Annual Bill” (EAB) to appear on marketing material, based on the usage of an average consumer as defined by the regulator, which was designed to increase price transparency. Similar to study 1, this study examined two research questions: first, whether providing a mandatory EAB would prompt consumers to choose packages with lower unit prices and, second, whether an EAB would improve the precision of consumers’ decisions.

Like study one, study two employed both a choice task and an S-ID task but also included an advertisement rating task in which participants rated the quality of deals offered in advertisements on a scale from 1 (“very poor deal”) to 7 (“very good deal”). Participants were shown four adverts (one for each supplier) under each of four sequential conditions, which varied according to the presence and prominence of the EAB information. This was repeated through four stages, changing the conditions each time. Forty consumers took part, aged between 18 and 70 years, and were recruited by a Dublin-based market research company to be representative by age, gender and working status.

## Results and impact

The results of the first study suggest that consumers are much less likely to choose the package with the lowest unit price when prices are framed as discounts from SURs, compared to when prices are expressed as a simple per unit rate (PUR). Analysis of individual differences reveals that the large majority, 29 of 36 participants, chose the lowest unit price more often under the PUR price frame than the discount price frame.

Once extra attributes – the supplier’s actual standing charge added and a billing method randomly assigned to each offering – were added in Stage 4, 26 of 36 chose the lowest unit price option more often under the PUR price frame. The S-ID task analysis showed that, under the PUR price frame, participants could identify the better product 86% of the time when the difference in annual bill (available surplus) corresponded to approximately one-sixth of the price range.

The results from the second study favour the EAB intervention. Experimental participants were more inclined to judge that adverts were good value, in line with their actual unit prices, when EAB information was added. This effect increased in size when the EAB information was made more prominent. The choice task presented in one of the stages demonstrated that, compared to the discount price frame, the EAB price frame makes opting for the lower unit price package more likely, by strengthening the weight given to the unit price in decisions. Last, the S-ID task revealed that participants were able to integrate product information more precisely under the EAB price frame.

These results arrive at two separate but related conclusions:

1. Unit energy prices expressed as discounts from standardised rates that vary by supplier are likely to cause consumer problems. This implies that the marketing practice of discounting unit prices from variable standard rates, which is ubiquitous in the Irish energy market, reduces price transparency and is likely to be detrimental to consumer decision-making
2. The introduction of a mandated EAB is likely to make it easier for consumers to choose cheaper electricity packages from among available offerings. This suggests that the proposed intervention is, on balance, likely to be beneficial for consumer choice.

While the experiments were applied to only electricity packages, the decision-making mechanisms behind the results were noted to likely also apply to choices of residential gas packages, and perhaps to other markets in which prices are expressed as discounts from variable standard prices.

## Institution

Results were published by the Economic and Social Research Institute (ESRI). The ESRI produces research that contributes to understanding economic and social change in the new international context and that informs public policymaking and civil society in Ireland.

This research was conducted as part of the PRICE Lab research programme, co-funded by the Commission for Energy Regulation, Commission for Communications Regulation, Competition and Consumer Protection Commission and the Central Bank of Ireland.

## Misrepresentation in advertising

<b>Country</b>	Israel
<b>Sector</b>	Consumer protection
<b>Institution</b>	Consumer Protection and Fair Trade Authority (CPFTA)
<b>Objective</b>	To consider whether the effect of misleading advertising can be cancelled after the fact
<b>Method</b>	Literature review was conducted by the Economics Department
<b>Application</b>	Applied behavioural insights to the evaluation of the case against the construction company and helped CPFTA support enforcement decisions as well as legal proceedings

### Problem

In January-February 2015, an Israeli construction company initiated an advertising campaign to market the apartments it was building using the term “Target Price”. This term is misleading for consumers, as the term relates to a programme of the Israeli Ministry of Construction and Housing that allows first time apartment buyers and those looking to improve their present housing situation to purchase a new apartment at a reduced price that is 20% lower than the market price in the same area as the apartments on sale.

The “Target Price” programme has been widely exposed in the media, especially in light of housing shortage in Israel, and the term “Target Price” has become associated with the tenders of the Ministry of Construction and Housing, including their terms supervised by the Ministry.

The construction company had two contradictory arguments on this matter. First, it argued that the term “Target Price” was a general expression indicating that the project was being sold for a price that was lower than the market price, and was not identified with the programme of the Ministry of Construction and Housing in particular. In addition, and more importantly, the company argued that it had made several efforts to inform consumers, after the fact, that this was not a government programme. The company therefore claimed that the fact that it informed consumers in various opportunities that this was not a government programme was alone enough to cancel the effect of any misleading advertisement.

In response, the CPFTA launched a review of the contents of this campaign as well as an examination of the existing theories and findings in the field of misrepresenting information. More specifically, they examined the effect of advertisement in general and misleading advertisement in particular, and whether the fact that the company informed potential buyers, in writing or orally, after the fact, that this was not the government programme, was sufficient to completely offset the misleading effect of the use of the term “Target Price”.<sup>1</sup> This case study represents an interesting situation where

1. It is important to state that despite what the company declared, it was unclear if, and especially when, the construction company actually informed the consumers. Naturally the longer it took them to do so, the more influence the misleading message might have had.

behavioural insights are applied to the evaluation and decision of a case in a regulated sector.

## Intervention

To help form a reaction to the misrepresentation in advertising in the construction case, the Economics Division of CPFTA conducted a literature review of, first, the cognitive biases that affect decision-making processes and, second, the channels through which advertising can affect decision making.

## Results and impact

The classic economic theory assumes that the individual is a rational being, always choosing the option that maximises his utility, due to his ability to process all the information available to him perfectly (Von Neumann and Morgenstern, 1944). Decades later Simon (1972), argued that people are not always able, due to cognitive limitations (e.g. time, memory etc.), to choose the best alternative, which maximises their utility. Therefore they act in accordance with the rules of rational choice within the confines of their cognitive limitations. This reduced rationality was named Bounded Rationality. Kahneman and Tversky (1979), questioned this conclusion, and suggested that the fact that actual decision making significantly and consistently deviates from the predictions of economic theory is not only the result of limitations in human resources (e.g. time, memory, processing capabilities etc.), but rather it is the result of the nature of the psychological process at the basis of human decision making.

As a result, people employ heuristics, which serve as a kind of mental short-cut that allows faster and more efficient information reception, processing and retrieval. However, these short cuts also create cognitive biases and errors that can lead to irrational decisions, and therefore is not necessarily optimal.

The review considers three central modes, or channels, through which advertising can have very significant effects, especially in light of these cognitive biases.

First, the Elaboration Likelihood Model (ELM). According to the model the process of persuasion may be explained by the existence of two routes of persuasion in human consciousness:

- The central route: Is activated when people have the ability and motivation to think about the message and its subject, thereby reaching an educated decision supported by all the accumulated information available to them
- The peripheral route: Is activated when ability, will or interest is low, and therefore the consumer does not have the time to process the information thoroughly. The consumers will be more likely to base their decisions on general impressions; the mood the advertisement puts them in, the agent sending the message, etc. Therefore, decision making in this route is not necessarily rational.

The model suggests that important purchase decisions (such as choosing a bank, a pension fund etc.) are made using the central route. However, in reality advertisers tend to also activate the peripheral route when they try to persuade consumers to make important purchase decisions, since in reality the dichotomous separation between these two routes is not clear cut. Consequently the term “Target Price” might activate the peripheral route.

Second, the Priming Effect refers to the process of unconscious recall that takes place when certain stimuli or events raise the availability of some information category in memory or consciousness. This priming process normally occurs through two stages: the exposure stage, where the subject is exposed to the stimuli and the reaction or test stage, where the subject responds to the stimuli. The use of the term “Target Price” might prime reliability among consumers, and lead to a positive evaluation of the project.

Last, the bait and switch advertising method refers to a “family” of advertising and marketing methods intended to mislead or deceive consumers to increase sales. This method offers consumers a special price for a specific product to bring them to the store (the “bait”). But, when consumers arrive, they discover that the advertised product is not available, and are offered a different product, usually more expensive, which is the product the seller originally intended to sell (the “switch”). The direct interaction between the seller and the consumer gives the seller a major advantage and makes it easier for him to close the deal.

In regards to the case study, the CPFTA determined that the construction company’s advertisements did contain a misrepresentation in advertisement by using the term “Target Price”. In addition the CPFTA reached the conclusion that even if the consumer was informed orally at some stage that the programme was not tied to the government programme this did not cancel the effect of misleading advertising in light of the aforementioned psychological mechanisms. As a result, the application of behavioural insights to this case helped the CPFTA support enforcement decisions as well as legal proceedings. The Authority imposed a monetary sanction at the amount of NIS 1 147 500 on the company. The company submitted an appeal to the Magistrates’ Court. During the discussions, the company admitted to all the violations and the monetary sanction was reduced to the amount of NIS 600 000. The monetary sanction was reduced in light of the establishment of an internal regulatory mechanism by the company, which is intended to prevent the recurrence of such violation or similar violations in the future.

## Institution

The Consumer Protection and Fair Trade Authority is an independent, intergovernmental authority established in 2010 as part of Amendment No. 20 to the Consumer Protection Law 5741 – 1981.<sup>2</sup> It has the authority to monitor the implementation of the provisions of the law. As part of its structure, its Economics Division initiates and conducts surveys and studies on different consumer issues, analyses markets, phenomena and population groups in order to detect market failures, trends and consumption patterns.

2. Consumer Protection Law (Amendment No. 20), 5766-2006 (15 June 2006).

## Package size reduction

Country	Israel
Sector	Consumer protection
Institution	Consumer Protection and Fair Trade Authority (CPFTA)
Objective	To provide the theoretical basis to the CPFTA's policy regarding Package Size Reduction
Method	Literature review was conducted to examine the impact of Focusing Effects, leading to a paper by the Economics Department
Application	Helped CPFTA support enforcement decisions and legal proceedings

### Problem

Since the early 2000s, companies worldwide have begun reducing packaging size. More specifically, companies have been minimising the amount of content offered in a product while keeping prices constant, which results in an effective price increase. During the post-2008 period of slow economic growth, the practice of reducing packaging size became widespread as companies sought to increase revenue without raising prices. Companies claimed that this practice was necessary to offset the rising prices of raw materials and labour, to better adhere to regulations, address health concerns and react to product improvements that increased the costs of materials.

However, analysis and observation show that companies often use misleading tactics when reducing packaging size, deliberately hiding the effects of changes from the consumer. Aside from the typical reductions companies can make to the height or width of packaging, firms can also modify volume and depth, which is less visible and apparent to consumers. With bottles, for example, companies often reduce volume by changing the bottom shape or structure of the bottle so it leaves less space inside. Alternatively, companies maintain the original size of the package, but reduce the quantity of the content.

In the early 2000s, Israel's Consumer Protection Commissioner began responding to this issue of changes in packaging by publishing guidelines. These guidelines clearly stated that reduction in package sizing is a misleading act, and that businesses and suppliers should clearly specify any such reductions on the package. These specifications should include the previous product weight, the new weight, and the percentage of the reduction.

Recent behavioural insights back-up these guidelines. Research has shown that an inherent **information gap** exists, whereby consumers consider the price of a product when making a purchasing decision, but rarely consider the weight of the product since they regard it as a constant. Thus, a **focusing effect** occurs, in which consumers focus on price, and not quantity.

The CPFTA Economics Division conducted a literature review to reveal additional insights, and to consider possible regulatory interventions that would ensure that the right information is conveyed to consumers.

## Intervention

Classic economic theory assumes that the individual is a rational being, always choosing the option that maximises his or her utility, due to the individual's ability to perfectly process all available information (Von Neumann and Morgenstern, 1944). Decades later, Simon (1972) argued that due to cognitive limitations (e.g. time, memory, etc.), people are not always able to choose the best alternative that maximises their utility. Therefore, individuals act in accordance with the rules of rational choice within the confines of their cognitive limitations. This reduced rationality was termed Bounded Rationality. Kahneman and Tversky (1979) questioned this conclusion, suggesting that the fact that actual decision making significantly and consistently deviates from the predictions of economic theory is not only the result of limitations in human resources such as time and memory, but rather the result of the nature of the psychological process that lies at the base of human decision making. Thus, people employ heuristics, which serve as kinds of mental shortcuts that allow faster and more efficient information reception, processing and retrieval. However, these shortcuts also create cognitive biases and errors that can lead to irrational and suboptimal decisions.

One of the heuristic techniques that people employ is called the Focusing Effect. Because attention is a scarce cognitive resource (Kahneman, 1973), consumers face difficulties comparing many different characteristics of a certain product. Research shows that consumers tend to focus on a single characteristic, called the Salience Attribute of the good. Consumers give disproportional emphasis to the Salience Attribute (typically the price, but sometimes quality or size, depending on circumstances), compared to other characteristics when making a purchasing decision. When a consumer makes a purchasing decision, he or she evaluates the Salience Attribute of the product in relation to a reference point. When the Salience Attribute is price for example, the reference point may be the price of parallel products with similar or average characteristics, or alternatively, the price of the same product in the past or in other shops. Studies show that consumers avoid making a purchase or react strongly when encountering a surprise increase in price in comparison to the reference point (Gennaioli and Shleifer, 2013).

The behavioural problem of limited attention that leads consumers to choose one Salience Attribute is reflected in consumers' difficulty in noticing changes in quantity. Given that one of the main principles of consumer protection legislation is the need to bridge the inherent information gaps between businesses and consumers, we believe that the regulator should intervene in such a case of behavioural failure. The intervention should consider both the content of the information and the manner in which it is provided to ensure consumers receive all the information required for informed economic choices.

Following the review of the theoretical background, the CPFTA Economics Division reviewed four specific empirical studies dealing with the following aspects of consumer attention to price and quantity: the reaction of the rational consumer to a price increase in comparison to his or her reaction to a quantity reduction (Gourville and Koehler, 2004); the effect of price per unit measurement on consumer awareness (Mitchell, Lennard and Megoldrick, 2013); consumer awareness of product weight (Levy and Snir, 2013);



consumer sensitivity to quantity and price changes in the case of ice cream package weights and prices (Çakir and Balagtas, 2014).

## Results and impact

Generally, the review of the four studies shows that:

In light of the complexity of shopping and pricing, consumers tend to be unaware of a product's weight, even when its price per unit is indicated. The studies showed that consumers were more sensitive to changes in price, than to changes in quantity. Consumers fail to evaluate the economic loss they sustain from product reduction in any case, worse so when manufacturers conceal changes. Even when consumers were fully aware of size modifications, they were confused and showed bias toward the price variable.

The behavioural insights reviewed provide the theoretical basis to the CPTFA's policy regarding Package Size Reduction. The application of these insights has supported enforcement decisions as well as legal proceedings. The CPFTA imposed two monetary sanctions on companies that violated the above mentioned guidelines. One company submitted an appeal which is currently pending before the Magistrates' Court.

## Institution

The Consumer Protection and Fair Trade Authority is an independent, intergovernmental authority established in 2010 as part of Amendment No. 20 to the Consumer Protection Law 5741 – 1981.<sup>1</sup> It has the authority to monitor the implementation of the provisions of the law. As part of its structure, its Economics Division initiates and conducts surveys and studies on different consumer issues, analyses markets, phenomena and population groups in order to detect market failures, trends and consumption patterns.

1. Consumer Protection Law (Amendment No. 20), 5766-2006 (15 June 2006).



## Information Sheets and Guides for Investors

<b>Country</b>	Spain
<b>Sector</b>	Consumer Protection
<b>Institution</b>	National Securities Exchange Commission (CNMV)
<b>Objective</b>	Improving financial decisions of Spanish investors
<b>Method/Application</b>	Information sheets and guides for investors

### Problem

The National Securities Exchange Commission (CNMV) is the regulator responsible for protecting financial consumers in Spain.

CNMV has found that investors lack of knowledge and skills when interacting with financial institutions and receiving financial services. The level of financial education amongst the Spanish population is low, leading to poor financial decisions by individuals which are detrimental to their protection as consumers.

CNMV, in collaboration with the Spanish Central Bank, has developed an Action Plan on Financial Education, with the aim of improving Spain's overall financial culture, which will in turn enhance the protection of Spanish consumers. The objectives of financial education are to transfer knowledge and competences to empower financial consumers and investor with competences to carry out informed judgment and take the right decision when managing their private economy, since a significant part of the decisions taken by citizens relate to financial behaviour with a direct impact on her/his personal and family environment.

As part of this Plan, CNMV has produced information sheets and guides for investors, designed to familiarise investors with the most common or significant investment products. The goal is to change maladjusted, misinformed or mistaken behaviours of financial investors.

### Intervention

The educational information sheets and guidelines produced by CNMV cover recommendations to influence investors' behaviour. The objective is to foster appropriate financial decisions by consumers in accordance with their knowledge, experience, financial situation and investment objectives.

The guidelines were created following extensive behavioural analysis by CNMV to identify the biases that were causing Spanish investors to make poor financial decisions. The Commission used various publications and diverse knowledge resources for this analysis, including reports on claims submitted to the CNMV, questionnaires filled by investors after seminars, workshops, presentations and face to face conversations with investors in fairs and conventions among others.

The CNMV also used studies prepared by international organisations of whom the CNMV is a member, for example the IOSCO (International Organisation of Securities Commissions) report on “Investment Risk Education”, to which the CNMV has itself contributed information and data, to compound its research. The report acknowledges that “research on behavioural economics indicates investors’ behaviours and aptitudes are substantially affected by bias”, which affects decisions in the following ways:

- By leading small investors tendency to invest in financial products familiar to them
- By making investors reluctant to take risk
- Investors may have a negative perception on the security and yield of their investment in the financial markets.

Based on a synthesis of research taken on the Spanish population’s behaviour and types of investor bias familiar to behavioural theory, CNMV was able to produce guidelines appropriate to changing the behaviour of Spanish consumers. Examples of the recommendations given in the sheets include the following:

- Take the time you need to take informed investment decisions without hurry or under pressure
- Do not take investment decision based on rumours or confidentialities
- Read advertisement information cautiously
- Do not forget that investments in financial derivative require sound judgment
- If you have questions or doubts, ask.

There is also a guide listing recommendations and behavioural patterns that helps investors to identify and avoid non-registered financial institutions, so that such institutions are unable use their persuasive selling techniques to acquire new clients.

## Results and impact

The National Securities Exchange Commission evaluates its educational initiatives, such as the investor guides, and takes on board stakeholder feedback from investors themselves to assess the real effectiveness of its programmes and identify areas for improvement. CNMV is using the following evaluation techniques to determine the success of its initiatives:

1. Quantitative measures – for example the number of persons attending seminars, visits to web pages, etc.
2. Qualitative measures – including feedback from users, collaborators and focus groups, among others
3. Indexes and indicators to measure financial aptitudes and investors’ behaviour, and in this way monitor and identify changes in investors’ behaviour over time.

## Institution

The National Securities Exchange Commission (CNMV) is the Spanish government agency responsible for the financial regulation of the securities markets in Spain. It is an independent agency that falls under the Ministry of Economy and Finance of Spain.

The main priority of the CNMV is the protection of financial consumers. It has been using behavioural insights to identify the behavioural bias, prejudices and errors consumers make when taking investment decision and to use the proper tools to amend those behaviours. This has a direct impact on their protection as consumers.

The Commission, in collaboration with the Spanish Central Bank, has been using behavioural insights in its development of an Action Plan on Financial Education. The aim of this plan is to enhance the Spanish population's financial culture through activities which will improve financial competence and knowledge among investors. The initiatives in these areas directly and indirectly consider the aptitudes and behavioural trends of financial consumers, in order to decide which activities to develop in financial education.

CNMV is actively looking for and acquiring knowledge on behavioural sciences applicable to financial education. It applies the recommendations and conclusions of the OECD International Network on Financial Education and of the International Organisation of Securities Commissions (IOSCO) to its work.

## Drip pricing in e-commerce

Country	United Kingdom
Sector	Consumer protection
Institution	Office of Fair Trading (OFT) (predecessor of the Competition and Markets Authority)
Start of intervention	2010
End of intervention	August 2013
Objective	To achieve better understanding of the effects of price framing on consumer decisions and to identify the circumstances in which price framing would be likely to result in consumer detriment
Method	Controlled laboratory experiment
Application	Enforcement actions

### Problem

The OFT commissioned a controlled experiment that analyses whether or not the way prices are presented or “framed” to consumers has effects on consumer decision making and consumer welfare. The results were published in 2010.

### Intervention<sup>1</sup>

The **price frames** tested in the experiment were as follows:

- **Baseline treatment:** consumers see straight per-unit prices
- **Drip pricing:** consumers see only part of the full price up front and price increments are added (“dripped”) through the buying process
- **Sales (reference pricing):** a sale price is given and a pre-sale price is also given as a reference to the consumer, for instance, “was GBP 2 is now GBP 1” (actual prices are identical to the baseline treatment)
- **Complex pricing:** the unit price requires some computations, for instance, “3 for the price of 2”

1. Based on: OFT (2010), “The impact of price frames on consumer decision making”, May, [http://webarchive.nationalarchives.gov.uk/20140402142426/http://www.of.gov.uk/shared\\_of/economic\\_research/OFT1226.pdf](http://webarchive.nationalarchives.gov.uk/20140402142426/http://www.of.gov.uk/shared_of/economic_research/OFT1226.pdf) (accessed 12 January 2017); and OFT (2013), “Partitioned Pricing Research”, August, [http://webarchive.nationalarchives.gov.uk/20140402142426/http://www.of.gov.uk/shared\\_of/economic\\_research/OFT1501.pdf](http://webarchive.nationalarchives.gov.uk/20140402142426/http://www.of.gov.uk/shared_of/economic_research/OFT1501.pdf) (accessed 12 January 2017).

- **Baiting:** sellers may promote a special price but there are only a limited number of goods actually available at that price.
- **Time limited offers:** the special price is only available for a short, pre-defined period of time.

The experiments were conducted at the University College London (UCL) Experimental Laboratory, and involved 166 subjects drawn from across the UCL student population. Each subject participated in the baseline and two of the five price frames. Subjects participated in 30 rounds of the experiment, with each subject experiencing of his/her three frames 10 times.

The experiments were done by using a web site created for these experiments. The basic environment of the experiment was designed as follows:

- There are two shops, both of which sell the good that the consumer wishes to buy. The good is of the same quality at both shops.
- Both shops draw randomly their prices from a uniform distribution over a price interval; the consumer does not know the price of the good at either shop until he visits it.
- At the start of each round, the consumer (subject) is at the home screen. The consumer can go back and forth between his home screen and the two shops as often as he likes and buy units of the good at the shops (up to four units in total).
- Consumers receive a fixed monetary payoff for each unit of each good they buy; the structure of monetary payoffs reflects the consumer's utility function with decreasing marginal utility (i.e. a very high payoff for the first unit bought and lower payoffs for subsequent units).
- Each time the consumer travels to a shop he has to pay some search/travel costs. This reflects the time costs of search on the internet or the actual travel costs in the case of visiting physical stores.
- Unless he/she receives advertising, he does not know the price of the good at either shop until he visits it.
- Given the above conditions, it is possible to calculate the optimal behaviour/strategy which maximises payoff, irrespective of any behavioural biases and with no limits to their computational power. However, calculating optimal strategy is not easy and practically impossible for consumers to calculate during the experiment. Therefore, consumers have to intuitively form expectations and make decisions as they do so in the real world.
- Consumer welfare in this experiment is measured by the payoff consumers receive net of the prices that they paid for the units of goods. Consumer welfare loss is defined as the amount of expected payoff the consumer missed out on because they made a decision which deviated from the optimal behaviour.

The results of the experiment suggested that drip pricing was one of the most harmful types of price framing in terms of welfare loss to consumers. Building on this finding, the OFT conducted a study on partitioned pricing including drip pricing in 2013. It analysed the effects of partitioned pricing without “drips”, which was not covered in the study in 2010, comparing those with baseline and drip pricing. The following price frames were tested:

- Baseline
- Drip pricing
- Two partitions with total: the price is split up into two partitions (base plus one extra part) and the total cost is also displayed (for example, GBP 7+GBP 3= GBP 10).
- Two partitions no total: the price is split into two partitions, but the total cost is not displayed (for example, GBP 7+ GBP 3).
- Presentation: the price is split into two partitions (base and extra part) and the extra part (or second partition) is presented in smaller font next to the “Buy” button instead of in the same font size next to the base price.
- Three partitions no total: the price is split into three partitions (base plus first extra part plus second extra part), but the total cost is not displayed (for example, GBP 7+GBP 2+GBP 1).

The experiments were conducted at UCL Experimental Laboratory, and involved 145 subjects drawn from across the UCL student population. Each subject participated in the unit-pricing baseline, the drip pricing and one of the other partitioned pricing frames. Just as in the 2010 study, subjects participated in 30 rounds of the experiment, with each subject experiencing his/her three frames 10 times. The basic environment of the experiments was also the same.

## Results and impact

The study in 2010 delivered the following findings:

- Price framing does matter for consumer decision making and welfare. Consumers make more mistakes and achieve lower consumer welfare under the price framings tested compared to the baseline.
- Drip pricing resulted in the largest welfare loss. The ranking of the price frames (largest to smallest welfare loss) were: 1) drip pricing; 2) time limited offers; 3) baiting; 4) sales (reference pricing); and 5) complex pricing.
- Under drip pricing and time limited offers, which generated the largest welfare losses, subjects made most errors. The most prevalent error under those two price framings were that subjects search “too little”; subjects buy at the first shop at prices that are too high, whereas they should continue their search.
- Under drip pricing, behavioural biases including loss aversion or the endowment effect had been observed. It was difficult for consumers to give up the good which they had already in their basket, even if they realised there were additional costs

The study in 2013 delivered the following findings:

- As in the 2010 study, “drip pricing” led to more errors in general, more purchasing errors (which occurred when subjects did not buy the optimal amount of the good) and significantly less search effort.
- The “presentation” frame increased purchasing errors and led to significant consumer welfare loss.
- Subjects make fewer errors as they repeated the exercise (learning effect).

- Changes in the transparency and clarity of price partitions and the total price of a product or service have a significant impact on consumer decisions and welfare even when all the price components are presented to the consumer at the same time.

These results supported enforcement actions by OFT on drip pricing and a number of other potential price framing issues. Some examples include:

1. Retailers' surcharge for paying by debit or credit card (2011) (OFT, 2011)

In 2011 the OFT received a “super-complaint” from which regarding the use of payment surcharges in the passenger transport sector. It was pointed out that those surcharges are often only revealed towards the end of a lengthy transaction process, and a reasonable, practical alternative to avoid the fee was lacking. In its response, the OFT set out certain principles, including that debit card charges should be included in the headline price.

2. Payment surcharges in the airline industry (2011-12) (OFT 2012).

In 2011, the OFT started an investigation of airline company practices involving the charging additional fees for debit card payments that were not included in the headline price and presented to consumers at the end of the booking process. Credit card charges were not presented in a clear and transparent way as well. The OFT considered these practices as a breach of Consumer Protection from Unfair Trading Regulations (CPRs) provisions on unfair commercial practices including misleading actions and misleading omissions. In July 2012, the OFT closed the investigation and 12 airline companies agreed to include debit card surcharges in the headline price and present any surcharges for paying by credit card in a way that could be easily found by consumers.

## Institution

The OFT was responsible for protecting consumer interests throughout the United Kingdom. In April 2014, the Competition & Markets Authority (CMA) took over many of the OFT's functions including enforcing consumer protection legislation to tackle practices and market conditions that make it difficult for consumers to exercise choice (CMA homepage).

Enforcement work by the OFT (and now the CMA), has been informed by behavioural economics, including through conducting research on commercial practices that might induce behavioural biases as presented below. The CMA employs economists across a number of levels, including senior levels, some of whom are familiar and work with behavioural economics.

*Source:* OFT (2011), “Retailers’ surcharges for paying by credit or debit card”, March, <http://webarchive.nationalarchives.gov.uk/20140402142426/http://www.oft.gov.uk/OFTwork/markets-work/super-complaints/which-payment-surcharges> (accessed 12 January 2017); OFT (2012), “Airlines to scrap debit card surcharges following OFT enforcement action, July, <http://webarchive.nationalarchives.gov.uk/20140402142426/http://www.oft.gov.uk/news-and-updates/press/2012/58-12> (accessed 12 January 2017); CMA (2017), homepage, <https://www.gov.uk/government/organisations/competition-and-markets-authority/about> (accessed 12 January 2017).

## How much? Designing optimal price comparison websites in the payday lending market

<b>Country</b>	United Kingdom
<b>Sector</b>	Financial Services / Consumer Choices
<b>Institution</b>	Financial Conduct Authority (FCA)
<b>Start of intervention</b>	2015
<b>End of intervention</b>	2015
<b>Objective</b>	To find out how the presentation of information on price comparison websites affects consumer choices
<b>Method</b>	Online experiment followed by a survey testing the ability of consumers to select the cheapest payday loan according to different ways to frame price comparison information on websites
<b>Application</b>	To inform the standards of price comparison websites that compare payday loans

### Problem

In 2015, the Competition and Markets Authority (CMA) discussed the potential for price competition between payday lenders in certain cases. The CMA's market remedies included an Order on all online payday lenders that will prohibit them from lending unless they publish loan product details on at least one price comparison website.

Alongside this Order, the CMA made recommendations to the FCA to raise the standards of price comparison websites that compare payday loans to help to ensure better outcomes for consumers.

The objective of this study was to test potential standards for price comparison websites that compare payday loans and inform the FCA's response to the CMA's recommendations.

### Intervention

The FCA recruited 8 088 UK consumers who had taken out a payday loan in the past 12 months and/or intended to take one out in the coming 12 months to take part in an online experiment followed by a survey.

Participants saw three versions of a price comparison website listing hypothetical payday loans and, in each case, had to select the cheapest loan (defined as the one with the lowest total amount payable (TAP)) amongst the ones that best suited their needs in terms of amount and duration. All participants saw Treatment 1, which encompassed all of the standards the FCA wanted to test, and were randomly allocated to see two of six alternative versions, each of which was missing one of the standards.



The treatments were:

1. **All standards:** All loans on one page, ordered by TAP ascending, no banner advertising, input functionality and market coverage disclosure
2. **Featured loans:** As 1, but showing only featured loans on the first page requiring a click-through to see all loans
3. **No order:** As 1, but loans not ordered by TAP
4. **RAPR:** As 1, but loans sorted randomly and displaying representative APR (RAPR) instead of TAP
5. **Advertising:** As 1, but with banner advertising
6. **No input functionality:** As 1, but no functionality to filter loans by loan amount and term, and
7. **No standards:** none of the standards.

## Results and impact

When viewing the control page which contained all of the proposed standards (Treatment 1), 63% of consumers chose the cheapest loan consistent with their preferences.

The largest single effect was observed when customers were required to click through to see all, not just featured loans (Treatment 2). In this case, 3% of respondents seeing price comparison websites with loan offers across two pages chose the cheapest deal, compared to 63% of respondents seeing price comparison websites with all loan offers displayed on a single page.

The second largest single effect was observed when displaying RAPR instead of TAP (Treatment 4). Respondents who were not explicitly shown the TAP chose the cheapest deal 13.5% of the time, compared to 63% of respondents who were shown the TAP.

The third largest single effect was observed when loans were sorted randomly by TAP, but with one restriction: the cheapest deals were never on top (Treatment 3). Respondents who saw loan offers ranked randomly chose the cheapest deal 27% of the time, compared to respondents who saw loan offers ranked in ascending order of TAP who chose the cheapest deal 63% of the time.

The FCA found no significant effects of the other treatments. Self-reported differences in payday loan usage (for example, whether participants had taken out a payday loan before) showed no significant effects on whether participants chose the best deal.

Therefore, the findings showed that requiring customers to click through to a second page to see all the loans significantly reduced performance, as did not providing the TAP. This is consistent with behavioural evidence that people often make poorer choices because of relatively small barriers such as needing to click-through, or larger barriers such as having to make a calculation. It also shows that small changes to the way information is presented can have a large effect on behaviour.

## Institution

The United Kingdom's Financial Conduct Authority (FCA) is an independent financial regulatory body in the United Kingdom, which is financed by charging fees to members of the financial services industry. The FCA has three statutory objectives: to enhance market integrity; to secure an appropriate level of protection for consumers; and to promote competition. It actively utilises behavioural science alongside other regulatory tools in research and policy making to achieve its operational objectives.

The FCA has a specialised Behavioural Economics and Data Science Unit (BDU), made up of economists, computer scientists and psychologists. The BDU carries out original research and helps the FCA to apply behavioural insights. Many others in the organisation, including the Chief Economist's department and members of the Policy arm of the FCA also apply behavioural economics in their routine work. All trials and research conducted by the FCA go through a robust review process, in which ethical and other risks are assessed and where appropriate, mitigated.

*Source:* Smart, L. (2016), "Full Disclosure: a round-up of FCA experimental research into giving information", Financial Conduct Authority (FCA), *Occasional Paper 23*, <https://www.fca.org.uk/publication/occasional-papers/op16-23.pdf> (accessed 12 January 2017).

## Shop and save: Designing an annuity comparison tool

Country	United Kingdom
Sector	Financial Services / Consumer Choices
Institution	Financial Conduct Authority (FCA)
Start of intervention	2015
End of intervention	2015
Objective	To find out how the presentation of information on price comparison websites affects consumer choices.
Method	Online experiment followed by a survey testing the ability of consumers to select the cheapest payday loan according to different ways to frame price comparison information on websites
Application	To inform the standards of price comparison websites that compare payday loans

### Problem

The retirement income market study, conducted in 2016 by the FCA, found that competition is not working well for consumers in the annuities market. In particular, the FCA found that, while most consumers who purchase their annuity from their current pension provider (80%) can benefit by shopping around, many fail to do so.

Consumers' decision not to shop around may in part be related to the way they perceive the associated costs and benefits. Many consumers say that shopping around is not worth it, despite clear evidence that they could increase their annuity income by switching away from their pension provider. Furthermore, they may believe that it would be difficult to evaluate the array of potential options available, and that their easiest and most straightforward choice is to stick with their existing provider. Moreover, some consumers may wish to avoid decisions they will regret in the future, and so end up staying with their current pension provider.

This experiment focuses on whether information prompts, given as part of the pension annuity quote from their pension provider, are likely to encourage more consumers to **overcome inertia** and shop around. A laboratory experiment was suitable for investigating these questions, as the FCA was interested in the purchase stage, where it is likely that consumers are paying some attention.

### Intervention

The FCA recruited a sample of 1 996 UK consumers aged 55-65 and allocated them randomly into six groups. Five of the six groups received an information prompt with varying information intended to encourage consumers to shop around. The sixth group were not presented with an information prompt, and therefore acted as a control against which the behaviour of the other groups could be compared. Treatments included:

- **Personalised annual:** participants were provided with the highest quote they could obtain by shopping around

- **Personalised lifetime:** as above, but with an estimate of the foregone gains from not shopping around over a typical person's lifetime
- **Non-personalised annual:** participants were provided with an estimate of how much they could obtain by shopping around (not exact)
- **Non-personalised lifetime:** as above, but with an estimate of the foregone gains from not shopping around over a typical person's lifetime; and
- **Call to action:** participants were told that "80% of people who fail to switch from their pension provider lose out by not doing so", with a visual representation.

Participants were incentivised to maximise their hypothetical retirement income through a series of tasks including choosing an annuity. "Shopping around" involved some additional effort (giving personal information and choosing a quote), as it would in real life. The experiment also aimed to induce **status quo bias**, **inattention** and **fatigue** by getting the participant to multi-task and answer a series of questions before making a choice.

## Results and impact

All the information treatments had a significant impact on the consumers' decision to shop around. Results show that the effects of the treatment, measured as the difference between the treatment and the control, range from around 8 percentage points for the non-personalised lifetime treatment to 27 percentage points for the personalised annual treatment (all statistically significant).

Furthermore, there is substantial variation in the effects across the five treatments, with the personalised annual treatment achieving the highest impact on shopping around, followed by the call to action treatment. The two treatments prompt consumers in different ways: the personalised treatments offer information that is reliable and customised to the consumer; and the call to action treatment offers simple, easily digestible information accompanied by a strong social-comparison visual.

Moreover, the non-personalised treatments caused less shopping around than both the personalised and the call to action treatments, although this was not significant. There are two main potential explanations for this. The non-personalised treatments may have contained too much text, which may have led to information overload and dilution of the message, prompting consumers to stick to the status quo. An alternative explanation is that consumers were less willing to shop around as they may not have understood the gains they could make.

The experimental results provide additional evidence that carefully designed information prompts can have an impact on consumer behaviour and encourage shopping around. Importantly, the experiment identified which information prompts resulted in more shopping around.

## Institution

The United Kingdom's Financial Conduct Authority (FCA) is an independent financial regulatory body in the United Kingdom, which is financed by charging fees to members of the financial services industry. The FCA has three statutory objectives: to enhance market integrity; to secure an appropriate level of protection for consumers; and

to promote competition. It actively utilises behavioural science alongside other regulatory tools in research and policy making to achieve its operational objectives.

The FCA has a specialised Behavioural Economics and Data Science Unit (BDU), made up of economists, computer scientists and psychologists. The BDU carries out original research and helps the FCA to apply behavioural insights. Many others in the organisation, including the Chief Economist's department and members of the Policy arm of the FCA also apply behavioural economics in their routine work. All trials and research conducted by the FCA go through a robust review process, in which ethical and other risks are assessed and where appropriate, mitigated.

*Source:* Smart, L. (2016), “Full Disclosure: a round-up of FCA experimental research into giving information”, Financial Conduct Authority (FCA), *Occasional Paper 23*, <https://www.fca.org.uk/publication/occasional-papers/op16-23.pdf> (accessed 12 January 2017).

## Senior water discount enrolment

Country	United States
Sector	Poverty reduction/utility bills
Institution	City of Philadelphia, Pennsylvania
Start of intervention	January 2015
End of intervention	November 2015
Objective	Increasing the number of low-income seniors enrolled into a programme that would reduce their water bills by 25%
Method	Randomised Controlled Trial – sample size of 6 000+ homeowners enrolled in another discount programme
Application	Successful innovations were too expensive to scale up to a larger population

### Problem

The City of Philadelphia in Pennsylvania offers a discount to low-income senior citizens living in the municipality on their water bills. Senior water and sewer customers can apply to receive 25% off their payments for water in an effort to reduce the financial burden on those elderly citizens with lesser means.

However, despite the fact that this would benefit the citizens in question, the City of Philadelphia noticed that many low-income seniors eligible for the discount were not actually submitting an application to receive it. It set out to investigate whether more low-income senior citizens could be encouraged to take advantage of the programme.

### Intervention

The City decided to test the effect of using different behavioural nudges, to see how successful these might be in motivating citizens to claim their right to lower water bills. It took a sample of over 6 000 low income senior citizens living in Philadelphia, who were already enrolled in a separate discount programme for seniors and tested the impact of various combinations of messages and sequencing of outreach.

The outreach consisted of **letters sent in either a large or small envelope, postcards, and calls** to the homeowners to encourage them to complete their application for the water bill discount. Messaging was based on applying the principles of **loss aversion** and **social norms**. The application to receive the discount was also re-designed to make it simpler and easier to complete.

Results were measured by the number of information requests from seniors who received the outreach, applications returned, and the number of applications approved for this group, as compared against a control.

## Results and impact

The City found all of the innovations tested to be successful in achieving the desired aim of motivating more senior citizens to claim their water bill discount. Letters which utilised large envelopes significantly exceeded control in applications returned and approved, with approximately 10% of seniors who were sent a letter in a large envelope receiving approval on their application, as compared to less than 1% receiving approval in the control.

However, this method was found to be too expensive to scale up for subsequent rounds of testing and on a broader scale for the larger population. The City has extracted the lessons learnt from this experiment to think about cost and implementation on a broader scale before testing on a pilot population when considering further studies.

A subsequent trial replaced the large envelope with uniquely coloured but standard size envelopes to mimic the benefit from standing out without incurring additional postage costs and allowing the utilization of existing mailing equipment. Evaluation of this second round is underway.

## Institution

The City of Philadelphia governs the largest city of the commonwealth of Pennsylvania, USA. The Administration has been applying behavioural economics to the design and implementation of programmes which help operate government more efficiently, effectively and with integrity and to provide economic opportunities for all Philadelphians.

Sectors of particular concern for the City of Philadelphia include Tax Collection through improved messaging to delinquents and better payment options, Public Health by making smart food and drink choices easier, and Poverty Reduction through increased enrolment in assistance programmes. Specifically, behavioural insights have been used to improve tax collection and reduce poverty by connecting people with the discounts they are entitled to.

The City does not have a formal central unit nor network focused exclusively on behavioural insights. However, there is a small cross-departmental group working jointly on isolated projects that hopes to grow into a network. Partnerships with university researchers also exist through the Philadelphia Behavioural Science Initiative (<http://phillybsi.org>), which seeks to bring government and academia together to create more effective government policies and programmes. This has included behavioural insights training at a one-day summit and ongoing partnerships for new pilot projects in several city agencies.

Funding is in place for continuing behavioural insights training for programme designers and managers and to support pilot projects which are planned for 2016 and beyond.





## Chapter 5

### Behavioural insights case studies: Education

*This chapter provides a series of case studies detailing how behavioural insights have been applied in OECD member and partner countries as a tool to improve academic and social outcomes. Case studies presented utilise a breadth of experimental methods, ranging from resource-intensive randomised controlled trials to relatively less resource-intensive literature reviews. The open and transparent sharing of what works, and what does not, is vital to ensuring that good quality research and findings are shared widely.*

## After school project

<b>Country</b>	South Africa
<b>Sector</b>	Education
<b>Institution</b>	Western Cape Government
<b>Start of intervention</b>	2012
<b>End of intervention</b>	2015
<b>Objective</b>	To improving participation at the MOD (after-school) centres
<b>Method</b>	Randomised controlled trial, experiments and surveys using behavioural insights
<b>Application</b>	To inform WCG policies regarding the recruitment of MOD centre coaches and to increase attendance rates at MOD centres

## Problem

In 2010, the Western Cape Government (WCG) Department of Cultural Affairs and Sport (DCAS) created the “Mass participation; Opportunity and access; Development and growth” (MOD) programme as an after school programme aimed at creating a socially inclusive, creative and active Western Cape. The MOD Centres act as a hub for sport, recreation, arts and culture activities for learners in the community. The centres are usually located in a school and serve the community as a whole. MOD Centres offer a complement to educational activities provided by schools, offering a safe place for learners to “hang out” and for children to engage in sport and recreational activities. They also assist in the identification of talent learners, who may be selected for high-performance training at “Sharp Centres,” which focus on sporting, arts, culture, excellence and youth development.

There are currently 181 MOD Centres across the province, with a total of 500 coaches that provide sport and recreational activities to over 40 000 registered participants from disadvantaged communities and underserved schools.

A key motivation behind the establishment of the MOD programme was the idea that keeping young people engaged, and providing homework support after school would lead to improved academic, emotional and social outcomes. Furthermore, the delivery of high-quality programming within MOD centres hinges critically on the quality of coaches recruited and increasing the attendance numbers at MOD centres.

As a result, it was important for the WCG to study both the effects of the MOD centres on the performance of learners, as well as to try to identify the behavioural attributes of coaches and messages to parents that could result in high learner attendance. The interventions used experimental methods combined with surveys to investigate these issues and find solutions to implement.

## Intervention

As part of a partnership established in 2012 to study the application of behavioural insights to four policy areas, the Western Cape Government (WCG) worked with ideas42 and the University of Cape Town to initiate a series of behavioural change pilot projects aimed at investigating whether behavioural nudges could enhance policy implementation and delivery.

This intervention has two distinct phases. During Phase I, UCT and ideas42 developed and implemented two levels of communication rollouts in schools, at the school and classroom level respectively, and worked with DCAS to improve the internal monitoring and evaluation system to facilitate timely collection of individual-level attendance data.

The trial used behavioural insights to inform the design of posters, stickers and messaging in order to increase the **salience** and **reframe** the identity of the MOD centres. In total, 90 schools participated in the RCT, which were randomly split into 45 treatment and 45 control. The primary unit of measurement was the number of learners who attended MOD programmes consistently.

In Phase II, led by UCT, three separate projects were tested:

1. Measuring the impact of MOD centre attendance on learner **academic outcomes** in relation to Phase I;
2. Understanding the **behavioural traits of coaches** that correlate with higher attendance, and provide input on ways to successfully identify and measure these traits during the recruitment and selection phase of new coaches; and,
3. Testing the use of **behavioural messaging to parents** as a mechanism to increase learner involvement and attendance at the MOD programme.

The first project was measured by compiling school level data on MOD centres from an audit conducted in 2016, leader demographics and test scores from grades 3, 6 and 9 systemic tests, and MOD attendance data provided by DCAS. The audit was conducted for all 181 MOD centres, while attendance data was provided for 170 of the 181 MOD centres. Systemic test results were available for 172 schools, representing 25 545 students. However, due to issues with matching test results with participant lists at MOD centres, the final sample includes approximately 9 800 (40% of the total sample) learners from 114 schools who attended an MOD centre at least once.

The second project used self-reported surveys in combination with individual choices in a series of standard experimental tasks collected at a meeting of head coaches in November 2015. Each coach participated in five experimental tasks over a 3-hour period and then completed a questionnaire independently. In total, 162 coaches representing the nine school districts took part in the experiment.

For the experiment, coaches were randomly assigned to one of six classrooms, with approximately 25 to 30 coaches per room, and the experiments were run simultaneously. The tasks were designed to elicit measures of patience, co-operation, trustworthiness, honesty and selfishness. The five games were:

1. *Simple Discount Task*: This task measured how coaches characterised time preference to indicate how individuals view choices in the present versus choices in the future, and the estimated discount rate provides some measure of the willingness to delay gratification
2. *Prisoner's Dilemma/Co-operation Game*: This task measured the propensity to co-operate with a stranger as opposed to defect. In this task, the decision is framed in terms of a decision to make a High or Low contribution to a common pot. Players earn a return based on contributions to the common pot
3. *Trust Game/Reciprocity Game*: This task measured the trustworthiness of coaches. Trustworthiness is measured by the amount of money a coach returns to a stranger, who has made an initial transfer to them in the expectation of receiving a return
4. *Honesty Reporting*: This task investigates how individual levels of honesty vary under different scenarios, and to extent to which monitoring – which can be expensive – might be effective. The game consists of a basic word search task which individuals complete under 3 different conditions – one in which they are monitored; one in which they have the opportunity to be dishonest about their performance in the task, and one in which they compete against their peers for a single prize
5. *Dictator Game*: This task seeks to measure altruism in coach's behaviour. In this task, individuals each received ZAR 100, which they could donate some, or all, to a charitable organisation. Altruism is measured by the size of the donation made.

The questionnaire gathered information such as age, gender, education, income and method of recruitment. In addition to these questions, give psychological scales were included to measure specific personality traits.

The third project considers whether messaging parents of learners has any positive impact on learner participation in the MOD programme. Using a randomised-controlled trial, learners were randomly assigned to two separate treatment groups and a control group. For this experiment, the researchers recruited students participating in the “Year Beyond” (YeBo) programme.<sup>1</sup> Participants were recruited from 18 of the 24 schools – 10 primary and 8 high schools – participating in the programme, with 1 689 registered attendees (approximately 93 per school). Of this group, 1 363 contact phone numbers for parents/guardians were acquired, of which 1 107 were verified.

Two types of brief messages were sent to parents of learners assigned to the treatment group, while parents of learners in the control group received no such message. Messages were behaviourally-informed from experiments conducted in the United States and literature, and adapted to the specific contexts of low-income Western Cape populations, including being translated into home languages. The first treatment group received messages that focused on learner's actual attendance record from the previous week. Treatment Group 2 received this information and an additional short sentence that identified a specific long-run benefit of attending the programme.

The messages incorporated the following behavioural insights:

1. YeBo is a government after-school initiative designed to improve learners' after-school opportunities and contribute to numeracy and literacy development.

- **Social norms:** Messages were addressed in the first-person and personalised to create a sense that the message came from a real and interested person and thus create a form of social pressure or social expectation
- **Salience:** All messages used highlighted the learners' attendance record from the previous week, and presented it in numerical form e.g. child attended 2/3 days. The contrast of numbers to words is more likely to stand out in the message and create an impression in recipients' memories
- **Loss aversion:** In messages that went to the group which did not attend any sessions in the previous week, the message focused on the opportunities that were missed rather than what could be gained from attending. This harnesses the tendency of people to place more value on losing something rather than gaining an equivalent item
- **Anchoring:** The use of a social norm of attending "all 3 sessions", or of attending "Monday, Wednesday, and Friday" (all scheduled sessions), also creates an unconscious "anchor" for behaviour
- **Efficacy and channelling:** Messages were designed to reinforce parents' feelings of their own efficacy in encouraging attendance. This was done by providing a relatively actionable suggestion (encouraging learners to attend) and reinforcing that this would help increase attendance
- **Time preferencing:** Education is seen as an "investment good", with significant future payoffs and short-run costs.

Messages were scheduled to be sent at the same time on a weekly basis through SMS for an 11-week period.

## Results and impact

For Phase I, the behavioural pilot was shown to have positive effects on learner attendance, increasing daily attendance rates within the treatment schools, and bringing more learners into the MOD programme. The treatment schools in the post intervention period were estimated to have on average 25.6 more students attending per day, or a 39% increase over the control population. There was no appreciable change in the frequency with which learners participated in the programme however.

Additionally, the After School Team was able to implement a new attendance tracking protocol to allow DCAS to evaluate changes in daily attendance behaviour within and across schools, thereby providing the department with a greater ability to target particular MOD centres and coaches to increase programme attendance.

Results from Project 1 of Phase II showed that attendance rates at MOD centres are low, especially for amongst high school learners, with learners attending between five and six days per month on average. However, MOD attendance does appear to yield positive academic benefits. The researchers found:

- Evidence to suggest that MOD centre attendance improves systemic Maths test scores, especially for Grade 6 learners, by between 2 to 4%. Results are weaker for Grade 9 Maths scores, but this may plausibly be confounded by lower attendance rates amongst high school learners to begin with.

- Evidence to suggest that regular attendance (more than 15% of available sessions) may yield particularly large gains.
- There is no evidence that MOD centre attendance improves test scores on the language systemic test.
- MOD centre attendance does not appear to affect test score outcomes differentially for girls and boys.

Considering that overall attendance rates are still low and those who attend only attend 5-6 days per month, the researchers note that these test score benefits MOD attendees are encouraging. However, more resources are needed to encouraging greater numbers of learners to attend, and to attend regularly, especially those in high school. In addition, these results do not capture other potential behavioural benefits such as improved discipline, self-control, and greater self-esteem. The authors noted the key constraint of good quality data on the results of all three projects.

For the second project, results showed that MOD centre coaches display significant levels of pro-social behaviour. In particular, coaches appear, on average, to be willing to delay gratification, to exhibit reciprocity in their choices, and high levels of altruism/generosity. Furthermore, they found that many of these behavioural attributes are correlated with attendance and retention rates of learners in the MODs.

These results are important for future recruitment and selection processes. The researchers recommend that the MOD team should continue to incorporate the personality assessment scales into their recruitment processes, as these provide a quick and reliable measure of important attributes such as integrity, conscientiousness and reliability, all of which positively impact learner participation in the programme. Data quality problems were also highlighting, reinforcing the need for the MOD centres to collect better data.

For the third project, results found that, on average, the attendance rate for those in the treatment group was 6% higher than the control. This effect was present for both Treatment 1 (51.9%) and Treatment 2 (50.3%), compared to the control (45.9%). This effect was larger for high school learners than primary school learners, and there was no difference based on race or gender.

Furthermore, the messaging intervention appears to have been effective at bringing non-attendees back into the programme. Evidence suggests that differences in attendance rates post-messaging were higher amongst treatment and control group learners who had not attended at all in June (a 7% difference) compared to those who had attended at least once in June (a 3% difference). However, the pilot results suggest that the messaging intervention does not appear to have extended to parental engagement with their children on issues beyond the scope of YeBo, but this may simply reflect the short time frame involved.

The researchers note that messaging intervention is a relatively low-cost, high impact intervention. Based on the regression analysis, they estimate that messaging generated an additional 900 days of attendance at MODs. With a total cost of messaging at ZAR 4 710 for the 11-week intervention, this suggests a total cost of ZAR 5.23 for each additional day of attendance generated, which could also be improved with economies of scale.

## Institution

The Western Cape Government works in co-operation with national government to create laws for and provide services to the people of the Western Cape. The WCG consists of 13 departments that are responsible for implementing laws and providing services, including on health, environment, economic development, social and human development. The application of behavioural insights has been spearheaded by the Policy and Strategy Directorate within the Department of the Premier.

Ideas42 is a non-profit design and consulting firm that uses insights from behavioural sciences to design scalable solutions to some of society's most difficult problems. Initially formed at Harvard in 2008, ideas42 brings together professionals from different backgrounds and disciplines to work on projects worldwide to solve problems in health, education, criminal justice, international development, and government efficiency.

The Research Unit in Behavioural Economics and Neuroeconomics (RUBEN), based at the University of Cape Town, is an interdisciplinary group of researchers who use economic experiments, often together with fMRI imaging techniques, to examine the role that social, cognitive and emotional factors play in economic decision-making. RUBEN is currently the only centre for experimental research in economics on the African continent, providing training, research leadership and technical resources for the benefit of researchers throughout the continent.

## Improving adult literacy

<b>Country</b>	United Kingdom
<b>Sector</b>	Adult literacy; English and maths policy
<b>Institution</b>	Department for Business, Innovation and Skills (BIS) and the Behavioural Insights Team (BIT)
<b>Start of intervention</b>	July 2015
<b>End of intervention</b>	November 2014 (10 week trial)
<b>Objective</b>	Encouraging adults with low English and Maths skills to persevere with adult education programmes
<b>Method</b>	Field Experiment (Sample size: approximately 2 000 students enrolled in adult learning courses)
<b>Application</b>	Sending text messages to adults with low Maths and English skills to encourage persistence with the adult education courses they have enrolled on in various colleges in the United Kingdom

### Problem

Adults who lack literacy and numeracy skills tend to be less productive at work, earn lower wages, and are more likely to suffer from ill health and experience social exclusion. England is ranked average for literacy skills and below average for numeracy skills across the OECD.

In an effort to find out how behavioural insights could be used to improve adult numeracy and literacy, the UK's Department for Business, Innovation and Skills (BIS) established the Behavioural Insights Research Centre for Adult Skills and Knowledge (ASK) in collaboration with the Behavioural Insights Team (BIT) September 2014. ASK conducts research and runs trials with the aim of producing evidence-based policy recommendations and practical tools for employers, training providers and adult learners.

One of the first problems identified by the Centre concerned retention and attainment rates on adult educational programmes. ASK found that many college programmes in the United Kingdom were experiencing high rates of attrition at key moments, with attendance rates deteriorating by around 50% over the academic year.

### Intervention

In one of the first trials conducted by the Centre since its inception, ASK set out to find out if, using insights taken from behavioural science, it would be able to successfully encourage adults with low English and Maths skills to stick with literacy and numeracy programmes.

It conducted a large-scale field experiment testing the use of encouraging text messages, informed by principles adopted from behavioural science, which were sent to adult learners, aged 19 and over, enrolled in English and Maths courses at two further education colleges in the United Kingdom. The trial was randomised at class level, with all learners in treatment classes receiving text messages, and all learners in control classes receiving no text messages.



Two thousand students were sent multiple messages and prompts via text message throughout the duration of their course, which were sent on behalf of the college. The messages focused on inculcating four beliefs in learners, based on insights taken from behavioural science that other studies have shown to predict persistence in education:

1. That what the students are learning is important
2. That they as a learner can succeed in the course
3. That practice matters in shaping improvement, and
4. That they belong in college.

Learners were also sent messages to help them plan their attendance at college and how to revise their course materials, using implementation intention and mental contrasting style prompts.

The programme of messages aimed to increase persistence by nurturing their motivation for learning and prompting them to organise themselves for classes in the week ahead.

ASK measured the resulting weekly class attendance by students and the proportion of students that stopped attending courses, where a participant was considered to have dropped out if they were absent for three weeks from classes, and compared this with the same indicators for those students sent no messages at all.

## Results and impact

The experiment found that average attendance increased by 7% for those students who were sent the text messages in comparison to the control group who had been sent no messages at all. Moreover, the dropout rate of students (those who never come back after the mid-term break) decreased by 36% in the group sent messages relative to the control.

ASK was able to conclude that the use of behavioural nudges in the form of simple text messages, based on principles of **positive feedback**, **social support** and **planning** or **organisation**, had a positive impact on improving attendance, attainment and retention rates of learners on adult education programmes. As a result of the trial's findings, a number of colleges around the UK are looking to implement a similar text message regime. Using behavioural insights to reduce attrition and increase attainment in adult education could in the long term, therefore, have the potential to improve overall adult literacy and numeracy in the United Kingdom.

## Institution

The Department for Business, Innovation and Skills (BIS) was a ministry of the UK Government responsible for business regulation and consumer affairs, higher and further education including training and skills development, and science and research. It has now merged with the Department of Energy and Climate Change (DECC) to form the Department for Business, Energy and Industrial Strategy (BEIS). Adult Skills and Higher Education have now moved to the Department for Education which is now responsible for overseeing the Adult Skills and Knowledge Centre.

BEIS uses behavioural insights in research, design, and implementation to inform its evidence-based approach to policy making. Behavioural science holds significant potential to influence numerous policy areas which BEIS deals with, including, consumer behaviour, energy use, and business behaviour and compliance

The Department has a small central unit dedicated to behavioural insights, and also maintains an informal network of practitioners throughout the organisation. Introductory training on behavioural insights is available to all employees of the organisation.

## Chapter 6

### Behavioural insights case studies: Energy

*This chapter provides a series of case studies detailing how behavioural insights have been applied in OECD member and partner countries as a tool for promoting energy efficiency. Case studies presented utilise a breadth of experimental methods, ranging from resource-intensive randomised controlled trials to relatively less resource-intensive literature reviews. The open and transparent sharing of what works, and what does not, is vital to ensuring that good quality research and findings are shared widely.*

## Better consumption data for more efficient energy use

Country	Italy
Sector	Energy
Institution	Regulatory Authority for Electricity, Gas and Water (Autorità per l'energia elettrica, il gas ed il Sistema idrico, AEEGSI)
Start of intervention	January 2015
End of intervention	April 2015
Objective	To test how individuals react to the different types of feedback they receive when they use energy
Method	Laboratory experiment
Application	Re-designing the layouts of electric and gas bills

### Problem

How do individuals reach to the different types of feedback they receive? The Italian energy and water regulator wanted to improve energy efficiency by exploring the opportunities offered by a better use of consumption data and better information for end users.

### Intervention

An experiment was conducted to verify how individuals react to the different types of feedback (in terms of frequency, framing and content) they receive when they use energy, the overall aim of the study being to improve energy consumption efficiency through better consumption data and better information for the end-user, that would increase their awareness on what they are paying for. Key Behavioural Insights tested in the study included **Loss Aversion**, **Feedback and Learning** and **Framing**, which were taken from previous experimental studies on feedback and energy consumption behaviour.

The participants in the experiment consisted of 300 students, stratified into groups, who were asked to complete a number of tasks. The experiment consisted of three phases:

1. Phase 1: Participants earned points with a simple and boring task e.g. counting the “zeroes” in number of pages – to avoid bias according to individual skills
2. Phase 2: Implementation of a software composed of five sliders, each one simulating the use of an electric appliance with a function (not known to participants), linking points to Virtual Cash (simulating the benefit from using such appliances). Participants were invited to spend their Points by moving the sliders (appliances), in order to obtain the Total Maximum Cash as a sum of the outcomes of the five appliances. This task was repeated for 21 rounds
3. Phase 3: The experiment was carried out with seven combinations of frequency, framing and content of feedback to be provided to participants about the result of each round. This design allowed the researchers to investigate how consumers

become increasingly aware of their energy consumptions and related costs (e.g. frequency ranges from feedback provided at the end of each round – simulating a smart meter –, or every three rounds – simulating the information taken from a monthly electric bill). Other treatment variables included i) Benchmarks i.e. the results of the “best-in-class” or the “worst-in-class”, to test the influence of information about other participants’ performance (for example, in the electric bill consumers may be informed about what the most efficient similar consumer in his area does) on the consumers’ behaviour and ii) positive vs. negative framing, i.e. whether the participants aimed to maximise benefits or to minimise losses, simulating information on savings or extra costs.

## Results and impact

The study delivered the following findings:

- Continuous feedback is extremely useful (smart metre, app on smartphone, etc.) to rapidly increase learning curves of awareness
- Feedback should remark the evolution of energy consumption in terms of cost, not energy
- It is more useful to highlight the costs related to inefficient use, for instance providing information about the difference of costs with respect to the previous bill
- Benchmark selection is crucial. If information is provided on the average, best or worst performance of a similar consumer, this yields very different results. If feedback provides information about a benchmark performer who is inefficient, the consumer is not motivated to find better solutions.

These results have been utilised by AEEGSI in re-designing the layouts of electric and gas bills, in order to better empower the consumer, increase awareness of liberalised energy market opportunities and optimise the use of electric appliances.

## Institution

AEEGSI is the regulator responsible for supervising the energy and water sector in Italy. AEEGSI has been applying behavioural insights in some cases related to research & diagnostics and the design of certain regulatory interventions, as it is the case for the implementation of Directive 2012/27/EU on Energy Efficiency, presented below.

The AEEGSI has no special unit in charge of applying behavioural insights and has been partnering with the University of Salento to conduct the study.

## Consumer adoption of renewable energy

Country	United States of America
Sector	Energy / Climate change
Institution	Department of Energy (DOE) / Social and Behavioural Sciences Team (SBST)
Start of intervention	2016
End of intervention	--
Objective	Increase the adoption nationwide of green-power plans
Method	Pilots and experiments with voluntary state and private-sector partners to test and evaluate various behavioural tools
Application	Behavioural tools that will encourage homeowners to select renewable energy sources

### Problem

The Federal Government works to protect the environment, expand the clean energy economy, and prepare communities for the effects of climate change. Addressing climate change requires developing and utilising renewable sources of energy, such as wind and solar power. The availability of renewable energy offerings for consumers is expanding. In 2015, wind and solar combined outpaced natural gas in new electricity-generation capacity added to the grid. Reflecting these trends, many residential electricity consumers now have the option to source their power from clean energy resources. Consumers can purchase clean energy directly from their utility's clean-power programme or from electricity suppliers that support the expansion of renewable-energy demand. Adoption of clean-power plans, however, remains low at approximately 700 000 customers nationwide.

The market mechanisms by which clean-power plans induce, or fail to induce, additional supply of clean energy is debated in the literature. Perhaps less appreciated are the behavioural factors that might affect the performance of these markets—for example, **lack of awareness** of clean-power options, **barriers to enrolment** such as needing to connect current utility accounts to a third-party account, and **difficulty choosing** from a vast array of options. Behavioural science provides tools for addressing some of these challenges, such as **automatic enrolment** and **active choices**, as shown in Germany.<sup>1</sup> Providing clear information about the costs and benefits of clean energy may also encourage customers to sign up for clean-energy purchases.

1. Rates of clean-power adoption were dramatically higher in Germany when consumers had to opt out of clean energy plans rather than opt in.

## Intervention

SBST has initiated a dialogue with the Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy to identify the potential behavioural barriers underlying low take-up of clean energy, as well as a suite of behavioural tools that can be used to address these barriers. For example, behavioural science research indicates that prompting consumers to select a power plan from among clean and standard options (rather than defaulting them into a standard electricity plan) may help increase participation rates. SBST will identify voluntary state and private-sector partners to test and evaluate these approaches on a wide scale over the next few years.

In other work with DOE, SBST is contributing to the design and evaluation of the Home Energy Score, a DOE programme that provides homeowners and potential home buyers with verified information to quickly assess the energy-efficiency profile of a home. The Home Energy Score Report will show on a 1-to-10 scale the home's current energy score and an estimate as to how much an increase to a higher level will save annually. The Home Energy Score also provides homeowners with clear recommendations for improving the energy efficiency of their home.

## Results and impact

Results of the project are expected in 2017.

## Institution

The Social and Behavioural Sciences Team (SBST) is a cross-agency group of applied behavioural scientists, programme officials, and policymakers—with providing policy guidance and advice to Federal agencies. SBST is a unit located in the Executive Offices of the President under the National Science and Technology Council.

SBST was created in accordance with Executive Order 13707, “Using Behavioural Science Insights to Better Serve the American People,” issued by President Obama on 15 September 2015. The Order directs Federal Government agencies to integrate behavioural science insights into the design of their policies and programmes.

The Order calls for the Assistant to the President for Science and Technology, on behalf of SBST, to provide agencies with advice and policy guidance in pursuit of the Order. This guidance helps agencies identify promising opportunities to apply behavioural science insights to Federal policies and programmes. It is organised around four key aspects of Federal policy where research and practice show that behavioural factors may play an especially strong role in programme outcomes: determining access to programmes, presenting information to the public, structuring choices within programmes, and designing incentives.

The Department of Energy was established in 1977 and serves to ensure America's security and prosperity by addressing its energy, environmental and nuclear challenges through transformative science and technology solutions.

## Transparency in energy contracts

<b>Country</b>	The Netherlands
<b>Sector</b>	Energy
<b>Institution</b>	The Netherlands Authority for Consumers and Markets (ACM)
<b>Objective</b>	Increasing compliance amongst energy suppliers in terms of transparency in energy contracts
<b>Method</b>	Behavioural Analysis/Policy Implementation for three largest firms
<b>Application</b>	Using nudging techniques in communications with energy suppliers to increase compliance

### Problem

The Netherlands Authority for Consumers and Markets (ACM) is a regulator which ensures fair competition between businesses, and protects consumer interests. By doing so, it aims to create more opportunities and options for both businesses and consumers.

ACM deals with the oversight of a number of markets, including the energy market in the Netherlands. ACM is responsible for ensuring that companies supplying energy to Dutch consumers are complying with the rules of the sector, to maintain fair competition. However, ACM found that this was not always the case when it came to disclosure to consumers regarding the details of their energy contracts. Some Dutch energy suppliers were not calculating and communicating the accurate monthly fee new customers were going to pay until after the “cooling-off period”.

The suppliers used the consumption information their clients gave them when they closed a contract, even though energy suppliers are actually able to make more of an accurate calculation of consumption after a contract is closed. This meant that customers did not receive all the information they needed to use their cooling-off period.

Another problem was that the suppliers presented some contracts as a “fixed price for a whole year” contract while, in fact, the period for which customers actually received the fixed price varied from between 10 to 12 months.

### Intervention

ACM set out to investigate how it could increase compliance amongst the energy companies to providing customers full disclosure regarding their contracts.

It first conducted a behavioural analysis of both the non-compliant and compliant energy suppliers. The analysis was based on the experiences of ACM staff who were in close contact with the commercial directors and legal departments of the energy firms. ACM then tested an intervention designed to influence the non-compliant companies using a combination of nudges based on insights taken from behavioural science. The nudging techniques adopted were as follows:



- Creating a **higher perceived probability of sanctions by mentioning former sanctions from ACM regarding similar non-compliant behaviour**– an actual change in sanctions would only be used if necessary
- **Informing** firms on the desired behaviour through emails, meetings and their trade organisation
- Using **social influence** by targeting the three biggest suppliers first – it was hypothesised that, once these firms complied, it would be easier to change the behaviour of the smaller non-compliant firms that had a tendency to copy the behaviour of the three larger ones.

## Results and impact

ACM invited the three biggest suppliers separately for a formal meeting. This meeting was enough to achieve the desired behaviour amongst the originally non-compliant energy suppliers. The next step was to involve the branch organisation in our communication strategy and have them organise an information meeting for all energy suppliers (at the retail level). Together with the branch organisation, ACM presented an exact description of the behaviour that is required to comply with the law. ACM gave the suppliers a deadline on which they should comply. We informed them that we would use formal instruments (sanctions) if they did not comply after the deadline. Social influence was used by involving the branch organisation and the three biggest energy suppliers to endorse our message. Our actions resulted in compliant behaviour among all 50 energy suppliers. With minimal use of formal instruments and in a short period of a few months, our intervention was successful in eliciting behaviour change within the sector.

## Institution

The Netherlands Authority for Consumers and Markets is the Dutch competition and market regulator. It works to protect consumers and promote fair competition between businesses. ACM has been actively using behavioural insights in order to achieve more effective market oversight.

The Authority is particularly interested in using behavioural insights to make consumers more aware and active, to increase compliance amongst businesses, and to obtain information from regulated companies, especially in the energy, telecom and postal sectors.

ACM has a Behavioural Insights Team consisting of 10 people. It organises workshops open to all employees and information meetings for managers. In order to increase the organisational knowledge of behavioural insights, ACM also participates in international conferences and networks with universities and other regulators and government bodies that apply behavioural science.

Although there was some initial scepticism, questions and concerns about ethics across all layers of the organisation regarding the use of behavioural insights by ACM, as the use of behavioural insights became increasingly visible, this has decreased over time.

## Energy efficiency project

<b>Country</b>	South Africa
<b>Sector</b>	Energy
<b>Institution</b>	Western Cape Government
<b>Start of intervention</b>	July 2015
<b>End of intervention</b>	4 October 2016
<b>Objective</b>	To test behavioural responses to four different styles of email prompts aimed at encouraging energy efficient practices
<b>Method</b>	Randomised controlled trial using behavioural insights to inform the design of the messages being sent to occupants of an office building
<b>Application</b>	Invest in energy efficient infrastructure projects that incorporate behavioural insights

### Problem

In an effort to promote environmental sustainability and respond to climate change, the Western Cape Government (WCG) launched the “Too Wise to Waste” programme. A key part of this programme was an intervention aimed at reducing energy use inside government buildings. It was discovered that the WCG’s average energy consumption was nearly 1.5 times that of the industry standard, and, with rising energy costs, this made a strong case finding a cost-effective and sustainable solution.

As part of a partnership established in 2012 to study the application of behavioural insights to four different policy areas, the WCG worked with ideas42 and the University of Cape Town to diagnose and find solutions to promote energy efficient behaviour. Fieldwork and behavioural mapping carried out jointly by the partner organisations found that the following six behavioural bottlenecks impede energy efficient behaviour:

1. **Diffused Responsibility:** Employees are often unsure whose responsibility it is to turn appliances and lights off at the end of the day
2. **Moral Justification:** Employees consider public service to be their primary contribution to the environment, rather than reducing personal consumption
3. **Unit Confusion:** It is unclear to employees how small individual behaviours translate into and affect energy efficiency
4. **Limited Attention:** Employees sometimes simply forget to turn off devices
5. **Identity:** While at work employees do not think about translating their energy efficient behaviours at home to the office
6. **Social Norms:** Employees do not know how much energy their colleagues use and therefore have no reference point for how energy efficient they are.

Taking on board these insights, ideas42 and UCT designed an intervention to test a response to these bottlenecks in an effort to find a sustainable solution to promote the efficient use of energy.

## Intervention

The intervention devised by ideas42 and UCT tested the effects of different isolated email messages that incorporate the following intervention components, in increasing order of “behavioural” content:

- **Providing information:** Giving easy-to-understand information regarding energy use, which employees can easily translate into action
- **Reminders:** Targeted e-mail reminders, sent out to coincide with important decisions (for example, first thing in the morning, and before the end of the work day). Additionally, reminders to turn devices on in the morning will avert potential tensions, such as co-workers complaining about a lack of hot water in the morning
- **Social Competition:** A programme that compares employees’ energy use with other floors, in order to pique interest and push behaviours
- **Assigning Responsibility:** Assigning employees with responsibility for energy use. For example, one employee may be randomly singled out on a daily basis as the “energy champion” for the entire floor. Alternatively, one employee in each floor could be given a certain task (e.g. “turn off lights at the end of the day”, “turn off the water heater”, “unplug the printer”). Finally, individuals who are the last to leave could be identified if they fail to turn off devices. This could also be paired with personalisation to feed social competition.

To test the above interventions, the team conducted a randomised controlled trial of a 24-floor government office building in Cape Town. On each floor, two energy meters were installed that provided half-hourly energy consumption data for each floor. Data was collected for nearly two years while correcting for problems such as anomalies in meter readings, meter breakdowns and tracking of floor inventories.

Baseline data was collected for the first four months of the intervention in order to calculate average per capita consumption for each floor. Based on this data, floors were then randomly assigned into one control and two treatment groups. Floors 8, 9 and 24 were excluded due to ongoing renovations at the time.

The intervention was tested in two phases: in phase I, which lasted three months, both treatment groups received the same tips via email, while the control group received no emails during this phase. The email tips were as follows:

- *General Tips:* First Monday of the month (1X per month)
- *Reminders to turn off light:* Every Friday (4X per month)
- *Kitchen Tips:* Every 3rd Wednesday of the month (1X per month).

In phase II, which lasted 6 months, each treatment group received different interventions. Treatment group one received only emails about the inter-floor competition, while treatment group two received emails about both the inter-floor

competition and emails nominating a single person on that floor as an “energy saving advocate”.

In total, 991 office workers took part in this experiment, though this varied according to natural employee movements.

## Results and impact

Phase I results indicated that the average reduction in energy use was 0.0594 kWh/30 minutes, though this result was not statistically significant. It was discovered during this phase that a cap on all “Too Wise to Waste” emails meant that only some messages reached floor occupants. However, large effects were not expected from the information and tips treatment. Nevertheless, this means that the effects that may have been seen were likely further attenuated by these intervention difficulties.

Similarly, phase II faced several crucial implementation problems. Initial issues with emails during the first two months meant that only a monthly (as opposed to weekly) inter-floor competition feedback email on energy consumption was sent for a one-month period. Since the intervention ended only six weeks prior to the publishing of this case study, initial data on phase two reflects a four-month period (June to September 2016 – one month after the aforementioned month with implementation issues, and one month before the end of the intervention).

Overall, the data suggests that:

- Information and tips led to a 2% reduction in energy use (statistically insignificant)
- Inter-floor competition led to a 7% reduction in energy use (statistically insignificant)
- Inter-floor competition plus advocates led to a 14% reduction in energy use (statistically significant)

With phase II ending in October 2016, researchers are expected to be able to add one more month worth of data to the existing analysis, which will further buttress their understanding of these results.

The researchers also noted that these results are much better than anticipated, especially considering that these reductions are not incentivised by monetary savings for the floor occupants in the same way that it would be for residential consumers.

Scaling this intervention to other WCG buildings would require an infrastructure investment to install energy meters on every floor. Taking the statistically significant intervention of having inter-floor competition plus advocates, the researchers find that the 13.5% savings currently being achieved through the intervention would be sufficient to pay back the total costs of the project within five years.

## Institution

The Western Cape Government works in co-operation with national government to create laws for and provide services to the people of the Western Cape. The WCG consists of 13 departments that are responsible for implementing laws and providing services, including on health, environment, economic development, social and human

development. The application of behavioural insights has been spearheaded by the Policy and Strategy Directorate within the Department of the Premier.

Ideas42 is a non-profit design and consulting firm that uses insights from behavioural sciences to design scalable solutions to some of society's most difficult problems. Initially formed at Harvard in 2008, ideas42 brings together professionals from different backgrounds and disciplines to work on projects worldwide to solve problems in health, education, criminal justice, international development, and government efficiency.

The Research Unit in Behavioural Economics and Neuroeconomics (RUBEN), based at the University of Cape Town, is an interdisciplinary group of researchers who use economic experiments, often together with fMRI imaging techniques, to examine the role that social, cognitive and emotional factors play in economic decision-making. RUBEN is currently the only centre for experimental research in economics on the African continent, providing training, research leadership and technical resources for the benefit of researchers throughout the continent.

## An electricity market in transition

<b>Country</b>	Sweden
<b>Sector</b>	Energy policy
<b>Institution</b>	Energy Markets Inspectorate (EMI)
<b>Start of intervention</b>	2014
<b>End of intervention</b>	2014
<b>Objective</b>	Changing energy consumption patterns amongst the Swedish population
<b>Method</b>	Choice experiment – stated preference approach
<b>Application</b>	Better understanding consumer behaviour on the Swedish electricity market

### Problem

The Swedish Energy Markets Inspectorate (EMI) supervises the electricity, natural gas and district heating markets in Sweden. Its aim is to improve the functioning and efficiency of these markets.

In order to do so, EMI has carried out consumer-focused behavioural research to understand energy consumption patterns amongst the Swedish population. Its aim was to explore the potential for demand-side flexibility amongst consumers of electricity to improve energy efficiency.

EMI wanted to study the possibilities and incentives for changing current electricity consumption patterns, asking what is required to make individual consumers to systematically alter their patterns of consumption in alliance with the current availability of power signalled in the real-time market price on electricity.

### Intervention

In conjunction with the Centre for Environmental and Resource Economics at Umeå University, EMI designed a “choice experiment” to test consumers’ responsiveness to changing their consumption patterns when offered monetary compensation.

The approach taken in the quantitative analysis was a stated preference approach, based on the assumption that people choose the most preferred option when faced with a number of hypothetical alternatives. A survey was sent to 900 consumers, chosen on the basis of age, gender and geographical location. The sample was selected to be representative of the Swedish population. The questions and response options in the survey were randomly assigned to the responder, and were designed to give information about consumer behaviour, and their demand for compensation to be willing to adjust their electricity consumption.

## Results and impact

Three main conclusions were drawn from analysis of the survey responses:

1. Economic incentives for individual households to reschedule their electricity consumption over the course of the day are small
2. The compensation an average household would need in order to systematically reschedule its electricity use is considerably higher than today's incentives
3. The “price” of demand flexibility depends on when, how and what household is in question.

Demand response in terms of changing electricity consumption patterns through means of incentive was therefore found to be varied across the Swedish population.

## Institution

The Swedish Energy Markets Inspectorate (EMI) is the authority responsible for regulating the electricity, natural gas and district heating markets in Sweden.

Behavioural insights are not yet being institutionally applied in EMI, though it is supported as part of the organisation's analytical “toolbox”. The research described in the case study above was funded by the National Research Agenda (NRA) in Sweden specifically because EMI felt it needed more information in the area of consumer behaviour in energy usage, in particular regarding price sensitivity. It aims to gain further knowledge on behavioural insights in its work related to consumer interests and market functioning and through its participation in the OECD Network of Economic Regulators (NER).

## Smart meters

Country	United Kingdom
Sector	Energy
Institution	British Office of Gas and Electricity Markets (OFGEM)
Start of intervention	2007
End of intervention	2010
Objective	To study the applications of behavioural insights to the roll-out of smart meters
Method	Multiple experimental trials conducted by four energy utility companies, involving over 61 000 households
Application	Results were used to inform the Government's roll-out of smart metres

### Problem

“When it comes to energy consumption, it can be particularly complex for consumers to associate consumption patterns to the use of specific appliances or energy-powered services” (OECD, 2016, para 45). “With conventional energy meters, consumption information is conveyed to consumers with a delay rather than in real time. Infrequent and limited feedback provision prevents users from having a clear picture of the amount of energy required to power a given appliance, as well as of the cost of such an energy service. This issue ultimately leads consumers to optimise their energy consumption given incomplete information” (OECD, 2016, para 45). As a result, **status quo bias**, **attitude-behaviour gaps** and **framing effects** can all affect energy consumption choices (OECD, 2016).

Between 2007 and 2011, the British Office of Gas and Electricity Markets (OFGEM) conducted a project to illustrate the potential of behavioural insights applications to encourage energy conservation. Under the UK Government initiative to roll-out smart meters, the OFGEM-led Energy Demand Research Project (EDRP) was created to test consumers’ responses to different forms of information about their energy use.

### Intervention

“The trials involved over 61 000 households and were delivered by four different energy utilities (AECOM, 2011). The interventions evaluated, individually or in combination, were” (OECD, 2016, para 47):

- Energy efficiency **advice**
- Historic energy consumption **information** (such as comparison of energy consumption with earlier periods)
- **Benchmarking** of the customer’s consumption against the consumption of comparable households
- Customer engagement using **targets** (commitment to reduce consumption)



- Smart electricity and gas meters
- **Real-time display (RTD) devices** that show energy use (including audible usage reduction alarms)
- Control of heating and hot water integrated with RTDs
- **Financial incentives** (including variable tariffs) to either reduce consumption or shift energy use from periods of peak demand to periods of lower demand
- Other **digital media** for delivering information (web, TV) (AECOM, 2011).

## Results and impact

“The most successful intervention in reducing energy consumption was found to be the deployment of smart meters coupled with the installation of real-time information displays. In fact, with two exceptions (real-time displays and benchmarking against comparable households’ consumption – both leading to energy savings of about 1%), interventions not including the use of smart meters entailed no significant energy savings” (OECD, 2016, para 48).

“One of the reasons why smart meters may have delivered important energy savings in this context is that they provide actual feedback on historic consumption, thus enabling consumer learning in the longer run. Furthermore, precise information from smart meters allows energy utilities to bill consumers on the basis of actual consumption rather than estimates” (OECD, 2016, para 49).

“The project also showed that coupling interventions leads to larger impacts. This is important, even though separately testing individual behavioural insights applications allows researchers to determine their specific impact. For instance, complementing a smart meter with a real-time display is important, and yields energy savings that are 2-4% higher than in the absence of the real-time display. The positive impact related to bundling smart meters and real-time displays may be because RTDs make energy consumption more **salient**, **frequent** and **accurate** than meters alone” (OECD, 2016, para 50).

## Institution

OFGEM is an independent, non-ministerial government department who serves as a regulator in the gas and electricity sector. Their principle objective is to protect the interests of existing and future electricity and gas consumers through promoting value for money, promoting security of supply and sustainability, the supervision and development of markets and competition, and regulating and delivering government schemes.

*Source:* OECD (2016), “Behavioural Insights for Environmentally Relevant Policies: Review of Experiences from OECD Countries and Beyond”, OECD; AECOM (2011), “Energy Demand Research Project: Final Analysis”, St Albans, <https://www.ofgem.gov.uk/ofgem-publications/59105/energy-demand-research-project-final-analysis.pdf> (accessed 12 January 2017).



## Chapter 7

### Behavioural insights case studies: Environment

*This chapter provides a series of case studies detailing how behavioural insights have been applied in OECD member and partner countries as a tool for promoting sustainable behaviour that benefits the environment. Case studies presented utilise a breadth of experimental methods, ranging from resource-intensive randomised controlled trials to relatively less resource-intensive literature reviews. The open and transparent sharing of what works, and what does not, is vital to ensuring that good quality research and findings are shared widely.*

## Testing social norms and feedback provisions for water savings

Country	Costa Rica
Sector	Environment / water
Institution	World Bank's Governance Global Practice Group (GCP) and the Latin America and Caribbean Unit (LAC, then Central America Countries Unit), and ideas42
Start of intervention	July 2014
End of intervention	July 2014
Objective	To test the effects of three behaviourally-informed interventions to foster water savings
Method	Randomised controlled trial involving 5 626 households in Belén, Costa Rica, who received one of three behaviourally-informed treatments involving neighbourhood and city comparisons, and plan-making
Application	To show how the application of behaviourally-informed policies can be a useful supplement to price- and persuasion-based tools to effectively curb water use

### Problem

Global use of water has increased six-fold over the course of the twentieth century. Spurred on by population growth, increasing urbanisation and climate change, scarcity and access to fresh water is considered a critical issue facing policy makers. The United Nations estimates that “by 2025 over two-thirds of the world’s population will reside in regions considered water stressed” (Datta et al., 2015: 2).

Even water-rich regions like Latin America are not immune to these demographic and economic pressures. Latin America is home to nearly 31% of the world’s freshwater and decades of water rationing have resulted in 94% of Latin Americans having improved access to drinking water. However, the above-mentioned pressures will require a policy response, especially in the urban context where “household water use constitutes the bulk of water consumption [and] reducing the amount of water households consume thus emerges as a key priority for policy makers” (Datta et al., 2015: 2).

Historically, strategies to promote water conservation have focused on “**pecuniary approaches** involving price or tax increases, as well as **information or communications campaigns** intended to foster awareness of water scarcity and encourage water conservation” (Datta et al., 2015: 2). Recent advances in applied behavioural economics suggest that simple and inexpensive **non-pecuniary behavioural interventions** or “nudges” could serve as a useful supplement to these traditional approaches.

As a result, the World Bank’s Governance Global Practice Group and the Central America Countries Unit, and ideas42 conducted a randomised controlled trial in Belén, Costa Rica, to test different behavioural interventions to foster water savings.

### Intervention

The experiment tested three behavioural interventions to reduce water consumption in Belén. First, they used “two **peer comparisons**, comparing a household’s water usage to

their “peers”– defined in one case as the average household in their local neighbourhood (one of six neighbourhoods in Belén) and in the other case as the average household in their city. The third intervention made **relative consumption salient** and used a **planning prompt** ... to help people set personal goals and create concrete plans to reduce their water consumption” (Datta et al., 2015: 8).

Since researched faced a dual problem of both increasing salience regarding current consumption levels and the lack of a suitable benchmark to evaluate household consumption, the researchers designed stickers that would “give people feedback about their water consumption relative to an appropriate reference point” (Datta et al., 2015: 11). This was used to form the two peer comparison treatments, which are as follows:

1. **Neighbourhood Comparison:** a brightly-coloured sticker on the water bill provided people with direct feedback on their own water consumption in comparison to that of the average household in their neighbourhood. Households above mean consumption in the neighbourhood in July 2014 received a “frowny face” sticker and a message alerting them to the fact that their water consumption exceeded the neighbourhood average. Those below the mean received a “smiley face” sticker and a congratulatory message
4. **City Comparison:** Was identical to the Neighbourhood Comparison treatment, except that the reference point was the average consumption in Belén.

The third intervention (“Plan Making”) utilised literature on goal-setting and prompting, since the absence of a clear plan for water saving and lack of information about how to do so were considered part of the problem. This treatment group received a postcard with their July 2014 bill that prompted them to “enter their water consumption (making it **salient**) with that of the average Belén household in the same month (providing a **benchmark**), which was printed on [the postcard]” (Datta et al., 2015: 13).

Furthermore, the postcard asked participants to establish personal goals for water use reduction and check off one or more of six tips for ways to reduce water consumption (for example, limiting use of water while gardening, or turning the tap off while brushing teeth). The goal was to “supplement making relative consumption salient with the **formation of clear intentions** about water conservation and plans to accomplish these goals” (Datta et al., 2015: 13).

The sample was drawn from a list of active residential water consumers, excluding commercial and residential condominium associations, in Belén in April 2014. Households were stratified by postal route<sup>1</sup> in addition to neighbourhood and average monthly consumption in the 12 months prior to June 2014, and randomised into three treatment groups and a control group. In total, 5 629 households were included in the experiment and were randomised into one of the three treatment groups (n = 1 399 households per treatment) and the control group (n = 1 429), who received no additional information on their utility bill.

1. Not all households receive their bills at the same time; however, bills are generated according to a schedule of “postal routes”, with each household belonging to one of 25 routes.

The intervention was implemented for the July 2014 billing cycle in Belén, and results were compared to the average billed water consumption in August 2014 and September 2014.

## Results and impact

The study found that the “average water consumption in Treatment households declined by more than in Control households for each of the three Treatments, although the difference-in-differences is only significant for the Neighbourhood Norms and Plan-Making interventions” (Datta et al., 2015: 16). In general, they also saw that “both control and treatment households’ average monthly water consumption in August-September 2014 was less than their average monthly water consumption in the corresponding season of the previous year. However, the decline in consumption is much larger for households in the Treatment group” (Datta et al., 2015: 16).

For the two peer comparison (Neighbourhood and City comparisons) treatment groups, the authors found that “Neighbourhood comparison reduces water use by between 3.5% and 5.6% of control group consumption, but City comparison has no significant effect on water consumption” (Datta et al., 2015: 16). In addition, the results showed that Plan-Making reduces water use by between 3.4% and 5.5%, compared to the water consumption of the control group.

Moreover, the study found that Plan-Making appears to be “most effective for low-consumption households, and Neighbourhood comparison intervention may be most effective for high-consumption households” (Datta et al., 2015: 17).

The authors also noted that the average 4 to 5% reduction found across all estimations for the “Neighbourhood Comparison” and the “Plan-Making” treatments can be used for a rough cost-benefit analysis of one the treatments being expended to all the individually-metered households in the municipality. Based on the monthly average water consumption and the water rates at the time, their results suggest that the monthly water savings (from the household perspective) in monetary terms could be estimated from CRC 1.4 million (USD 2 600) to CRC 2.8 million (USD 5 200).

Adding in the additional costs of implementing the treatments (equal to the costs of printing the stickers or postcards, approximately USD 400), the experiment would produce a benefit/cost ratio varying from 6.5 to 13 times. The researchers note that this justifies its expansion to the entire municipality.

In terms of water conserved, their results indicate that “on average, in Belén, approximately 6 720 cubic meters of water could be preserved each month. This amount is equivalent to 87 300 baths, 94 080 washing machine loads, 188 000 showers and 222 000 dishwasher loads. Moreover, this decrease in water consumption can forestall the advent of substantial water shortages in Belén’s near future” (Datta et al., 2015: 17).

## Institution

The World Bank Governance Global Practice (GCP) group supports client countries to help them build capable, efficient, open, inclusive, and accountable institutions. This is critical for countries to underpin sustainable growth and is at the heart of the World Bank’s twin goals of ending extreme poverty and boosting shared prosperity. Countries with strong institutions prosper by creating an environment that facilitates private sector growth, reduces poverty, delivers valuable services and earns the confidence of their

citizens — a relationship of trust that is created when people can participate in government decision-making and know their voices are heard.

Drawing on the World Bank Group’s convening power and multidisciplinary expertise, the GGP provides financing, intellectual leadership and a reservoir of global experience to help countries develop practical reforms to address these complex governance challenges.

The World Bank’s Latin America and Caribbean Unit (the Central America Countries Unit in 2014) focuses on laying the groundwork for economic recovery, improving infrastructure, investing in human capital and protecting the poor in the region. This includes projects on shared prosperity, spurring economic growth, building sustainable infrastructure, investing in the poor and vulnerable, building resilience and responding to shocks, and transparency and accountability.

Ideas42 is a non-profit design and consulting firm that uses insights from behavioural sciences to design scalable solutions to some of society’s most difficult problems. Initially formed at Harvard in 2008, ideas42 brings together professionals from different backgrounds and disciplines to work on projects worldwide to solve problems in health, education, criminal justice, international development, and government efficiency.

*Source:* OECD (2016), “Behavioural Insights for Environmentally Relevant Policies: Review of Experiences from OECD Countries and Beyond”, OECD, Paris; Miranda, J. et al. (2015), “A Behavioural Approach to Water Conservation: Evidence from Costa Rica”, *Policy Research working paper No. WPS 7283. Impact Evaluation series*, World Bank Group. Washington, D.C., <http://documents.worldbank.org/curated/en/809801468001190306/A-behavioral-approach-to-water-conservation-evidence-from-Costa-Rica> (accessed 12 January 2017).

## From replacement to repair: changing default options to decrease electronic waste

Country	Denmark
Sector	Environment / Electronic Waste
Institution	Nordic Co-operation / Nordic Council
Start of intervention	
End of intervention	2016 – Final report
Objective	To discover demand-side measures that promote the sustainable consumption of electronic goods
Method	Survey and two choice experiments that tested the effects of active display and decoy options on the choice architecture of 19-28 year olds buying new phones
Application	To inform the use of nudges in regards to strategic discussions on sustainability

### Problem

“As consumption of electronics increases, so does the amount of electronic waste requiring disposal. Correct disposal and recycling of the materials used in electronic goods is particularly important for minimising the environmental and health impacts associated with their extraction and disposal” (OECD, 2016, para 136).

To offset this trend of increased consumption of electronics, most policy responses rely on producer responsibility, which places responsibility on the producer to deal with the waste generated by the sale. The theoretical advantage of this system is that the producer is “encouraged to minimise the collection and recycling costs in the production phase” (Stefansdotter et al., 2015: 85). However, since waste collection is a collective responsibility, “individual companies’ efforts to minimise the use of materials gives small effect on the total; the gains benefit all participants in the system and not the investing company” (Stefansdotter et al., 2015: 85).

This study by the Nordic Council argues that supply side policies need to be complemented by measures targeting the demand side (consumption) to enable individuals to make more sustainable choices. Such measures would leverage upon behavioural insights, and “induce consumers to buy fewer electronic goods, more environmentally friendly or long-lived electronic goods, use products they own longer, and increase the re-use as well as recycling of electronics” (Stefansdotter et al., 2015: 85).

This report focuses on the possibility of using **nudging**, or changing the **choice architecture**, to increase sustainable consumption of electronics.

### Intervention

“The study recognises that consumption behaviour differs according to the type of electronic good concerned (be it a mobile phone or a white good appliance), to the



stage of the consumption process and of the product lifecycle (purchase, re-use or recycle decision). Furthermore, consumers belonging to different demographic groups may well have heterogeneous preferences when it comes to electronics. Considering the heterogeneity at play in this sector, the authors have chosen to focus on the consumption of mobile phones in the age-group 19-28 years old in the Nordic Countries”. (OECD, 2016, para 137)

“The study included two phases. In the first phase, a sample of young consumers was surveyed in a Danish electronics shop to identify unintended behaviours or behavioural obstacles preventing sustainable consumption. In the second phase, two choice experiments were carried out in order to test the impact of different BI applications on mobile phone purchase decisions”. (OECD, 2016, para 138)

“The first experiment simulated the situation of having a broken mobile phone under two scenarios. In the first scenario, consumers had to choose between buying a new phone or repairing the broken one. In an alternative scenario, consumers had to choose between buying a second-hand phone or buying a new one in an alternative scenario”. (OECD, 2016, para 139)

The nudge investigated is “**active display**” of two alternative options to buying a new phone: to repair an old one or to buy a used phone. This experiment aimed at understanding if young consumers would be interested in repairs or second-hand possibilities, which are not automatically offered by electronics shops.

“The second experiment aimed at increasing the percentage of young people who choose to rent their mobile as an alternative to buying it, by including a third, clearly undesirable option (e.g. a more expensive mobile leasing scheme)” (OECD, 2016, para 141).

Here, the researchers are seeking to nudge for increased leasing through the use of a **decoy**. A variation of this choice experiment explicitly stated that the mobile phone under consideration was “green”, meaning its components were sourced respecting certain sustainability criteria.

“The rationale for the decoy effect is that it can be difficult to choose between two options where none is objectively better than the other one. The choice is affected by introducing a third option that is objectively worse than one of the other two choices. It is for example possible to introduce a leased phone in a situation of a choice, which has less favourable terms than another leased phone in order to nudge towards the first phone”. (Stefansdotter et al., 2015: 87)

## Results and impact

Results from the survey found that, for example, a “relatively many young people chose to buy a new phone when their old one is broken, without investigating whether it would be possible to repair the old one” (Stefansdotter et al., 2015: 87). They also found that young people tend to return back to the store they previously purchased their phone when buying a new phone. The researcher further found that young people do have a level of awareness about the environmental costs of new phones and are willing to pay or lease “green” mobile phones.

The experiments show that young people seem to have a preference for sustainable behaviour. Results from the first experiment show that, in the first scenario, 87% of consumers would opt for repairs if that option was offered in store. This is 20 percentage

points more than in the baseline scenario where only new phones would be proposed. In the second scenario, 28.9% of consumers would opt for the second-hand mobile phone, this being 7 times more than in the baseline scenario. All these results were statistically significant.

Results from the second experiment show that 62% of consumers choose to lease their phone, as opposed to only 38% in the baseline scenario. However, presenting a decoy “green phone” did not yield any statistically significant result.

“These results signal that young consumers are open to considering sustainable alternatives to the purchase of new mobile phones (e.g. repairing old phones, buying second-hand devices or leasing a phone). However, for the time being these options are scarce in the mobile phone market, hindering the uptake of sustainable behaviours” (OECD, 2016, para 142). Retailers of mobile phones generally do not offer repairs, and only to a limited extent used phones. It is therefore not in their interest to highlight these options. Rather the opposite, since emphasising options outside of the company would lead to reduced sales in the store. Therefore, producers have incentives to sell more phones to increase profits rather than invest in sustainable options.

In addition, subscriptions and planned obsolescence, “which render mobile phones non-functional after a certain number of upgrades of software” (Stefansdotter et al., 2015, 89), create structural barriers to promoting sustainable options. Last, “rapid technological development also make phones outdated before their actual lifetime is over” (Stefansdotter et al., 2015, 87).

The researchers also make the following three policy recommendations to the Nordic Council of Ministers:

1. “Governments should include nudging in the strategic discussions on sustainability;
2. Implementers of policy should use nudging in the situations and in the manner identified as relevant for achieving the sustainability strategy decided by government; and,
3. Evaluate the effect of nudges and communicate with executors on how measures should be designed with evaluation in mind” (Stefansdotter et al., 2015: 90).

## Institution

The Nordic Co-operation, one of the most extensive forms of regional co-operation anywhere in the world, involves Denmark, Finland, Iceland, Norway and Sweden as well as the Faroe Islands, Greenland and the Åland Islands. Nordic co-operation promotes Nordic and regional interests and values. Shared Nordic values make the Region one of the most innovative and competitive in the world.

The Nordic Council of Ministers is the forum for inter-governmental co-operation. The work is overseen by the ministers for Nordic co-operation and elected members of the Nordic Council. The prime ministers maintain a dialogue with these parliamentarians about ways in which the Nordic countries can benefit from synergies.

The Nordic Council is the official inter-parliamentary body in the Nordic Region. Formed in 1952, the Council has 87 elected members from member states.

*Source:* OECD (2016), “Behavioural Insights for Environmentally Relevant Policies: Review of Experiences from OECD Countries and Beyond”, OECD, Paris; Stefansdotter, A. et al. (2015), “Nudging för hållbar konsumtion av elektronikprodukter” [Nudging the sustainable consumption of electronic goods. Executive summary in English], <https://www.copenhageneconomics.com/dyn/resources/Publication/publicationPDF/6/346/1458659704/fulltext01.pdf> (accessed 12 January 2017).

## Framing energy efficiency information to encourage uptake of energy efficient electric appliances

<b>Country</b>	10 EU countries (France, Germany, Greece, Ireland, Italy, the Netherlands, Poland, Portugal, Romania, and Sweden)
<b>Sector</b>	Environment
<b>Institution</b>	European Commission Consumers, Health, Agriculture and Food Executive Agency (CHAFEA, formerly EAHC, at the time of the study)
<b>Start of intervention</b>	2013
<b>End of intervention</b>	2013
<b>Objective</b>	To discover how the provision of online information on energy performance of household appliances can be improved to promote energy efficient product choices
<b>Method</b>	Online experiment and survey with 11 764 consumers in 10 countries, applying four different label designs
<b>Application</b>	To inform policies regarding the display of energy efficiency information in online retail locations

### Problem

“In the context of the impact assessment and revision of its Energy Efficiency directive, the European Commission ordered a cross-country study to assess how various label designs affect consumer understanding and purchase decisions” (London Economics and IPSOS, 2014; OECD, 2016, para 74). The Commission noticed that low purchases of energy-efficient appliances underline a discrepancy between the stated wish to reduce power consumption expenditures and consumer behaviour at the moment of purchase, where energy efficiency is only one among various product criteria under scrutiny (OECD, 2016).

As a result, the European Commission Consumers, Health, Agriculture and Food Executive Agency (CHAFEA, EAHC at the time of this study) collaborated with ECORYS, Tilburg University and GfK to examine how “online information on energy efficiency performance of household appliances can be improved to promote energy-efficient product choices” (ECORYS et al., 2014: 7).

More specifically, CHAFEA wanted to discover:

1. “How can the current full energy efficiency label be simplified and adapted to contexts with limited information space while retaining its effectiveness?” (OECD, 2016: 50)
2. “When should energy efficiency information be first provided in online outlets: during consideration set formation or during final choice?” (OECD, 2016: 50)

### Intervention

To test the effects of different labels promoting energy-efficient product choices, researchers conducted an online experiment and survey with 11 764 consumers in 10 EU

countries (France, Germany, Greece, Ireland, Italy, the Netherlands, Poland, Portugal, Romania, and Sweden).

In the first step, respondents went through an online experiment that simulated a shopping trip in an online retail environment selling four different appliances (refrigerators, TVs, washing machines and light bulbs). They were alternatively asked to form a consideration set out of several product alternatives (“consideration experiment”), or to make a final product decision out of a restricted set of product alternatives (“choice experiment”).

In the second step, respondents answered a questionnaire related to their background (socio-demographics, purchasing behaviour) and trying to address potential explanations for variations in responses to energy efficiency information. The experiment tested hypotheses related both to the content of labels and to the availability and display of information within the labels.

Regarding the labels’ content, the experiment aimed at testing the following behaviourally-informed hypotheses comparing various label designs:

1. **Meaning effect:** adding (textual or visual) meaning to the reduced (class-only) label improves its effectiveness
2. **Frame of reference effect:** adding a frame of reference to the reduced (class-only) label improves its effectiveness, particularly in the final choice stage.

Four reduced label variants were then created and compared against the control groups:

1. Class-only label: Showing a letter grade representing the energy efficiency of the product (i.e. A+++ to D)
2. Meaning label: Label 1, plus meaning added through the text “energy” on the label
3. Frame of Reference (FoR): Label 1, plus meaning added through a visual depiction (pictogram), and
4. Meaning plus FoR: A visual depiction (pictogram) of the environmental efficiency using an increasing scale of green leaves (1 being lowest; 5 being highest).

Regarding the availability and display of information, the experiment aimed at testing the following behaviourally-informed hypotheses:

1. *“Information effect:* consumers are more likely to choose energy-efficient products if energy efficiency information is available compared to when it is not
2. *Label effect:* consumers are more likely to choose energy efficient products if energy information stands out from other product information (through a label) compared to when it does not
3. *Reduced label effect:* consumers are more likely to choose energy efficient products if energy efficiency information is displayed online in reduced as compared to full label form
4. *Decision-stage effect:* energy efficiency information has a stronger impact on choices in the consideration set formation stage than in the final choice stage

5. *Order effect*: consumers are more likely to choose energy efficient products if these are presented at the top of the web page compared to at the bottom of the web page, particularly in the consideration set formation stage”. (ECORYS et al., 2014: 8)

Participants were randomly split into three control groups and two treatment groups. The three control groups received either: 1. No energy information, 2. Non-prominent, plain-text energy efficiency information and 3. Full energy label. The treatment groups received either the consideration or choice sub-experiment.

## Results and impact

“All proposed labels were found to lead to a higher consideration of more energy efficient products relatively to the choices made within the control groups, which were exposed to no or simplified energy efficiency information” (OECD, 2016, para 80).

Results were compared for two stages of consumer selection: the set formation stage, where consumers narrow down their choices to a select few, and the final choice stage, where consumer select their final choice from the set.

Results showed that the Frame of Reference label (Label 3) was the best performing, as it provided customers with the “full scale against which consumers could benchmark their potential appliance choice (e.g. an A+++ to D scale, presented visually) as opposed to labels in absolute terms (e.g. A-level appliance) or pictograms. At the set formation stage, that label led to the most efficient product being selected on average 61% of the time as opposed to 51% of the time in the control group (all appliances considered). At the final choice stage, the margin was lower: the most efficient product was selected 68% of the time, as opposed to 65% of the time for the control. Both results were statistically significant” (OECD, 2016, para 80).

Comparatively, Label 1 led to the most efficient choice selection at the set formation stage 58% of the time, and 67% for the final choice stage. Labels 2 and 4 led to the most efficient selection 56% and 55% of the time at the set formation stage, respectively, and 65% and 66% at the final choice stage, respectively. All results are statistically significant.

## Institution

The Consumers, Health, Agriculture and Food Executive Agency (formerly named EAHC at the time of this study) currently implements the EU Health Programme, the Consumer Programme, Better Training for Safer Food initiative (BTSF) and the Promotion of Agriculture Products Programme. The Agency provides a professional service in performing the tasks and activities entrusted to it by the European Commission and works closely with the DG Health and Food Safety, DG Justice and Consumers and DG Agriculture and Rural Development.

Ecorys is an international company that provides research, consultancy and management services. They specialise in economic, social and spatial development and aid to deliver real benefit to society through the work they do.

GfK is an international company that provides market and consumer information to clients. Their market research experts use GfK's long-standing data science experience to deliver global insights matched with local market intelligence from more than 100 countries.

*Source:* OECD (2016), "Behavioural Insights for Environmentally Relevant Policies: Review of Experiences from OECD Countries and Beyond", OECD, Paris; ECORYS, Tilburg University and GfK (2014), *Study on the effects on consumer behaviour of online sustainability information displays*, Brussels, doi: 10.2759/52063.

## Framing of fuel efficiency, emissions and running cost information

Country	10 EU countries (Belgium, Germany, France, Italy, Netherlands, Poland, Romania, Spain, Sweden, United Kingdom)
Sector	Environment / car choice
Institution	European Commission Directorate- General for Climate Action (DG Clima)
Start of intervention	2013
End of intervention	2013
Objective	To test the effectiveness of variants of car eco-labels and of mandatory information on fuel efficiency in promotional material
Method	Online survey and experiment with 8 000 respondents, and a laboratory experiment with 405 respondents
Application	To inform EC and Member State regulation regarding labels and promotional materials in car advertisements

### Problem

“When it comes to car purchases, consumers often show **attitude-behaviour gaps**. While being aware of the environmental impact of cars and stating that they see fuel economy as an important criterion for car choice, these attitudes do not ultimately translate into eco-friendly car purchases. This may also be due to a lack of understanding of the link between a vehicle’s fuel efficiency class and the environmental impact of its use” (OECD, 2016, para 97).

To better understand their weight on car purchase decisions, the European Commission Directorate-General for Climate Action (DG Clima) collaborated with the London School of Economics and partner consortium to assess the impact of different types of labels and promotional materials providing information on fuel efficiency, CO<sub>2</sub> emissions and running costs in 2013. This study sought to test the effects of the attitude-behaviour gap, as well as **inconsistent preferences** (self-reporting wanting fuel efficient cars, then purchasing non-fuel efficient models) and a **lack of understanding** of the link between CO<sub>2</sub> emissions and fuel efficiency (Codagnone et al., 2013: 6; OECD, 2016: 62).

### Intervention

The study built on a three-fold approach consisting of a cross-country survey and an online experiment in 10 EU member states, and a laboratory experiment in the United Kingdom.

The first task involved a review of the literature and a preliminary survey of a randomised sample of 800 people in 10 countries (Belgium, Germany, France, Italy, Netherlands, Poland, Romania, Spain, Sweden, United Kingdom), for a total 8 000 respondents. The key questions they sought to answer were:

- What parameters affect the car-purchase process?
- What is the level of consumers' awareness regarding the environmental impact of car usage?

The second task was an online experiment, which followed the survey and used the same sample of 8 000 respondents. The experiment sought to re-tested labels and tested promotional materials, focusing on testing alternative designs for environmental impact labels. The sample was randomly split into four sub-samples (split ballot technique), each viewing the same car (a VW Polo) but with one of the following four simplified labels containing different CO<sub>2</sub> emissions:

1. Relative Classification system: vehicle is rated compared to vehicles belonging to the same class
2. Absolute Classification system: vehicle is rated compared to vehicles from all classes
3. Combined Classification system: a combination of the absolute and relative rating, and
4. German classification system: a sub-variant of the relative classification.

Participants were then asked four questions about the car labels they had just seen, to examine which had an effect. The questions were:

- “How environmental friendly do you think this car is?”
- “How fuel efficient do you think this car is?”
- “How environmentally-friendly do you think this car is compared to other similar type of cars?”
- “How environmentally friendly do you think this car is compared to the car/s in your household?”

As well, both the above second task, as well as the third task involving a laboratory experiment at the LSE Behavioural Lab with 405 respondents, tested the effectiveness of labels and promotional materials. The labels tested were:

- **“Standard elements:** Elements that, though in different formats, are already contained in most of the labels and promotional materials currently in use, such as the different CO<sub>2</sub> classification systems (absolute: car rated compared to cars from all classes; relative: car rated compared to cars belonging to the same class; combined: a combination of absolute and relative rating) and their format (text only, in graphic format using either a vertical or a horizontal layout)”
- **Additional elements:** Elements that either are not included in currently used labels and promotional material or are included only in a few countries. Elements such as : Information about running costs; Information about taxation related to CO<sub>2</sub> emissions; Information about the savings lost on fuel that buying a car X implies, if compared to the most efficient car in the class” (Codagnone et al., 2013: 5).

The promotional material was:

- **“General format:** concerning the layout by which information about CO<sub>2</sub> emissions is provided



- **Additional elements:** concerning mostly the layout by which information about CO<sub>2</sub> emissions is combined with information on running costs;
- **Web link:** the presence or absence of this element”. (Codagnone et al., 2013: 5)

The effectiveness of the various interventions was measured through various indicators. First, they tracked consumer’s willingness to pay (does the information drive consumers to buy more eco-friendly cars). Second, they recorded self-reported and constructed cognitive measures of the noticeability, comprehension and recall of relevant information by asking consumers questions on car “greenness” and fuel efficiency. Their answers were used to infer how noticeable and comprehensible information was in labels and promotional material.

Both the online and laboratory experiments were designed as randomised controlled trials with participants being allocated into a treatment group (receiving the above messages) or to a control.

## Results and impact

From the survey, the researchers confirmed the interference of behavioural biases as, in regards to awareness, “Europeans are aware and not indifferent to the environmental problems caused by the pollution produced by vehicles” (Codagnone et al., 2013: 88). While 33% of those who participated in the survey stated that they will buy an electric or hybrid car as their next car, results showed that only 1.9% of participants currently possess a hybrid or electric car. Furthermore, “more than 50% of the respondents think that more than 40% of the greenhouse effect is attributable to car pollution” (Codagnone et al., 2013: 88). Last, a majority of respondents believed that they can affect the environment with their actions.

Moreover, the results from the survey confirm the attitude-action gap. The survey finds that “environmental concerns come after 10 other main attributes (price, safety, performance, etc.) in terms of importance in influencing car purchase decisions” (Codagnone et al., 2013: 88). Moreover, the majority of respondents stated that they prefer their own car to alternative modes of transportation for commuting. Last, the study also finds that consumers “first select a class of vehicles, and only when they narrow down to choosing a model they may then take into considerations eco-friendly parameters” (Codagnone et al., 2013: 88).

In addition, the survey also finds that:

- More than half of respondents are not very familiar with labels
- 40% disagree with the statement that labels are easily recognisable
- 44.5% agree that car labels are unfamiliar to them, and
- Many misunderstood environmental labels as symbolising product reliability. (Codagnone et al., 2013).

In regards to the laboratory experiment and online experiment, the researchers found that the labels generally provided non-systematic findings, meaning they could not get an unequivocal picture of what works and what does not. Although they found statistically significant effects both in the laboratory experiment and online, these were not consistent across treatments, measures, and engine types.

However, they did find some conclusive findings from labels in regards to the CO<sub>2</sub> classification systems and nudges. For the classification systems, they found, if they consider the cognitive processing of emission information, the “absolute system overall works better than others and is a recommended and conclusive choice” (Codagnone et al., 2013: 9). Furthermore, they found that nudges related to fuel economy worked better than emissions-related nudges. Specifically, they found that – across both experiments – nudges related to the information on lost savings on fuel, running costs in different formats, information on electricity consumption (electric cars only), and information on consumption in the two formats specific to hybrid cars performed fairly well (Codagnone et al., 2013). Together with the findings on promotional materials, the researchers conclude that running costs (in both per mile/km and per 5 years format) were relatively more effective among all tested.

For the promotional materials, they similarly found non-systematic but “larger number of statistically significant effects as compared to the nudges concerning the labels” (Codagnone et al., 2013: 9). As well, they found significant effects across variables. The most effective treatments were the use of graphic illustrations of CO<sub>2</sub> emissions, and the use of a larger element indicating running costs per 5 years. Oppositely, the web link has a contrasting effect and results were “not conclusive as to the overall effectiveness of this nudge” (Codagnone et al., 2013: 9).

As to the cause of these findings, the researchers hypothesise that the nudges tested “were to some extent overloaded with information and had mixed effects” (Codagnone et al., 2013: 10). Second, “promotional material visual stimuli are simpler than their label counterparts and, thus, may be easier to process and use” (Codagnone et al., 2013: 10). The researchers explain that this may be the cause of the larger number of statistically significant results for promotional materials.

Additionally, two other factors may make the promotional material more effective. First, there was more variation between the types of treatment, as well as between the types of treatment and the control group. Second, the promotional material may be more familiar to consumers than the labels, making them more trustworthy to consumers and easier to comprehend.

In conclusion, the study recommends that the Commission and Member States should “use the most effective and easiest to understand label to gradually improve comprehension and, thus, affect familiarity and trust and eventually impact label usage” (Codagnone et al., 2013: 12). Moreover, it is important that promotional material is utilised to nudge consumers towards more fuel-efficient cars. Last, the study made a number of recommendations on the design of labels.

## Institution

The Directorate-General for Climate Action (DG Clima) leads the European Commission’s efforts to fight climate change at EU and international level. Their mission is to formulate and implement climate policies and strategies; take a leading role in international negotiations on climate; implement the EU’s Emissions Trading System (EU ETS); monitor national emissions by EU member countries; and, promote low-carbon technologies & adaptation measures

*Source:* OECD (2016), “Behavioural Insights for Environmentally Relevant Policies: Review of Experiences from OECD Countries and Beyond”, OECD, Paris; Codagnone, C., F. Bogliacino and G. Veltri (2013), “Testing CO<sub>2</sub> / Car Labelling Options and Consumer Information”, London School of Economics and Partner Consortium, [https://ec.europa.eu/clima/sites/clima/files/transport/vehicles/labelling/docs/report\\_car\\_labelling\\_en.pdf](https://ec.europa.eu/clima/sites/clima/files/transport/vehicles/labelling/docs/report_car_labelling_en.pdf) (accessed 12 January 2017).

## Consumer use of sustainability information to reduce food waste

Country	Italy
Sector	Environment / Sustainability
Institution	European Commission Consumers, Health, Agriculture and Food Executive Agency (CHAFAEA)
Start of intervention	30 June 2015
End of intervention	6 July 2015
Objective	To test consumer choices in relation to food sustainability, specifically in regards to sustainable food purchases
Method	Field experiment with 303 visitors to the Milan Expo, testing the application of both sustainability behaviour activation and the effects of increased information during the visit to the Supermarket of the Future
Application	To inform future policy regarding consumer choices in relation to food sustainability

### Problem

This field study, as part of a broader behavioural study that tested consumer choices in relation to food sustainability, was carried out at the Milan Expo 2015 among Expo visitors by CentERdata, GfK, and ECORYS, on behalf of the European Commission Consumers, Health, Agriculture and Food Executive Agency (CHAFAEA). This study is part of a broader behavioural study testing consumer choices in relation to food sustainability (see case studies “Food waste and best-before / production dates” and “Framing durability and authenticity information to reduce food waste”).

At the Expo, the COOP Supermarket of the Future was set up as a large supermarket with many different product categories and Stock Keeping units. Uniquely, visitors can request more information about a product by pointing at the product and viewing the information on an interactive screen. The screens display information for seven aspects of each product:

1. Price information
2. The history of the product
3. The origin of raw materials used
4. Nutritional values
5. Allergy information
6. Environmental information and the carbon footprint, and
7. Organic and sustainability logos.

The overall aim of the study is then two-fold. The researchers sought to “investigate if and how the **information** displayed on the interactive screens is being used in consumer decision-making, and – more specifically – whether exposure to sustainability-related information in an innovative, interactive way translates into more sustainable food choices” (ECORYS, Tilburg University and GfK, 2015: 10; OECD, 2016: 70).

In general, consumers view sustainability positively. However, for “information on sustainability to actually impacting consumer behaviour requires the information to be i) should be noticed and processed, ii) accurately interpreted and understood, and iii) considered sufficiently important (relative to other product features)” (ECORYS et al., 2015: 10).

As a result, the focus of the study is to “gain deeper insight into how exposure to sustainability information affects consumers’ choices, this study surveys visitors of the Supermarket of the Future to observe to what extent they attended sustainability information in the supermarket, considered sustainability an important factor in their food choices, and whether this impacts their current and future sustainability choices” (ECORYS et al., 2015: 10).

## Intervention

The intervention tested the impacts of sustainability-related information on 303 Milan Expo visitors. The experiment was composed of three stages:

1. Sustainability pre-task: Consumers were asked to select the most sustainable product from a set of products for various non-food product categories. Consumers were also asked to judge whether a possible action enhances sustainability. The goal of the pre-task was to “investigate if sustainable actions in a non-food domain spill over to the food domain” (ECORYS et al., 2015: 10).
2. Visiting the Supermarket of the Future: whereby customers would interact with the screens providing information.
3. Post-visit questionnaire: to observe to what extent “participants attended sustainability information in the supermarket, considered sustainability an important factor in their food choices, and whether this impacts their current and future sustainability choices” (ECORYS et al., 2015: 10). This was administered either at the exit of the supermarket (treatment groups) or elsewhere at the expo (control group). Respondents were also asked if they want to donate to one of three charities, two relating to food sustainability and one not.

Participants were split into three groups – two treatment and one control – with roughly 100 in each group. The first treatment group (Group 1) experienced all three stages of the experiment. The second treatment group (Group 2) just visited the supermarket and filled in the post-visit questionnaire. The third group (Group 3) – the control group – just filled in the post-visit questionnaire in another area of the Expo.

The researchers expected that:

- “Consumers who visited the supermarket (Group 1 and 2) i) find sustainability information more important, ii) and are more likely to use this information in future food choices, iii) have higher intentions to make sustainable food choices in the future, and iv) donate more to charities related to food sustainability, compared to non-visitors (Group 3)
- Store visitors with a sustainability pre-task (Group 1) i) pay more attention to sustainability information, ii) find this information more important, iii) are more likely to use this information in future food choices, iv) have higher intentions to make sustainable food choices, and v) donate more to charities related to food

sustainability, compared to store visitors who did not make the pre-task (Group 2) (positive spill-over effect)” (ECORYS et al., 2015: 11).

## Results and impact

Overall, the study first found that the sustainability pre-task was challenging for consumers. Out of the 100 consumers who took part, only 6 performed the task well, compared to 41 who only made a few correct choices. In contrast, “all experimental groups indicated that they were relatively pro-environmental in their purchases and choices during the past year (traveling, leisure, household products, and food products) (all means > 5.12 on a 7-point scale). In addition, they consider themselves as having a very pro-environmental self-identity (mean = 5.40 on a 7-point scale)” (ECORYS et al., 2015: 11).

In regards to what store visitors pay the most attention to, the study found that price, nutritional values and origin of raw materials were more salient to consumers than sustainability information. Similarly, price and nutritional information were found to be more important than sustainability for consumers.

The researchers also found no evidence of positive spill-over effects to the food domain. Whether or not visitors participated in the pre-task did not have a difference on the attention they paid to sustainability information nor the importance of sustainability in the decision-making process. In addition, the researchers found no difference between those who went to the Supermarket of the Future, and those who did not, which indicates that the Supermarket did not increase the importance or salience of sustainability prompts.

However, the research did find that the Supermarket seemed to trigger longer-term positive impacts on the decisions of consumers in regards to food choices and sustainability. The research found that “consumers intent to put relatively more weight to sustainability information compared to the other informational attributes (price, nutritional value, original raw materials) in the future. In addition, store visitors have stronger intentions to take environmental concerns into account in future shopping than non-visitors” (ECORYS et al., 2015: 13).

Another positive effect discovered was that supermarket visitors donated more to sustainable charities than non-visitors, who donated more equally to all charities.

Therefore, the results from this experiment show that consumers incorporate sustainability into their behaviour at an abstract level, but are not as sure of how to incorporate sustainability into specific actions – such as making sustainable choices in a non-food domain. The study notes that future research should “investigate how consumers can be effectively educated to take concrete actions to behave more sustainably” (ECORYS et al., 2015: 16).

## Institution

The Consumers, Health, Agriculture and Food Executive Agency (CHAFEA) implements the EU Health Programme, the Consumer Programme, Better Training for Safer Food initiative (BTSF) and the Promotion of Agriculture Products Programme. The Agency provides a professional service in performing the tasks and activities entrusted to it by the European Commission and works closely with the DG Health and Food Safety, DG Justice and Consumers and DG Agriculture and Rural Development.

ECORYS is an international company that provides research, consultancy and management services. They specialise in economic, social and spatial development and aid to deliver real benefit to society through the work they do.

GfK is an international company that provides market and consumer information to clients. Their market research experts use GfK's long-standing data science experience to deliver global insights matched with local market intelligence from more than 100 countries.

CentERdata is a research institute located on the Tilburg University campus with the mission to answer research questions in the field of humans and society. They conduct research work on behalf of the academic community, public authorities and the private sector in the form of up-to-date opinion surveys as well as for complex policy issues, and for quantitative as well as qualitative research. They collect, analyse and disseminate reliable data as well as develop models and draw up prognoses for a better future. CentERdata moreover has ample experience in developing software tools to support (panel) research.

*Source:* OECD (2016), “Behavioural Insights for Environmentally Relevant Policies: Review of Experiences from OECD Countries and Beyond”, OECD, Paris; ECORYS, Tilburg University and GfK (2015), *Milan BExpo 2015: A behavioural study on food choices and eating habits*, Brussels, doi: 10.2838/537411.

## Food waste and best-before / production dates

Country	Italy
Sector	Environment / sustainability
Institution	European Commission Consumers, Health, Agriculture and Food Executive Agency (CHAFAEA)
Start of intervention	30 June 2015
End of intervention	6 July 2015
Objective	To test consumer choices in relation to food sustainability, specifically in regards to the misinterpretation of “use by” and “best before” dates on food labelling and its impact on food waste at a household level
Method	Lab experiment with 500 visitors to the Milan Expo 2015, testing information provision of production and best-before dates through differently framed labels
Application	To inform future policy regarding consumer choices in relation to food sustainability

### Problem

“Worldwide roughly one-third of food produced for human consumption is lost or wasted, which amounts to about 1.3 billion tons per year. In Europe, about 34% of still edible food is wasted by consumers, which amounts to around 95 kg/year per capita. To increase sustainability in the food chain, household food waste needs to be reduced” (ECORYS et al., 2015: 17). To study consumer choices in relation to food sustainability, a behavioural study was carried out at the Milan Expo 2015 among EXPO visitors, by CentERdata, GFK, and ECORYS, on behalf of the European Commission Consumers, Health, Agriculture and Food Executive Agency (CHAFAEA).

A contributing factor to food waste is the misinterpretation by consumers of the meaning of “use by” and “best before” dates. Currently, foods considered “non-perishable” (e.g. sugar, salt, rice and pasta) are except from such a label. Therefore, a solution may be to increase the number of foods considered “non-perishable”. However, to do so, more needs to be learned about the impact on consumer behaviour that such a removal of the “best before” dates would have, specifically on consumers’ perceptions of the quality and durability of products without best before dates.

Therefore, the aim of this study was to “investigate consumers’ decisions to use or dispose non-perishable long shelf-life food products they have stored in their kitchen cabinets over time, and how such behaviour may be influenced by the **framing** of dates on food labelling (best before date, production date) versus absence of a best before date on the food package” (ECORYS et al., 2015: 17). This experiment is part of a broader behavioural study testing consumer choices in relation to food sustainability (see case studies “Consumer use of sustainability information to reduce food waste” and “Framing durability and authenticity information to reduce food waste”).



## Intervention

In this experiment, 500 visitors (mostly Italian) visiting the Milan Universal Exposition were asked to indicate for two products: “i) their willingness to use/keep versus throw away a product, ii) their perceived product quality, and iii) their perceived product safety, at four different time points” (ECORYS et al., 2015: 17). Participants judged products with “either a best before date (BBD), no date, or a production date. In addition some consumers evaluated non-perishable products with a perceived short shelf-life beyond the best before date (pasta sauce and orange juice) and some with a perceived long shelf-life beyond the best before date (coffee and pasta)” (ECORYS et al., 2015: 17).

Researchers created four time points around the BBD (with half year before and after the BBD for the short shelf-life condition, and one year before and after the BBD for the long shelf-life condition). Results were assessed according to respondent’s answers according to their understanding of the best-before dates, disposal probability, perceived product safety, and perceived product quality

## Results and impact

In general, the results found that “only 47% of participants indicated correctly what the meaning of the BBD, when asked to select the correct answer out of three options” (ECORYS et al., 2015: 18). This indicates that the understanding of BBD can be improved.

In regards to the disposal probability, consumers were asked to indicate how likely they were to dispose of a product being given a best-before date, a production date or no date, together with an indication of the approximate shelf life of the product relative to these significant dates. With best-before dates, the study found that, overall, “it was difficult to tell whether no date is preferred over best before date, because this strongly depends on how long consumers typically keep long shelf-life, non-perishable products in their cupboard before consuming them” (ECORYS et al., 2015: 19).

With production dates, the study observed that for products with a “short shelf-life consumers respond in the same way as when no date is provided. For products with a long shelf-life however, a production date leads to higher disposal rates at the first moment in time as compared to no date. In sum, putting a production date is the least preferred option as compared to no date and a best before date” (ECORYS et al., 2015: 19).

For perceived product safety, before the best-before date is reached, products with a best-before date are considered more safe than similar products with no date mark or a production date. Thus, the “presence of best-before-dates on products leads to higher safety perceptions of consuming a product compared to products without a date mark or products with a production date” (ECORYS et al., 2015: 20). After the best-before date has been reached, “no date mark is preferred over providing a best-before date or production date” (ECORYS et al., 2015: 20).

Last, for perceived product quality, before the best-before date is reached, presence of this date on products is connected to higher quality perceptions relatively to products without a date mark or products with a production date. After the best-before date is reached, providing no date mark is more effective than providing both a best-before date and a production date.



As a result, two key conclusions are reached:

- “Before the BBD has been reached, it seems better to have a BBD on products (less disposal; higher perceived product quality and safety perceptions). However, in the long run (i.e. after the BBD has been reached) it is however better to not have a date mark on products. This pattern is even more existent for products with a long perceived shelf-life
- Providing production dates (PD) on products does not decrease disposal, as for products with a short perceived shelf-life the PD does not decrease disposal better than products without a date mark. And, for products with a long perceived shelf life, the addition of a production date does not decrease disposal more, compared to products with a BBD or no date mark”. (ECORYS et al., 2015: 23).

However, the researchers note that this experiment was conducted with a small sample of mainly Italians, and would be useful to replicate in other states and with larger sample sizes.

## Institution

The Consumers, Health, Agriculture and Food Executive Agency (CHAFEA) implements the EU Health Programme, the Consumer Programme, Better Training for Safer Food initiative (BTSF) and the Promotion of Agriculture Products Programme. The Agency provides a professional service in performing the tasks and activities entrusted to it by the European Commission and works closely with the DG Health and Food Safety, DG Justice and Consumers and DG Agriculture and Rural Development.

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*Source:* OECD (2016), “Behavioural Insights for Environmentally Relevant Policies: Review of Experiences from OECD Countries and Beyond”, OECD, Paris; ECORYS, Tilburg University and GfK (2015), *Milan BExpo 2015: A behavioural study on food choices and eating habits*, Brussels, doi: 10.2838/537411.

## Framing durability and authenticity information to reduce food waste

Country	Italy
Sector	Environment / Sustainability
Institution	European Commission Consumers, Health, Agriculture and Food Executive Agency (CHAFEA)
Start of intervention	30 June 2015
End of intervention	6 July 2015
Objective	To test consumer choices in relation to food sustainability, specifically in regards to uncovering the factors that can increase consumers acceptance of imperfect foods
Method	Lab experiment with 500 visitors to the Milan Expo 2015, testing the effects of persuasive messaging and framing on consumers choices to buy imperfect food
Application	To inform future policy regarding consumer choices in relation to food sustainability

### Problem

Western societies waste a lot of food. On average, between “one third and half of all produced food is not consumed by humans but thrown away, used as fertilizers, or given to animals” (ECORYS et al., 2015: 25). One driver of food waste is the distaste from consumers to accept and purchase imperfect looking produce (fruits and vegetables), even though these foods still have optimal taste and quality. Moreover, imperfect produce are not stocked by food retailers – despite meeting European Union standards for quality and aesthetics – since “food retailers are likely to keep using high aesthetic standards for the fruits and vegetables” (ECORYS et al., 2015: 25).

There are two main reasons why food retailers prefer not to stock imperfect produce. From an operational angle, the “storage and distribution of products with regular shapes and sizes is easier to handle, whereas products with irregular shapes and sizes create efficiencies in the logistic process” (ECORYS et al., 2015: 25). Second, food retailers maintain that customers prefer perfect foods and the retailers “typically sell imperfect foods about 30% lower than perfect foods” (ECORYS et al., 2015: 25). Thus, it is lower customer acceptance that drives retailers to stock higher quality produce.

This study, carried out at the Milan Expo 2015 among visitors by CentERdata, GFK, and ECORYS, on behalf of the European Commission Consumers, Health, Agriculture and Food Executive Agency (CHAFEA), sought to understand how consumer acceptance of imperfect produce could be improved. Typically, this is done by reducing the price of the imperfect produce, relative to the perfect produce. However, the result is that farmers get smaller margins simply due to aesthetic appeal and lower prices often lead to more food waste, as consumers feel more justified throwing away lower priced food.

Specifically, the researchers sought to study whether “**persuasive messages** can be used as an alternative to diminish the need for reducing price levels of imperfect fruits and vegetables” (ECORYS et al., 2015: 25). In addition, the researchers analysed “the impact of **price reductions** and **message framing** on consumers’ perceptions of the

quality and taste of imperfect foods” (ECORYS et al., 2015: 25). This experiment is part of a broader behavioural study testing consumer choices in relation to food sustainability (see case studies “Consumer use of sustainability information to reduce food waste” and “Food waste and best-before / production dates”).

## Intervention

The researchers considered **anti-food waste messages** and **authenticity messages**. For Anti-food waste messages, the researchers sought to examine the effects of extrinsic motivation on purchasing behaviour, such as “Embrace imperfection: join the fight against food waste!” (ECORYS et al., 2015: 25). While these messages provide motivation to purchase imperfect produce, they are not likely to remove the bias towards perfect foods. Oppositely, authenticity messages provide an intrinsic motivation to purchase imperfect produce – i.e. imperfect is more natural, genuine, or real – and “may even lead to higher quality and taste perceptions for imperfect compared to perfect foods” (ECORYS et al., 2015: 25).

In this experiment, 500 visitors (mostly Italian) at the Milan Universal Exposition were presented with imperfect foods that was either the same price as perfect food, reduced moderately in price by 15%, or reduced sharply in price by 30%. In addition, visitors were either presented with no persuasive message, or one of the following, thus giving the experiment a 2x3 between subjects design:

- Anti-food waste message: “Embrace imperfection: Join the fight against food waste!”
- Authenticity message: “Naturally imperfect: Apples [carrots] the way they actually look!”.

A control group was also created, which was not exposed to any awareness-raising messages.

## Results and impact

The experiment found that both the addition of promotional messages and the reduction in prices led consumers to purchase imperfect foods.

For prices, the study found that “the higher the price reduction, the more willing consumers are to buy imperfect foods:

- Same price: 74% of consumers would buy perfect foods while 26% would buy imperfect foods
- Moderate price reduction: slightly more respondents would buy imperfect foods (31%)
- Sharp price reduction: even more respondents would buy imperfect foods (39%)” (ECORYS et al., 2015: 27).

In regards to messages, the researchers found that:

- “If no message is provided 74% of consumers would buy perfect foods while 26% would buy imperfect foods

- If an authenticity message or anti-food waste message was provided, more consumers (41% and 42%) would buy imperfect foods” (ECORYS et al., 2015: 27).

Since one goal was to show how different framings could result in the need for less drastic price reductions, the researchers then examined the effects of combining price reductions and message framings. They found that:

- “If an authenticity message was provided more respondents (40%) would buy the imperfect foods with a moderate price reduction
- Providing an anti-food waste message accompanied with a moderate price reduction is even more effective with 51% of respondents willing to buy imperfect foods
- If an anti-food waste message or authenticity message was provided, more respondents (51% and 50%) would buy the imperfect foods with a sharp price reduction” (ECORYS et al., 2015: 28).

Thus, the report concludes that the “situation that most likely would work best in practice would be a moderate price reduction with a message frame” (ECORYS et al., 2015: 28). Furthermore, regarding the quality perceptions of imperfect foods and vegetables, both extrinsic (anti-food waste) and intrinsic (authenticity) message framing “leads to increased quality perceptions for imperfect foods, but that for intrinsic message framing to yield higher quality perceptions, a price reduction is not necessary (and may in fact diminish the effect)” (ECORYS et al., 2015: 30).

## Institution

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## Perception of cost savings related to the use of energy-efficient major appliances

Country	United Kingdom
Sector	Environment / energy consumption
Institution	UK Department of Energy and Climate Change (DECC, now BEIS) and the Behavioural Insights Team
Start of intervention	September 2013
End of intervention	June 2014
Objective	To test whether the way energy efficiency is presented impacts major appliance purchase choices
Method	Randomised controlled trial involving 38 John Lewis retail stores, evenly split into treatment and control groups, which tested the effects of including monetary lifetime running costs on EU appliance energy labels
Application	The findings support the idea that small, low cost changes to address information barriers and provide salient information to consumers can help to reduce energy demand. The early findings from this work have also fed into the EU Commission evaluation of the Energy Labelling Directive

### Problem

“Ownership of appliances has increased substantially in recent decades and, over time, European Union-wide (EU) standards and energy labels are making the appliances consumers buy for their homes more energy efficient” (DECC, 2014: 6).

Between 1970 and 2013, the total consumption of electricity from domestic appliances grew by around 1.7% per year. This corresponds with a tripling of the number of electrical appliances, products and gadgets owned in the United Kingdom since the 1970’s. Estimates say that households own 41 electrical products on average, with some owning up to 85. “When considering ‘wet’ appliances (washing machines, laundry dryers, dishwashers) in particular, the number of appliances owned by households has risen from 12 million to over 48 million” (DECC, 2014: 6). Moreover, “electricity consumption from wet appliances has increased by 154% from 1970 to 2013, with an increase of 27% since 1990, and nine tenths of the increase observed between 2000 and 2013” (DECC, 2014: 6).

While energy efficiency of new appliances is increasing over time, in 2013 “there were still nearly half a million washing machines purchased that were rated A or lower” (DECC, 2014: 9). The UK Department of Energy and Climate Change (DECC, now BEIS) Energy Efficiency Strategy recognised that the “lack of access to trusted and appropriate information is one of the four key barriers to energy efficiency” (DECC, 2014: 9). DECC recognised that energy labelling was an area where “behavioural nudges could have an impact on purchasing of energy efficient products” (DECC, 2014: 9). Specifically, they noticed that **cognitive dissonance** and **time-inconsistent preferences** meant that consumers aim for energy savings yet they are reluctant to invest in energy efficient appliances in the short term.

DECC recognised that an opportunity existed to improve the **salience** of the information on energy labels to encourage better informed consumer decisions. The existing EU energy labels only report energy use in kWh per year, which is an abstract concept for some consumers.

Recognising the shared goals around reducing energy use, DECC collaborated with the John Lewis retail chain and the Behavioural Insights Team (BIT) to design a randomised controlled trial that provided robust evidence on whether providing information on the electricity lifetime running costs at the point of sale changed purchasing behaviour, by increasing the attractiveness of appliances with lower energy consumption.

## Intervention

Lifetime running costs were introduced on the appliance labels of washing machines, washer dryers and tumble dryers in some John Lewis stores in September 2013. The trial completed in June 2014. Each John Lewis store was randomly allocated to one of two groups:

- *“Intervention:* total monetary lifetime running cost of each appliance included on the appliance label in addition to the EU energy label with kWh per year
- *Control:* EU energy label with Kwh per year information but no information on lifetime running costs on the appliance label” (DECC, 2014: 6).

The sample consisted of 38 stores in the John Lewis chain, 19 in each treatment and control. Randomisation was clustered at the store level, rather than the individual level. Furthermore, the sample was stratified by store location (town-centre and out-of-town stores). This segmentation choice is because the two types of stores target different groups of customers.

## Results and impact

At the trial completion John Lewis retailed a total of 60 washing machines, 42 tumble dryers (34 condensing and 8 vented) and 13 washer dryers.

The trial “provided robust evidence for the use of lifetime running cost labels on white good appliances, specifically washer dryers. The washer dryers sold in intervention stores over the course of the trial consumed an average of 6.64 kwh/year (equivalent to 0.7%) less energy than the appliances sold in control stores. This difference was statistically significant ( $p < 0.06$ )” (DECC, 2014: 7)

Comparing town centre and non-town centre stores, the effect was “greater in non-town centre stores. In non-town centre stores purchased washer dryer products consumed an average of 15.26 kWh (1.5%) less energy in intervention stores than in control stores ( $p < 0.01$ )” (DECC, 2014: 7).

The report found no significant effect for washing machines or tumble dryers. DECC hypothesised that “an effect was observed for washer dryers because their lifetime running costs were the highest out of all the product types in the trial. Therefore, the total lifetime running costs would have been bigger and possibly more salient to purchasers. There is no obvious explanation for the difference in the washer dryer result across town centre and non-town centre stores” (DECC, 2014: 7).



Extending the use of the new type of labels to washer-dryers throughout the whole retail chain would entail costs around GBP 1 000 (in present value terms) to design labels and train employees. The net present value of social benefits associated to the intervention would be around GBP 47 000, including GBP 48 000 in benefits from avoided emissions. Extending the intervention to label all washer-dryers throughout the UK would deliver a social net present value estimated at GBP 1.7 million throughout their lifetime. This consists of GBP 1.8 million benefits due to avoided emissions and GBP 0.1 million in costs to business.

“The findings from this trial which have been useful to DECC and John Lewis, support the idea that small, low cost changes to address information barriers and provide salient information to consumers can, in certain contexts, help to reduce energy demand. The early findings from this work have also fed into the EU Commission evaluation of the Energy Labelling Directive” (DECC, 2014: 7).

## Institution

The trial was conducted by the UK Department of Energy and Climate Change (DECC), which is now the Department for Business, Energy and Industrial Strategy (BEIS) upon the merger of DECC with the Department for Business, Innovation and Skills (BIS). BIS was a ministry of the UK Government responsible for business regulation and consumer affairs, higher and further education including training and skills development, and science and research. Adult Skills and Higher Education have now moved to the Department for Education, which is now responsible for overseeing the Adult Skills and Knowledge Centre.

BEIS uses behavioural insights in research, design, and implementation to inform its evidence-based approach to policy making. Behavioural science holds significant potential to influence numerous policy areas which BEIS deals with, including, consumer behaviour, energy use, and business behaviour and compliance

The Department has a small central unit dedicated to behavioural insights, and also maintains an informal network of practitioners throughout the organisation. Introductory training on behavioural insights is available to all employees of the organisation.

The UK’s Behavioural Insights Team (BIT) is a social purpose company, jointly owned by the UK Cabinet Office, employees and the innovation charity Nesta. It was set up within the United Kingdom government as the world’s first government institution dedicated to the study and application of behavioural sciences. Its purpose is to apply behavioural insights to government policy in the United Kingdom, and to evaluate what works through the use of rigorous research methods.

The BIT is made up of experts from a mixture of disciplines, with expertise in behavioural science and economics a common qualification. It also retains an Academic Advisory Panel, made up of other Academic Experts who collaborate on trials and provide peer-reviews. In addition, BIT engages a number of PhD students who work with the team as Research Fellows.

The BIT works across entire policy spectrum and also collaborates with other government departments and agencies to undertake projects with a specific policy agenda.

*Source:* OECD (2016), “Behavioural Insights for Environmentally Relevant Policies: Review of Experiences from OECD Countries and Beyond”, OECD, Paris; Department of Energy and Climate Change (2014), “Evaluation of the DECC / John Lewis energy labelling trial”, London, [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/350282/john\\_lewis\\_trial\\_report\\_010914final.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/350282/john_lewis_trial_report_010914final.pdf) (accessed 12 January 2017).

## Water abstraction reform

Country	United Kingdom
Sector	Environmental Policy
Institution	Department for Environment, Food and Rural Affairs (DEFRA)
Start of intervention	March 2012
End of intervention	October 2015
Objective	Creating a regulatory system to better manage abstraction from rivers and aquifers more efficiently, providing better resilience and better protecting the environment
Method	Engagement and modelling exercise, Workshops
Application	Reform of water abstraction licensing regime

### Problem

Water abstraction can cause severe risks to the environment and risks around water availability poses a major business risk to abstractors. Thanks to an out-of-date licensing regime, there are risks to the environment and to businesses due to inadequate regulation of abstraction from rivers and aquifers in the England and Wales.

At the moment it is difficult to trade water, which makes efficient allocation difficult to achieve and the sharing of water resources. The process to change the licenses of those businesses causing damage to the environment, meanwhile, is expensive and time consuming. DEFRA needed to find a way, therefore, to reform the overall water licensing system itself in such a way that it supports abstractors in managing their water resilience risks and better protects the environment.

### Intervention

Partnering with specialist consultants Risk Solutions, DEFRA set out to explore how behavioural insights could inform the reform of the water licensing regime to better manage water resilience and protect the environment. A multi-disciplinary team led by Risk Solutions delivered an extensive engagement and modelling exercise using **Concepts of Bounded Rationality** to explore the impacts of the different options for reform.

The team led over 60 workshops over a three-year period, in order to understand how abstractors use water and might respond to different elements of the proposed reforms. Risk Solutions developed an agent-based economic behavioural model, integrated with catchment hydrological models, to model in detail how the reforms would work in practice. This exposed many unanticipated and often unwelcome effects, and so enabled the design of the reforms to be improved.



## Results and impact

The team found that the most effective option for a reform in terms of its performance in most scenarios and flexibility would be a “**Hybrid Option**”, which introduces a share-based system of Water Shares. The Hybrid system explicitly establishes abstractors’ interest in a jointly managed variable resource and facilitates more extensive and shorter-term trading through the use of short-term allocations. However, it would be introduced in only a limited number of “enhanced catchments”, where there are clear environmental and economic benefits due to problems with water availability and the potential for trading.

In other catchments, under the Hybrid Option, some elements of the current system would persist, such as annual allocated volumes. However, in enhanced catchments, the system would be made to be more flexible, responsive to water availability, fairer for abstractors and more supportive of trading. The latter would allow some price signals to emerge and facilitate better allocation of water to high-value uses.

An impact assessment of the proposed reforms found that businesses would benefit from administrative savings, access to high river flows and from abstraction license trading. This would increase the profits earned by non-public water supply businesses; for example from using water more efficiently, they could produce more output, or a different, more profitable product.

A more efficient allocation of water would also allow mainly public water supply businesses to change their investment profile, and there would be on-going administrative cost savings. The improved abstraction market would facilitate competition in the water industry and increase the economic benefits of upstream competition in England.

The UK Government is committed to deliver implementation of the reform in the early 2020s.

## Institution

The Department for Environment, Food and Rural Affairs (DEFRA) is the Ministerial Department responsible for supervising activities related to the natural environment, the food and farming industry and the rural economy in the United Kingdom.

DEFRA has been using behavioural insights for some time to inform regulatory design and influence behaviour. It has been working with stakeholders to understand their decision making processes, in order to populate decision rules for agents in an agent based model, as is the case in the reform of the licensing regime governing water abstraction in the United Kingdom.

A research programme has developed methodologies and research on behavioural insights for the ministry and DEFRA employs social researchers with a range of backgrounds in psychology to provide support and training.



## Chapter 8

### Behavioural insights case studies: Financial products

*This chapter provides a series of case studies detailing how behavioural insights have been applied in OECD member and partner countries as a tool for helping consumers access financial markets and products in a fair and beneficial manner. Case studies presented utilise a breadth of experimental methods, ranging from resource-intensive randomised controlled trials to relatively less resource-intensive literature reviews. The open and transparent sharing of what works, and what does not, is vital to ensuring that good quality research and findings are shared widely.*

## Investing in hybrid securities

<b>Country</b>	Australia
<b>Sector</b>	Financial Products / Regulation
<b>Institution</b>	Australian Securities and Investments Commission (ASIC)
<b>Start of intervention</b>	February 2014
<b>End of intervention</b>	March 2015
<b>Objective</b>	Investigating how behavioural biases may influence preferences towards hybrid securities over less complex financial products, despite potentially higher risk for the investor
<b>Method</b>	Laboratory experiment in which participants made stylised investment choices between different financial products (220 participants)
<b>Application</b>	<p>Better understanding of the behavioural biases that influence investor decision-making will inform more effective communication to the public regarding the risks associated with investing in hybrid securities.</p> <p>A government research report was launched with the findings of the experiment, which prompted the release of a number of media reports about the risks of investing in hybrid securities</p>

### Problem

Do individuals really understand the products they put their money into? Is the average retail investor aware of the risks associated with investing in complex financial products like hybrid securities, or are they making these investment choices based on the expectation of steady “bond-like” returns?

The Australian Securities and Investments Commission (ASIC) was concerned that cognitive and emotional biases might mean that retail investors underestimate the risk associated with investing in hybrid securities relative to other financial securities like bonds and shares. It set out to investigate how these behavioural biases might affect individuals’ investment decisions if they are not fully rational and/or poorly informed.

### Intervention

A multistage laboratory experiment was developed to study the relationship between behavioural biases and the risk perception of hybrid securities. Participants were provided with stylised investment choices: shares, government bonds, and hybrid securities, and asked to allocate their experimental money to each. At the end of the experiment they were paid an amount based on the simulated outcomes of their investments.

The participants first responded to a range of questions to identify selected behavioural biases that are considered to be relevant to complex investment choices such as hybrids. The biases tested included:

- Availability bias
- Representativeness/familiarity bias
- Framing bias

- Recency bias
- Overconfidence
- Illusion of control
- Competence bias
- Ambiguity aversion
- Mental accounting.

For each individual bias, participants were split into two groups based on the results of the test: those with the bias and those without. Differences in allocations by security type between the two groups were then examined for every bias.

In addition, the relationship between key risk perception factors and investment choices was investigated. Participants were asked a range of risk attitude questions to score the offered investment options according to five broad risk perception factors:

- Distrust of product/producer
- Adverse consequence
- Volatility of returns
- Poor knowledge or information
- Regulatory failure.

The aim was to understand the different ways in which individuals associate risk with different products, and how this influences their investment decisions.

## Results and impact

### *Choices*

There was a very significant difference in allocation between participants with **illusion of control** bias, where they felt they could exert control over their environment and influence the outcomes, and those without it in their selection of hybrid securities. Other variables remaining constant, allocation to hybrids increased by nearly **14%** for participants who demonstrated the illusion of control bias.

In choosing between two risky prospects (hybrids and shares), participants showing illusion of control felt they are more in control of investment outcomes of hybrids than shares. This may be due to their viewing the returns from hybrids as relatively stable (linked to bank bill rates) compared to shares. Since, unlike shares, hybrids can suspend or defer payments only under specific conditions (which can be often very restrictive) investors may feel more in control over outcomes of their hybrid investments than those of their share investments.

There was also significant difference in allocations to hybrid securities for participants with or without **framing**, **overconfidence**, and **competence** bias. Participants demonstrating these biases made higher allocation to hybrids, perhaps considering that there is a narrower range of risk events associated with hybrids. The framing effect is likely to be more pronounced for hybrids as many of the risks are not immediately apparent, rendering the risk-return trade-off more appealing than shares and bonds.

For allocation to other types of securities, the average allocation to shares was higher for participants with **ambiguity aversion** bias, i.e. a preference for known over unknown risks and lower for participants with **framing** bias. This is most likely due to ambiguity averse participants preferring “higher yet familiar” risk of investing in shares to “lower but less understood” risk of investing in hybrids, whilst those with framing bias, being presented with the range of risks associated with investing in shares, are less likely to do so.

Branding and **cognitive substitution** did not appear to affect investment choices. The average allocation to bonds was not significantly different between participants with or without any of the biases examined in the study either.

## Risk factors

Although this had no actual impact on the investment decisions of participants, **poor knowledge** was perceived as the biggest risk factor for hybrid securities. Only **distrust of products/producers** affected the choice to invest in hybrids, suggesting the reputation of the issuer may seem to count more in assessment of risk for hybrids than for shares. Shares were rated as having lower risk than both hybrids and bonds in terms of distrust of products/producers and poor knowledge, which indicates that shares are usually perceived by investors as well-defined products, that is, a product that they understand.

Finally, bonds were perceived as the least risky in terms of three risk factors: **adverse consequence**, **volatility of returns**, and **regulatory failure**, whilst the risk of an untrustworthy issuer or lack of information for this product was still taken into account.

A government research report was launched with the findings of the experiment, which prompted the release of a number of media reports about the risks of investing in hybrid securities. ASIC also plans to use the evidence gained from this study to inform conversations with the financial services industry regarding how to improve investors’ understanding of financial products before they make their investment decisions.

## Institution

ASIC is Australia’s corporate, markets and financial services regulator. It has been applying behavioural insights across its broad regulatory roles as part of an evidence-based approach to policy and decision making, with a particular interest in how to apply behavioural insights to supply and demand practices and digital opportunities and risks. ASIC has a central Behavioural Economics Unit, nested in a strategic research team, which comprises of economists, social and market research specialists and consumer policy experts. In addition to the central unit, behavioural insights are championed across the organisation in other teams, including operational teams and HR.

ASIC has developed an extensive Behavioural Economics Intranet site, and provides advice, support and materials within and outside the site, in addition to awareness building activities within the organisation to help promote understanding and demand for new behavioural insights projects. ASIC also commissions external experts on a project by project basis, such as the Queensland Behavioural Economics Group, which helped to facilitate the study into hybrid securities and investment choices.

## Improving communication with directors of firms in liquidation

Country	Australia
Sector	Financial Regulation
Institution	Australian Securities and Investments Commission (ASIC)
Start of intervention	February 2014
End of intervention	March 2015
Objective	To encourage directors of firms in involuntary liquidation to comply with their legal obligations to report information to their liquidators
Method	Laboratory experiment using a business simulation where a sample of students represented directors of small firms undergoing liquidation (107 participants)
Application	Redesign of the communications sent to firms undergoing liquidation

### Problem

The Australian Securities and Investments Commission (ASIC) assists liquidators in securing compliance from directors of companies in liquidation. Liquidators are sometimes unsuccessful in their efforts to obtain books and records from a company, either due to outdated contact details or because the director is not willing to co-operate.

Initially, the liquidator will send a letter to the director of the company requesting information. If there is no response, the liquidator informs ASIC of non-compliance. ASIC will then contact the company director with a warning letter seeking they comply with their statutory obligations. The letter informs the director of the duty and obligations as a company director and the consequences of breaching these legal requirements.

ASIC wanted to find out if there was a way to increase compliance amongst the directors by altering the letter it sends to the companies. It conducted an experiment to test how effective the use of behavioural nudges within the letter could be in encouraging directors to fulfil their legal obligations to their liquidator.

### Intervention

A sample of 107 students was enlisted to represent the directors of small businesses undergoing liquidation. The students experienced a business simulation and resulting “liquidation” of their “firms”.

The participants were then split into two groups. Following liquidation, one group were sent the standard warning letter from ASIC (the control group), whilst the other (treatment) group of directors were sent a revised letter in which the information was reversed so that the “**call to action**” came at the beginning of the letter – that is in which information on who the director needs to contact and the time frame within which contact must be made were both provided before informing them of the legal consequences of not doing so. Despite the structure the letters did not differ in length or wording. The revised

letter was based on the following behavioural insights principles, in order to test how these would affect the likelihood of directors to comply with the contents of the letter:

- Displaying “calls to action” first
- Social norms
- Moral suasion
- Punishment uncertainty.

Participants were given five minutes to read the letter and memorise important facts, before being asked for information using a multiple choice format. To test the difference in memory for the two different letter structures, participants from both groups were asked to recall the company’s name, liquidator’s name, time to act, maximum penalty for non-compliance and the name of the institution that had sent the letter

## Results and impact

Reversing information in the letter, with the “call to action” at the beginning resulted in greater recall of the letter contents, including: the company's name, the liquidator's name, the time to act, the maximum penalty for non-compliance and the name of the institution that sent the letter. The restructuring led to a significant increase of 12% in correct answers, which suggests that changing the order of contents in a communication can make it easier for readers to absorb the important information.

The experiment provided strong evidence that incorporating behavioural insights principles into how a warning letter is designed could result in greater compliance amongst directors of companies in liquidation. In particular, those directors who are simply overwhelmed by the process, and are unintentionally non-compliant, might profit from a restructure of the letter in order to fulfil their legal obligations to the liquidator.

Although this particular intervention was not implemented directly, the findings led to a separate project to redesign an associated form – “Report As to Affairs” (RATA), which firms undergoing liquidation are required to complete.

## Institution

ASIC is Australia’s corporate, markets and financial services regulator. It has been applying behavioural insights across its broad regulatory roles as part of an evidence-based approach to policy and decision making, with a particular interest in how to apply behavioural insights to supply and demand practices and digital opportunities and risks. ASIC has a central Behavioural Economics Unit, nested in a strategic research team, which comprises of economists, social and market research specialists and consumer policy experts. In addition to the central unit, behavioural insights are championed across the organisation in other teams, including operational teams and HR.

ASIC has developed an extensive Behavioural Economics Intranet site, and provides advice, support and materials within and outside the site, in addition to awareness building activities within the organisation to help promote understanding and demand for new behavioural insights projects. ASIC also commissions external experts on a project by project basis, such as the Queensland Behavioural Economics Group, which helped to facilitate the study in question.



## Improving transparency and information disclosure about financial products in Ghana

<b>Country</b>	Ghana
<b>Sector</b>	Financial Services
<b>Institution</b>	Consultative Group to Assist the Poor (CGAP) / Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ) / World Bank DEC
<b>Start of intervention</b>	November 2013
<b>End of intervention</b>	February 2014
<b>Objective</b>	Improving the level of transparency and information disclosure on savings and loan products in the banking sector in Ghana
<b>Method</b>	"Mystery shopping" exercise applied, including 176 visits seeking information about a credit product and 168 visits seeking a savings product
<b>Application</b>	Bank of Ghana adapted its regulatory framework to mandate clearer disclosure and will issue a credit disclosure directive including key fact statement forms for loan and savings products

### Problem

With the increase in the diversity and complexity of financial products and services on the market, consumers are constantly confronted with the issue of making informed decisions when seeking a financial product or service that meets their needs. Especially vulnerable, low-income people who have less experience with formal finance and lower levels of financial literacy and capability, face a high risk of accepting unsuitable product offers due to misleading or non-transparent disclosure of information. With the greater outreach and innovations of financial products and services product specific transparency and disclosure is essential for sustainable financial inclusion and market stability. Regulators and supervisors therefore need to ensure that financial service providers provide consumers with relevant, timely, reliable, and comparable information on products and services that enable them to make informed choices that best meet their financial needs.

*Die Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)* is an international development agency which assists the German government in achieving its development objectives in low-income countries around the world. GIZ, in collaboration with the Consultative Group to Assist the Poor (CGAP) and the World Bank, set out to research and test the level of disclosure and general service quality of financial service providers offering savings and loan products in Ghana.

### Intervention

Working with the Urika Research Center in Accra, Ghana, CGAP, GIZ and the World Bank designed a "mystery shopping" exercise, which was conducted in the Ghanaian cities of Accra, Kumasi and Takoradi.

Eighteen randomly selected low-income consumers got trained to make a total of 176 visits to financial service providers in Ghana to enquire about savings and loan products. Researchers analysed the following:

- level of disclosure given to the customers by sales staff
- information and material provided about the products
- content of information
- quality of information
- overall service quality
- discrimination towards different types of customer profiles by sales staff, and
- Integrity of sales staff.

From the behaviour of sales staff towards different types of “shopper” profiles, the researchers were able to assess the level of transparency and disclosure with regards to financial products offered to low-income consumers in Ghana.

## Results and impact

The main takeaways from the credit shopping exercises were the following:

- Low level of disclosure of information to consumers by the institutions. Especially for several key product terms: Only 36% received information about the Total Amount to Pay and only 4% about the Annual Percentage Rate (APR). Also, most sales persons failed to explain other charges that a loan may attract to the consumers and most information was not provided voluntarily—shoppers had to ask for it
- Out of the sales staff who provided the information less than 50% explained the information to the consumer
- Hardly any information was provided in written form, and in many cases written information did not contain important terms and conditions
- APR is a term not well understood by even the sales persons
- 74% of interests were quoted monthly, making it hard to standardise costs across loans of different terms.

The main takeaways from the savings account shopping exercises were the following:

- Consumers’ stated needs influenced direction of sales experience, facilitating product to consumer need matching
- High disclosure of account requirements and opening process
- Low disclosure of charges, such as minimum balance penalties, inactivity fees and other charges and fees
- Even less information was provided in written form than during credit visits.

As a result of the findings from the study, Bank of Ghana adapted its regulatory framework to mandate clearer disclosure and implemented consumer-tested key fact statement forms that financial service providers must share with the consumer when offering a savings or loan product.

## **Institution**

The Consultative Group to Assist the Poor (CGAP) is a global partnership of 34 leading organisations that seek to advance financial inclusion. CGAP develops innovative solutions through practical research and active engagement with financial service providers, policy makers, and funders to enable approaches at scale that will increase access to the financial services the poor need to improve their lives.

CGAP believes that, in order to have impact at the base of the pyramid, financial consumer protection rules and actions must be grounded in an understanding of the reality of low-income consumers' financial behaviours and experiences. As a result, it actively uses behavioural insights as an integral part of its research and policy advisory work.

CGAP employs behavioural science experts with backgrounds in development economics, psychology, social and political sciences. It also works with external consultants and consultancies, participates in trainings and shares its tools and learnings with stakeholders.

CGAP's Protecting Customers Initiative aims to develop effective, behaviourally informed consumer protection strategies that are practical and cost-effective. The strategies are designed to respond to rapid innovations in financial inclusion products, channels, and business models, to ensure that it is delivering the most effective outcome in its goal to provide financial inclusion for the poor.

## Complaints resolution in Ghana

<b>Country</b>	Ghana
<b>Sector</b>	Financial Sector Regulation and Supervision
<b>Institution</b>	Consultative Group to Assist the Poor (CGAP)
<b>Objective</b>	Improving the financial recourse system in Ghana that is more efficient in addressing and resolving consumer complaints, as well as encouraging consumers to submit complaints and persist to achieve satisfactory resolution
<b>Method</b>	"Behavioural diagnosis", comprising of a set of hypotheses based on expertise in behavioural science and interviews with various stakeholders in the Ghanaian market
<b>Application</b>	Bank of Ghana adapted its regulatory framework to standardise consumer complaints handling and resolution and mandate visual disclosure of complaints procedures to customers

### Problem

Consumer recourse – the ability to raise grievances and have them heard and resolved or redressed – is essential to ensure consumer protection. Timely and effective recourse processes can positively impact consumer well-being, provider–client trust, product uptake and loyalty, and overall development of a more responsible financial system. This is even more important for markets with large concentrations of “bottom-of-the-pyramid” financial consumers and the providers serving them. Investing in recourse systems that effectively serve these low-income consumers can reinforce and advance responsible financial inclusion.

Ghana is one such market serving these consumers. The Consultative Group to Assist the Poor (CGAP), which seeks to advance financial inclusion by tackling the obstacles faced by the stakeholders of financial services markets in low-income countries, set out to diagnose what was preventing consumers in Ghana from making and effectively following through on complaints to financial service providers, in the case of grievance, to achieve a satisfactory outcome.

### Intervention

CGAP began by conducting a desk review of relevant literature about the Ghanaian financial market and recourse regimes in other countries. Using behavioural mapping methodology, the researchers then generated hypotheses about the psychological tendencies of different market actors involved in consumer complaints and the situational features that might trigger or exacerbate those tendencies, with positive and negative impacts on the quality of recourse in the financial system in Ghana.

After refining these hypotheses on the role of certain psychological tendencies in the complaints process, the researchers developed further new hypotheses during a weeklong field visit where they conducted consumer interviews as well as interviews with staff and management at financial service providers, apex associations and Bank of Ghana itself,

that had experience handling complaints from financial consumers. They also interviewed low-to-middle income consumers across a mix of professions and circumstances, from smaller consumer issues such as non-disbursement of funds from an ATM to loss of all savings when a microfinance company became insolvent (a common occurrence during the time period of this field work). One of the primary segmentations used for the behavioural mapping was consumers who had an issue with a financial service provider and either decided to submit a formal complaint or did not bother to submit such a complaint.

## Results and impact

CGAP found four broad insights that could influence complaints and dispute resolution policy in Ghana:

1. Consumers may not think of submitting a complaint in the first place. Many consumers have a sense that losing money is part of the normal experience in dealing with financial service providers. Moreover, complaints mechanisms are **not always salient** to consumers at the right times or places
2. Even if consumers think to submit a complaint, they may be **deterred**. Consumers often doubt that their complaints will be resolved in their favour; if they submit a complaint, they may have to follow up at a later time but then fail to do so
3. If consumers complain but their complaint is not immediately addressed, they may not escalate their complaint or otherwise persist in the complaints process due to their conception of banking as a **personal relationship**
4. Low-income consumers did not think that Bank of Ghana accepts consumer complaints. These consumers had heard of the Bank and trust it, but they do not understand its functions or purpose, and **do not know** that it accepts complaints. They also perceived Bank of Ghana as **intimidating and distant**, which lowered the likelihood that they would submit a complaint to the Bank.

This initial diagnostic project showed that behavioural insights have power to improve financial consumer protection by contributing to the design of policies and processes. The knowledge gained from the field visit allowed CGAP to develop a series of behaviourally-informed design ideas that aided the development of a comprehensive and successful recourse system for financial consumers in Ghana. This process included a design workshop with Bank of Ghana's market conduct team to integrate consumers' experiences and preferences into the recourse directive to be issued by Bank of Ghana. Consumer insights were also used as the primary source to design a series of posters and other awareness-raising tools that will be mandatory for financial service providers to display at all branches and service outlets.

The behavioural insights in this work arose from a diagnosis process that was attentive to small contextual features and informed both system-wide policies via the recourse directive as well as specific processes or systems that could be implemented by financial service providers, apex associations, and the Bank of Ghana itself. They also describe how these systems could interact with each other from the consumer perspective in order to streamline and simplify a currently complex and cumbersome process for consumers seeking to resolve complaints with financial service providers.

## Institution

The Consultative Group to Assist the Poor (CGAP) is a global partnership of 34 leading organisations that seek to advance financial inclusion. CGAP develops innovative solutions through practical research and active engagement with financial service providers, policy makers, and funders to enable approaches at scale that will increase access to the financial services the poor need to improve their lives.

CGAP believes that, in order to have impact at the base of the pyramid, financial consumer protection rules and actions must be grounded in an understanding of the reality of low-income consumers' financial behaviours and experiences. As a result, it actively uses behavioural insights as an integral part of its research and policy advisory work.

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CGAP's Protecting Customers Initiative aims to develop effective, behaviourally informed consumer protection strategies that are practical and cost-effective. The strategies are designed to respond to rapid innovations in financial inclusion products, channels, and business models, to ensure that it is delivering the most effective outcome in its goal to provide financial inclusion for the poor.

## Investor education initiatives

Country	Italy
Sector	Finance
Institution	CONSOB
Start of intervention	February 2014
End of intervention	Ongoing
Objective	To provide investors with effective learning tools involving basic financial knowledge, awareness of their own rights and awareness of the correct decision process to be undertaken when making an investment decision
Method	Literature review and experiment composed of consumer testing on the understanding of financial information and investment decisions using different frames
Application	CONSOB made significant changes to the traditional design of the investor education area on their web site

### Problem

Several behavioural and experimental studies have long shown that risk preferences and financial decisions are sensitive to **framing**. Moreover, the level of financial literacy, emotional components of the investors' decision-making process, and heuristics may strengthen framing effects further, leading to **biased choices**.

This evidence has spurred a growing debate on how financial information can be best delivered to consumers. Indeed, several cases of mis-selling of financial instruments supported the idea that removing information asymmetries through detailed disclosure may not be effective in protecting retail investors. Therefore, regulators are increasingly becoming aware of the need to refine disclosure by departing from the rational individual hypothesis, so deeply entwined in economic analysis and in the standard regulatory approach, and by referring to actual behaviours.

Using this research, CONSOB undertook a project to re-evaluate the design of their investor education area on their website. As part of this project, CONSOB conducted a behaviourally-informed test to discover how the framing of the characteristics of financial instruments, as well as of risk perception and investment choices, impact on investor decision making. Specifically, CONSOB wanted to discover:

- How are different risk-return representations appraised in terms of complexity, usefulness and information content?
- Does risk-return representation affect risk perception?
- Does risk-return representation affect investment choices?
- How are different cost representations appraised in terms of complexity, usefulness and information content?

## Intervention

Partnering with the *Università Politecnica delle Marche* (Marche Polytechnic University), CONSOB launched an experiment testing different frames for return and cost according to four financial products found in the Italian financial market: an outstanding structured bond, a newly issued structured bond and two stocks.

Risks/returns were framed according to four templates:

1. Synthetic indicator, which aggregates market, liquidity and credit risks and accounts also for the comparison between risk characteristics of the selected products and the risk attributes of a benchmark portfolio.
2. Unbundled indicators, which discloses quantitative measures of market risk (volatility and value at risk), liquidity and credit risks (according to Moody's official rating and expected default probability).
3. A "what-if" scenario, including three example scenarios which describe the product's return in case of three hypothetical situations (i.e. low, medium or high return corresponding to hypothetical developments in prices or other conditions of financial assets and indices underlying and determining the product's performance)
4. A probabilistic modelling of expected returns, which provides information on the likelihood of the outcomes and is used in both the first and second risk framing scenario as a benchmark.

The templates listed above were used to define the information sheets using the four financial products mentioned above and presented to the subjects.

Costs were alternatively disclosed according to three options: the first showing the effect of costs on the internal rate of return; the second highlighting the impact of costs on principal and interest; the third unbundling the product fair value into its bond and derivative components and costs.

A sample of 254 Italian investors was randomly selected from a geographically stratified sample of banks' customers in eight Italian cities: Genova, Milano, Bologna, Firenze, Roma, Fano, Napoli, and Bari e Palermo. Each investor had to have securities held in their portfolios, shuffled their investments at least once in the previous year, and were under 70 years of age. These criteria were aimed at selecting out individuals completely inexperienced or extraneous to any investment decision. Investors were asked to perform three tasks:

1. Rate the complexity and usefulness of the different framing modes. To control for familiarity bias, neither the issuer's name nor the type of the asset were disclosed
2. Assess the relation between information disclosure and risk perception, investors were asked to rank products by their risk level
3. Asked how much they would invest in each product, given an initial endowment, a time horizon and an investment objective.

## Results and impact

The results from this experiment confirm the well-known finding of the behavioural studies, demonstrating that risk preferences and financial decisions are sensitive to the



way financial information is disclosed. The research finds that the synthetic indicators are perceived as least complex, and complexity rises for unbundled and again to what-if scenarios. Furthermore, 160 (63%) of respondents rated the synthetic information sheet as most understandable, and another 80 (31%) rated the unbundled information sheet as most understandable. Likewise, both synthetic and unbundled information sheets were scored higher in perceived usefulness than the what-if scenarios. This confirms that perceived complexity and perceived usefulness of financial information are inversely correlated.

Moreover, personal traits, financial knowledge and investment habits of individuals may strengthen framing effects further, leading to a biased risk perception and investment decisions. This evidence, collected for a sample of individuals with high education and use to making financial decisions, is likely to hold also for less experienced consumers. It makes the case for a careful consideration on how financial disclosure and investor education programmes might be designed to strengthen investor protection.

Regarding how the risk-return framing affects risk perception, the study found that the framing does matter. Only 1% of respondents were able to correctly recognise that the synthetic, unbundled and what-if scenarios were each conveying the same level of risk for the product. For the two stocks, only 53% of participants were able to correctly identify the more risky product.

A further finding is that perceived complexity and perceived risk are inversely related with the willingness to invest and the average amount to be invested. Participants were also asked which template had drawn their attention the most. This was also negatively correlated with perceived complexity, and is consistent with the hypothesis that salient information may help respondents in dealing with large amounts of information and, thus, reducing perceived complexity.

As for financial disclosure, the analysis highlights that simplification may not be sufficient to ensure correct risk perception and unbiased investment choices. Moreover, the interaction among investors' heterogeneity, behavioural biases and risk perception questions the existence of an "optimal" disclosure according to a "one-size-fits-all" approach. Providing more than one framing of the same characteristics of a financial product may be a good solution.

Evidence also suggests that educational programmes should be focused also on the documents envisaged by the regulators to empower investors. Moreover, evidence also suggested that financial knowledge does not necessarily free investors from an inclination towards behavioural biases, and therefore financial education initiatives should also be organised as de-biasing programmes.

Finally, given the relation between investment habits and appraisal of financial information and risk, financial experts and advisors may actually make the difference by playing an educational role.

As a result of these findings, CONSOB made significant changes to the design of the investor education area on institutional web site. The old version of the web site delivered a lot of information without contemplating any form of interaction or feedback.

The new version of the web site delivers information and interactive learning tools, such as questionnaires, personalised feedback, games. In more details, CONSOB investor education area currently:

1. Provides information and references for both those interested in acquiring basic notions or in deepening their financial culture
2. Provides tools (such as questionnaires and personalised feedback) for testing one's own level of financial knowledge (according to three increasing degrees of difficulties), and
3. Provides tools (such as questionnaires and personalised feedback) for testing one's own risk attitude and other behavioural traits such as impulsivity, overconfidence and the exposure to other behavioural biases (this latter point is still in progress).

Also a budgeting tool has been provided, to help people monitor their expenses and their saving choices.

These tools have been partly drawn from the literature, partly specifically designed to take into account the empirical evidence collected on Italian investors' behaviour through surveys and consumer testing. CONSOB (together with the University of Trento in Italy) is also currently developing an interactive game on investment choices and behavioural biases, according to a learning-by-doing approach.

The final goal of the tools developed so far is to raise people awareness about the decisional making process they have to go through when making an investment decision and the possible mental traps they may be prone to.

All this material is available in a very immediate style and plain Italian, to ensure understanding of the contents delivered.

## **Institution**

CONSOB (Commissione Nazionale per le Società e la Borsa) is the public authority responsible for regulating the Italian financial markets. Its activity is aimed at the protection of the investing public through ensuring transparency and correct behaviour by financial market participants; disclosure of complete and accurate information to the investing public by listed companies; accuracy of the facts represented in the prospectuses related to offerings of transferable securities to the investing public; and, compliance with regulations by auditors entered in the Special Register. It also conducts investigations with respect to potential infringements of insider dealing and market manipulation law.

Through the Economic Research Unit, CONSOB has applied behavioural finance (BF) informed research to collect data on investors' behaviour, prove the efficiency and effectiveness of evidence-based financial regulation and supervision, and design recent domestic regulations.

*Source:* Gentile M. et al. (2015), "Financial disclosure, risk perception and investment choices: Evidence from a consumer testing exercise", Commissione Nazionale per le Società e la Borsa, *Working Paper No. 82*, [www.consob.it/documents/11973/204072/qdf82.pdf/58dc22f8-504b-4bad-9679-610306359dfc](http://www.consob.it/documents/11973/204072/qdf82.pdf/58dc22f8-504b-4bad-9679-610306359dfc) (accessed 12 January 2017).

## Crowdfunding regulation

<b>Country</b>	Italy
<b>Sector</b>	Finance
<b>Institution</b>	Italian Companies and Stock Exchange Commission (Commissione Nazionale per le Società e la Borsa, CONSOB)
<b>Start of intervention</b>	2012
<b>End of intervention</b>	2016
<b>Objective</b>	Facilitating the use of crowdfunding for investment while protecting
<b>Method</b>	Using literature findings and investors' surveys to inform <i>ex ante</i> Impact assessment and ex-post evaluation of crowdfunding regulation
<b>Application</b>	Being used by CONSOB to revise regulations and build new interventions

### Problem

The term crowdfunding is used to describe the process by which people give sums of money, even modest amounts, to finance a business project or different types of initiatives using Internet sites, sometimes in exchange for receiving a reward.

In 2012, the Italian Government decided to allow "equity-based crowdfunding" in the economy. This form of crowdfunding utilises online portals to allow people to participate in a company, for the reward of funding complex economic and administrative rights resulting from the project.

In most countries, equity-based crowdfunding portals are not regulated and, therefore, fall under the scope of existing regulator networks (i.e. public savings, payment services, etc.). Italy is the first country in Europe to have a specific and comprehensive legislation on equity-based crowdfunding. It was created in response to the recognition that small businesses form a significant portion of the Italian economy and, post-2008 Financial Crisis, obtaining loans from banks was very difficult – especially for start-ups. As a result, Decree Law no. 179/2012 was adopted with the aim of provide economic stimulus for the country, of which equity-based crowdfunding was seen as one tool that can facilitate the development of innovative start-ups.

CONSOB was delegated the task of regulating aspects of the equity-based crowdfunding. How to develop regulation that would support investors' confidence in crowdfunding while protecting consumers? Could the use of behavioural insights help?

The key question for CONSOB is how to use behavioural insights – particularly in regards to heuristics and biases – to ensure the creation of an efficient and effective regulatory regime.

## Intervention

CONSOB's Impact Assessment Unit started evaluating different regulatory options, including by relying on heuristics and possible biases the had already been identified in the literature and research conducted by CONSOB's Economic Research Unit, which has been championing the use of behavioural insights within the regulatory agency.

Risk of suboptimal or even unsuitable investment choices may be due to behavioural biases connected to online decision making process. Financial decisions made in an automated environment are faster and easier than those made in any other context. However, velocity and the easiness may not always benefit the quality and the outcome of the investors' decision making process. An attentive design of the automated tool based on high quality decision trees may reduce the probability of "too-fast-click-decisions".

In particular, the Italian CONSOB Crowdfunding Regulation has been designed taking into account impact assessment and investors survey. It asks online-decision-makers to read some mandatory educative information sheets, to fill in a questionnaire aimed at ascertaining the real understanding of the main characteristics and risks of using automated advice services and requires crowdfunding platform to offer specific "nudging-based-designed" options in the online decision process.

Moreover, the mandatory participation of institutional investors to each crowdfunding campaign was required to provide a positive assessment of the bid to retail investors, generally low literate and less informed.

Following the issuance of the regulation on crowdfunding (*Regolamento sulla raccolta di capitali di rischio tramite portali on-line*, No. 18592, 26 June 2013), CONSOB monitored closely the implementation of the regulation to assess the degree to which the regulation had created confidence in crowdfunding, without creating excessive burdens on large and small investors. The evaluation relied on a targeted questionnaire submitted to a sample of 35 investors and operators identified through a mapping of representative stakeholders.

Questionnaire was aimed to check, among others, the utility of the information content of online platform and the effectiveness of the "nudging-based-designed" options. *Ex post* evaluation revealed that the main users of crowdfunding platform were mainly sophisticated investors and venture capital funds perceiving informative requirements provided by the Regulation to be of little relevance.

In particular, investors asked to assess the informational content of the mandatory participation of institutional investors signalled high confidence in their private information and limited reliance on the assessment of institutional investors.

## Results and impact

Almost three years after the implementation of the initial regulations, and incorporating evidence gathered through ex-post monitoring, the regulation has been revised in accordance with the behavioural insights discovered.

Online investing via crowdfunding platforms resulted to be attractive only to a low percentage of Italian retail investors. Therefore, CONSOB considered the mandatory online questionnaire to be an excessive requirement with respect to the expected benefits.

## Institution

CONSOB (Commissione Nazionale per le Società e la Borsa) is the public authority responsible for regulating the Italian financial markets. Its activity is aimed at the protection of investors through ensuring transparency and correct behaviour by financial market participants; disclosure of complete and accurate information to investors by listed companies; accuracy of the facts represented in the prospectuses related to offerings of transferable securities to investors; and, compliance with regulations by auditors entered in the Special Register. It also conducts investigations with respect to potential infringements of insider dealing and market manipulation law.

Through the Economic Research Unit, CONSOB has applied behavioural finance (BF) informed research to collect data on investors' behaviour, prove the efficiency and effectiveness of evidence-based financial regulation and supervision, and design recent domestic regulations.

## Digital cash transfer for food aid in Kenya

<b>Country</b>	Kenya
<b>Sector</b>	Humanitarian Sector; Digital Financial Services
<b>Institution</b>	Consultative Group to Assist the Poor (CGAP), and the World Food Programme (WFP) Kenya
<b>Start of intervention</b>	August 2014 (1); August 2015 (2)
<b>End of intervention</b>	August 2014 (1); August 2015 (2)
<b>Objective</b>	Monitoring and mitigating consumer risks for payment recipients when shifting humanitarian assistance from in-kind to digital cash transfers
<b>Method</b>	Mystery shopping applied to a sample of 46 (2014) and 73 (2015) cash transfer recipients
<b>Application</b>	WFP Kenya adopted mystery shopping as regular monitoring and evaluation tool for all digital cash transfer programmes and made adjustments to the programme design, including: a reduction in the transaction fee charged to merchants by the payment provider, a merchant award system, a toll-free consumer hotline and posters visualising the payment process with “do’s and don’ts” distributed at participating stores

### Problem

Cash for Assets (CFA) is a joint World Food Programme (WFP)/Government of Kenya conditional cash transfer scheme that reaches food insecure households in seven arid and semi-arid land (ASAL) counties in eastern and coastal Kenya, where recipients work on community assets to build resilience against drought.

WFP, a food assistance organisation within the United Nations, has historically used the distribution of in-kind food aid in its programmes. However, as WFP expanded its scope from “food aid” to “food assistance,” it launched CFA as a pilot to test a different mechanism for delivering assistance to the poor. Although WFP Kenya began experimenting with shifts away from food aid through CFA, it did not consider physical cash distribution, deeming it too insecure and fraught with risk, given high levels of corruption in Kenya. As a result, in 2010, it launched an electronic payments system to transfer aid to low-income households in Kenya.

Through the programme, recipients of in-kind food aid were shifted to receive cash into a bank account linked to a debit card that they could use for withdrawals at banking agents or digital payments at selected merchants. The idea was to give customers the power to choose what they consume and find greater diversity of food items in local shops, as well as reduce the social stigma they would face from participating in the food benefit programme, since they could shop when they want and use payment channels that are used by the general population as well. In addition, electronic payments would not disrupt the local economy the way direct food aid can by flooding the market with free supply and competing with local merchants.

However, recipients of the new digital cash transfer scheme reported a number of problems when using it. They were facing issues of overcharging, battery problems, unfair treatment and service unavailability due to network outages, unreliable service hours and forgetting the PINs for their cards.

The Consultative Group to Assist the Poor (CGAP) supported WFP Kenya to assess the incidence of and identify efficient measures to counteract the problems being experienced by cash transfer recipients by using its methods and insights learnt from behavioural science.

## Intervention

CGAP and WFP conducted two mystery shopping experiments in August 2014 and August 2015 in Isiolo County in Northern Kenya. The trials consisted of training a sample of food aid recipients to adopt a set of randomly assigned shopping scenarios and assess the consumer risks faced when using the cash transfer system.

CGAP wanted to use these scenarios to understand the incentives that may motivate merchants, banking agents, and customers to behave in unexpected ways that hamper the benefits of electronic payments. Would merchants impose unregulated fees on card users to make up for the costs of acquiring a point of service machine and paying transaction fees to the bank? In busy shops with long lines, would merchants lose patience with recipients trying to use their cards, mishandling their personal information and refraining from explaining how the card system works? Would the sudden transfer of cash into recipients' accounts create excess demand for products and ultimately lead to scarcity or increased prices? If only certain merchants accept the cards, would recipients be less likely to shop around? Would they treat the electronic payments less cost-consciously than “earned” money (“lottery effect”)? Would they feel the loss of this money as much when payments are digitised compared to losing real cash?

To explore these questions and monitor the effectiveness of electronic payments, CGAP and WFP Kenya assessed recipients' shopping experience with new magnet stripe cards for food support by sending recipients to purchase food from participating merchants using their new cards. Adopting a range of shopping scenarios, recipients measured key aspects such as pricing of items, protection of PIN and other sensitive information, and treatment of known recipients versus other customers.

## Results and impact

The study found that a number of incentives affected the way that merchants and consumers involved in the digital cash transfer programme behaved. Based on these findings CGAP and WFP identified and tested small measures to ensure that recipients have a positive experience using a digital payments systems:

- Some shoppers reported additional charges to card-users compared to past visits to that same merchant where they had paid in cash. Merchants also showed variance in the prices charged for the same item across customers.
- Several merchants did not fully protect PIN information of recipients, entering the information themselves or asking recipients to leave their PIN and/or card with them.
- Mandating itemised receipts from Point of Sale (POS) devices increased **price awareness** amongst consumers. Recipients who requested itemised receipts and were asked to recall cost of items after their shopping self-reported increased attention to prices.

- Most consumers reported not negotiating on prices, which contrasted with usual shopping behaviour in Kenyan markets. This could be due to the “**lottery effect**” or a rush of demand created by many recipients visiting a few merchants in a single day, raising the bargaining power of merchants vis-à-vis shoppers, which may help explain the insight regarding merchants charging more for goods than in the past.
- Several merchants allowed recipients to buy non-permitted products (such as alcohol, handbags, and perfume), though most did not.

A second “mystery shopping” evaluation exercise in the same cash transfer programme, conducted in August 2015, showed that one year’s experience had little impact on merchant behaviour and recipients’ PIN sharing behaviour and price awareness. However, there was a significant increase in the number of payments done per payment period: 32% were using the card more than once a month and 16% more than three times a month. This means that recipients used the “wallet” aspect of the payments service.

Based on the findings from the mystery shopping, CGAP and WFP Kenya identified five priority action areas to improve the delivery of their benefits as outlined below.

1. **Integration of an interoperable multi-provider payment platform:** The challenges of accessing banking agents for a single bank across the entire CFA Programme areas creates a need to explore development of an interoperable, multi-provider payments platform that allows beneficiaries to choose from a range of providers and channels to receive their benefits. This will allow beneficiaries to select the product that best suits their needs, location and personal preferences.
2. **Prevent unauthorised surcharges:** In order to prevent beneficiaries from being charged unauthorised and/or additional charges, merchants should be mandated to hand out itemised receipts along with the POS receipt. This will strengthen beneficiaries’ capacity to protect themselves from paying additional charges and develop sensitivity for unit prices as well as put merchants on alert that their pricing is being monitored.
3. **Protection of customers’ account information:** To protect beneficiaries’ account information, merchants and agents should be trained and sensitised continuously on handling of PINs and cards. Agents need clearer instructions on standard procedures, ID verification, PIN and card handling, problem solving, how to manage bulks, liquidity management as well as how to protect themselves from fraud or robbery. On the other hand, beneficiaries need to be better informed about the fees, the range of financial services that they can access through the programme, and where/how to address complaints.
4. **Prevent discrimination:** Discrimination between beneficiaries and other customers could be reduced by replacing the WFP-branded bank cards—as it is the case in the CFA Programme—with ordinary bank cards. This could avoid preferential treatment of other customers, upcharges and unfair treatment due to biases.
5. **Targeted training and capacity building:** Training and coaching of both agents and beneficiaries is vital to make digital payment programmes successful. The trainings should focus on PIN protection where beneficiaries receive tips how to memorise their PIN, learn how to enter the PIN, protect their funds, and use the



recourse mechanisms to report misconduct or problems. Agents and merchants should be sensitised on the “dos and don’ts” that are particular to the programme and incentivised for responsible and good practices, for example by creating a rating and awards system with honour stickers or other brand labels.

## Institution

The Consultative Group to Assist the Poor (CGAP) is a global partnership of 34 leading organisations that seek to advance financial inclusion. CGAP develops innovative solutions through practical research and active engagement with financial service providers, policy makers, and funders to enable approaches at scale that will increase access to the financial services the poor need to improve their lives.

CGAP believes that, in order to have impact at the base of the pyramid, financial consumer protection rules and actions must be grounded in an understanding of the reality of low-income consumers’ financial behaviours and experiences. As a result, it actively uses behavioural insights as an integral part of its research and policy advisory work.

CGAP employs behavioural science experts with backgrounds in development economics, psychology, social and political sciences. It also works with external consultants and consultancies, participates in trainings and shares its tools and learnings with stakeholders.

CGAP’s Protecting Customers Initiative aims to develop effective, behaviourally informed consumer protection strategies that are practical and cost-effective. The strategies are designed to respond to rapid innovations in financial inclusion products, channels, and business models, to ensure that it is delivering the most effective outcome in its goal to provide financial inclusion for the poor.

## Taking up nano-loans responsibly in Kenya

<b>Country</b>	Kenya
<b>Sector</b>	Digital financial services
<b>Institution</b>	Consultative Group to Assist the Poor (CGAP)
<b>Start of intervention</b>	2015
<b>End of intervention</b>	2015
<b>Objective</b>	Learning more about how consumers behave in a digital borrowing environment
<b>Method</b>	Lab-based and field-based experiments using simulated borrowing experience
<b>Application</b>	The digital lender adopted the communication designs and recommendations that were developed and tested in the research to drive more responsible borrower behaviour and higher repayment rates

### Problem

Digital credit products offer a fast, convenient way for many consumers to access hard-to-obtain emergency liquidity for their personal and business expenses. However, due to the rapid pace of innovation in digital credit, there has been little exploration of potential consumer protection concerns such as transparency or ability to repay.

The Consultative Group to Assist the Poor (CGAP) specialises on developing innovative solutions to increase fair and responsible access to the financial services the poor need to improve their lives. This includes digital financial services such as digital credit. CGAP recognises the importance of developing responsible practices in the digital credit market. It wanted to find out what might be different in consumer borrowing behaviour and associated risks now that credit is literally in the palm of their hands only a few keystrokes away.

### Intervention

CGAP partnered with the Busara Centre for Behavioural Economics and Jumo—a mobile money marketplace that offers digitally-delivered credit in Kenya, Tanzania and Zambia—to design a series of experiments to measure consumer response to different types of communications linked to a digital credit offer in Kenya.

The researchers aimed to find out if there were ways in which the communication channel (SMS) with consumers impacted borrower behaviour that could benefit both the borrower and the lender, and whether insights from behavioural economics could be used to develop communications that drive borrower behaviour in preferred directions, such as on-time repayment.

The researchers focused on two key opportunities:

1. **Increasing consumers' likelihood to read** – and understand – key product features, to test the hypothesis that positive correlations may exist between time spent on product terms screens during the loan application process and repayment rates.
2. Crafting repayment **reminder** messages that were **goal-based** or **aspirational**, to help consumers not “freeze” when they get a collections notice and instead see the long-term value of timely repayment.

To test these hypotheses, CGAP built both lab-based and field-based messaging platforms for a hypothetical digital credit product named “Top Cash” and tested these messages on a randomly selected sample of 200 low-income consumers in the Kenyan cities of Nairobi and Busia.

In the lab experiment consumers participated in a series of tasks where they could earn money, but first had to borrow funds to play the game, which they would later pay back with their earnings from completing the tasks. In each round of the game participants had to choose the amount they wanted to borrow. Each loan amount had different costs and repayment periods, which the participants considered when making their decisions on how much to borrow. This allowed the team to test how different disclosure messages impacted borrowing choices.

In the field experiment participants received actual, zero-cost loans via mobile money, and were instructed to pay them back after one week to receive a larger loan amount. A series of messages were then sent to borrowers to measure how these different messages performed in ensuring consumers paid back their loans after one week.

CGAP tested several reminder messages and different framings of these messages to discover which would be the most effective method to increase consumers' likelihood to repay. Variations of the message included emphasising **incentives** such as the ability to access higher future loan amounts, or the long-term benefits for the borrower of timely repayment, designed to counteract potential **present bias**.

## Results and impact

### *Lab experiment*

The lab experiment found that a choice-based approach to summary Terms and Conditions screens led to an increase in the likelihood a consumer would review them from 9.5% to **23.8%**. Making consumers actively choose to view or to skip summary Terms & Conditions screens made it more likely that they would actually read them.

Moreover, actually reviewing the summary then improved repayment performance, leading to a **7% absolute drop** in delinquency rates in the experiment. This supported the hypothesis that people who spend more time on product term screens are less likely to default. It also showed that effective prompting can increase consumers' attention to product terms and costs up front for a more informed borrowing decision.

When asked to choose a loan amount in the lab experiment, **separating finance costs** to make them more **salient** helped reduce default rates in the game from 29.1% to **20%** across the entire sample, regardless of whether consumers chose the higher or lower loan amounts. This suggested that, by making the finance charges stand out more, consumers could make a better choice on loan size preference.

### ***Field experiment***

**Timing** of reminders for repayment had an effect on how likely borrowers were to repay their loans. Borrowers who received evening reminders were **8%** more likely to repay their loan than those who were sent reminders in the morning.

The behavioural messaging treatments used in the reminders had different effects for different demographic segments of consumers. Overall, the messaging had a positive impact across the board for male borrowers, but negative impact on repayment across the board for female borrowers. This suggests that a more successful approach would be for digital lenders to create customised reminder messages that speak to the personal traits and ambitions of the user, based on the available demographic information.

Overall, CGAP was able to conclude that modifying the way that messaging is delivered to consumers in a digital credit market has the potential to deliver more benefits overall for both borrowers and lenders.

### **Institution**

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CGAP believes that, in order to have impact at the base of the pyramid, financial consumer protection rules and actions must be grounded in an understanding of the reality of low-income consumers' financial behaviours and experiences. As a result, it actively uses behavioural insights as an integral part of its research and policy advisory work.

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## National survey on financial education

<b>Country</b>	Spain
<b>Sector</b>	Finance
<b>Institution</b>	National Securities Exchange Commission (CNMV)
<b>Objective</b>	Understanding the financial behaviour of the Spanish population over time
<b>Method</b>	National survey covering the general population
<b>Application</b>	The information gathered through the survey can be used to more effectively improve financial education of Spanish consumers through the Action Plan on Financial Education

### Problem

The National Securities Exchange Commission (CNMV) is the regulator responsible for protecting financial consumers in Spain.

CNMV, in collaboration with the Spanish Central Bank, has developed an Action Plan on Financial Education, with the aim of improving Spain's overall financial culture, which will in turn enhance the protection of Spanish consumers. The objectives of financial education are to transfer knowledge and competences to empower financial consumers and investor with competences to carry out informed judgment and take the right decision when managing their private economy, since a significant part of the decisions taken by citizens relate to financial behaviour with a direct impact on her/his personal and family environment.

In order to effectively design and implement this programme, however, it is first important for CNMV to understand where the level of financial education of the Spanish adult population currently stands. By gaining better knowledge on the current situation, CNMV can identify areas for improvement, and how to go about achieving this through the Action Plan on Financial Education. Using ongoing evaluation also allows CNMV to monitor over the long-term how effective the Plan is in changing financial culture in Spain according to its objectives.

### Intervention

CNMV and the Spanish Central Bank are jointly working on the elaboration of a National Statistical Survey on Financial Education. The aim is to assess and monitor the progress or improvements of Spain adult population in this regard over the coming years.

The questionnaire will cover the general population. It follows the methodology recommended by the OECD and International Gateway for Financial Education's (INFE) Toolkit for Measuring Financial Literacy and Financial Inclusion. This methodology uses specific questions and variables to obtain comprehensive information on financial consumers' behaviour.

The survey will cover questions on financial aptitudes and knowledge, financial consumers' behaviour in issues such as money management, short term and long term financial planning, and how they choose financial products, among others.

## Results and impact

The survey is ongoing.

## Institution

The National Securities Exchange Commission (CNMV) is the Spanish government agency responsible for the financial regulation of the securities markets in Spain. It is an independent agency that falls under the Ministry of Economy and Finance of Spain.

The main priority of the CNMV is the protection of financial consumers. It has been using behavioural insights to identify the behavioural bias, prejudices and errors consumers make when taking investment decision and to use the proper tools to amend those behaviours. This has a direct impact on their protection as consumers.

The Commission, in collaboration with the Spanish Central Bank, has been using behavioural insights in its development of an Action Plan on Financial Education. The aim of this plan is to enhance the Spanish population's financial culture through activities which will improve financial competence and knowledge among investors. The initiatives in these areas directly and indirectly consider the aptitudes and behavioural trends of financial consumers, in order to decide which activities to develop in financial education.

CNMV is actively looking for and acquiring knowledge on behavioural sciences applicable to financial education. It applies the recommendations and conclusions of the OECD International Network on Financial Education and of the International Organisation of Securities Commissions (IOSCO) to its work.

## Financial education for school students

<b>Country</b>	Spain
<b>Sector</b>	Education
<b>Institution</b>	National Securities Exchange Commission (CNMV)
<b>Start of intervention</b>	January 2013
<b>End of intervention</b>	September 2013
<b>Objective</b>	Enhancing young persons' financial competences to take effective and evidence based financial decisions
<b>Method</b>	Survey and tests to evaluate the effectiveness of the financial education programme (sample of 28 schools)
<b>Application</b>	Financial education programme implemented in schools in Spain

### Problem

The National Securities Exchange Commission (CNMV) is the regulator responsible for protecting financial consumers in Spain.

CNMV, in collaboration with the Spanish Central Bank, has developed an Action Plan on Financial Education, with the aim of improving Spain's overall financial culture, which will in turn enhance the protection of Spanish consumers. The objectives of financial education are to transfer knowledge and competences to empower financial consumers and investor with competences to carry out informed judgment and take the right decision when managing their private economy, since a significant part of the decisions taken by citizens relate to financial behaviour with a direct impact on her/his personal and family environment.

The National Strategy for Financial Education and the Action Plan for Financial Education have diverse objectives, one of which is the implementation of financial education at schools. To achieve this goal the CNMV developed an annual Programme through which it aimed to transfer values, aptitudes, competences and knowledge to young students, to empower them with the ability to take financial decisions in an informed, evidence based and reasonable to confront basic financial challenges throughout their lives. Through the programme, CNMV wanted to improve the financial wellbeing of school students in Spain and foster equality of opportunities among young person, by granting financial education to students who would not otherwise benefit from any financial education.

### Intervention

The programme was designed by CNMV and the Spanish Central Bank in collaboration with Medida y Evaluación de Sistemas Educativos (MESE) Group and the European Foundation Society and Education (EFSE). They developed educational materials and tools based on knowledge taken from the OECD Programme for

International Student Assessment (PISA) survey, which assesses the comparative financial competences of students in many countries, including Spain.

The teaching material developed included as files, didactic guides for teachers and student, as well as a web page for students. The materials of the programme facilitated the establishment of goals and orientation of the learning process to achieve these goals, thus promoting the maintenance of intrinsic motivation amongst students. The programme was also reinforced by an annual contest for financial education that serves as an external element of motivation of students.

The development of the programme was based on principles of behavioural psychology, taking into consideration aspects of the financial decision-making process such as preferences, beliefs, motivation, the persuasion effect and the capability to influence, as well the context in which this process takes place. The content of the financial education programme had an essentially pedagogical basis in order to facilitate the apprehension of the financial concepts for pupils.

CNMV also conducted an evaluation of the financial education curriculum's validity and effectiveness. The evaluation took places in 28 schools, with a sample of 1 842 pupils and 926 teachers.

The validity of the curriculum was assessed by survey. Teachers in the schools chosen were asked to complete a questionnaire evaluating the content of the financial education programme that they were implementing.

Ex-ante and ex-post tools were used to evaluate the effectiveness of the programme through a test carried out on students before the start of the programme, and then once the programme had been completed.

## Results and impact

The data collected from the evaluation showed that:

1. The programme of financial education is generally well considered by teachers (average 7-8/10)
2. The materials that are part of the programme are well considered by teachers (medium value of 7/10)
3. 88% of surveyed teachers believe that such content should be part of mandatory curricula of compulsory secondary education.
4. The programme has been effective to the extent that has allowed students to acquire competence and knowledge in the area of interest.

The CNMV also recognised through the implementation of the programme that financial education is a long-term goal and that financial education (the mere theoretical transfer of information) is not useful without trying to act on the behaviour and habits of investments.

As a result of this evaluation, some of the programme's tools have been modified following the recommendations given.



## Institution

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The main priority of the CNMV is the protection of financial consumers. It has been using behavioural insights to identify the behavioural bias, prejudices and errors consumers make when taking investment decision and to use the proper tools to amend those behaviours. This has a direct impact on their protection as consumers.

The Commission, in collaboration with the Spanish Central Bank, has been using behavioural insights in its development of an Action Plan on Financial Education. The aim of this plan is to enhance the Spanish population's financial culture through activities which will improve financial competence and knowledge among investors. The initiatives in these areas directly and indirectly consider the aptitudes and behavioural trends of financial consumers, in order to decide which activities to develop in financial education.

CNMV is actively looking for and acquiring knowledge on behavioural sciences applicable to financial education. It applies the recommendations and conclusions of the OECD International Network on Financial Education and of the International Organization of Securities Commissions (IOSCO) to its work.

## Preventing over-indebtedness of borrowers

Country	Uganda and Ghana
Sector	Financial System Development
Institution	German Federal Ministry of Economic Cooperation and Development
Start of intervention	2013
End of intervention	2013
Objective	Preventing borrowers from becoming over-indebted
Method	Randomised Controlled Trial household survey (pseudo-randomised control group)
Application	Financial literacy campaign

### Problem

The expansion of microfinance around the world has opened up new opportunities for millions of low-income households and micro-entrepreneurs in developing countries by allowing them access to formal financial services which was otherwise unavailable to them. However, in certain areas, there is now too much credit around, leading to a risk of over-borrowing, and thus levels of debt that households become unable to pay off.

The German Federal Ministry of Economic Cooperation and Development wanted to assess the effects that taking up formal microcredit was having on the financial burden of poor households in Uganda, and see if there was a way to prevent borrowers of micro-finance loans from becoming over-indebted.

### Intervention

The Ministry of Development used data on more than 1 500 Ugandan house-holds that were either

1. borrowers at a formal institution
2. semi-formal borrowers (borrowing from an institution that is not regulated by the central bank)
3. informal-borrowers (borrowers at informal sources such as moneylenders, also including those with outstanding bills)
4. non-borrowers

To distil difference with respect to the financial burden between these groups. The study expanded on one previously conducted in the same field in Ghana.

The Ministry co-operated with one of Uganda's major providers of microfinance to acquire a sample of formal borrowers from that institution, and pseudo-randomly chose a group of comparison households (the third-next household in the vicinity of the baseline sample of formal borrowers) in and around the capital Kampala. It then conducted

interviews, asking the households questions about specific stress events, households' loans and liabilities and other household features and assessed the impact of these elements on households' rates of over indebtedness.

## Results and impact

The survey found that the chances of struggling financially were significantly higher for semi-formal and informal borrower than for borrowers from formal institutions, suggesting that formalisation of credit sources reduces financial distress.

Moreover, over-indebtedness was more likely with a lower level of financial literacy. Financial literacy skills were negatively correlated to levels of financial distress, suggesting that financial literacy skills help households to achieve a more sustainable planning of household finances. This confirmed the researchers' assumption that financial literacy has positive impacts for borrowers.

In the case of a saturated credit market like the one in Uganda, therefore, financial literacy interventions, such as conducting a financial literacy campaign, will help to ensure borrowers do not take up unduly large amounts of credit and do not take uninformed financial decisions.

## Institution

The Federal Ministry of Economic Cooperation and Development manages Germany's international development policy, and works on a number of projects in developing countries around the world. It has been regularly using behavioural insights in the planning and design of projects in various sectors.

The Ministry of Development uses behavioural insights as part of its ongoing development of new methods and instruments to integrate into the organisation's day-to-day work. Central responsibility for behavioural insights approaches rests with the organisation's unit *Kompetenzcenter Entwicklung, Governance und Frieden* (Competence Centre Development, Governance and Peace). However, new insights in the field are also being followed and generated by other in-house competence centres, for example in sectors such as health and financial system development, and the organisation's staff have approached university researchers in order to discuss options for accompanying studies as well. Several staff in the department have in-depth knowledge on behavioural economics from their higher education or doctorate programmes themselves.

There has been some skepticism within the organisation about the effectiveness of subliminal manipulation of behaviour through such approaches, and also misgivings about whether this is ethical. However, the Ministry has undertaken internal trainings to sensitise staff to the use of behavioural insights within its work, by educating them on the harmful effects that lack of action can equally have on outcomes too.

## Message received? The impact of annual summaries, text alerts and mobile apps on consumer banking behaviour

Country	United Kingdom
Sector	Retail banking
Institution	Financial Conduct Authority
Start of intervention	2012
End of intervention	2015
Objective	Evaluating the effectiveness of previous regulatory and commercial interventions in the personal current account market
Method	Empirical analyses of data on consumer behaviour – sample size of 500 000 customers from one UK bank and additional aggregated data from a second UK bank
Application	Improving future disclosure methods so that they are more beneficial for the consumer, such as by targeting annual summaries and changing regulation so that alerts become “opt-out” rather than opt-in, to help those who have difficult managing their finances.

### Problem

Ninety four per cent of adults in the United Kingdom own at least one personal current account and 40% have more than one. However, how well the current account market itself functions is questionable, with there being low transparency of overdraft charges, and little switching between providers of personal current accounts.

The Financial Conduct Authority (FCA) is a financial regulatory body in the United Kingdom, which operates independently of the UK Government. It is financed by charging fees to members of the financial services industry. The FCA’s operational objectives are to ensure an appropriate degree of protection for consumers, ensure market integrity and promote effective competition. In the context of a potential Competition and Markets Authority investigation into personal current accounts, the FCA wanted to understand the impact of previous initiatives that were intended to help consumers manage their current account.

Annual summaries are intended to focus consumers’ attention on the costs of their account by providing a breakdown of any overdraft charges incurred and the amount of credit and debit interest accrued over the last 12 months, and as a result help them improve how they manage their finances through reducing unarranged overdraft charges, lowering average balances or switching to an account that better meets their needs. They are designed to address the behavioural bias of **limited attention** in the consumer and the assumed impact is based on the principle of **loss aversion**, which would motivate the customer to act.

Many banks now provide text alert services and mobile banking apps to help consumers better understand and reduce the costs of their current account or switch to another account that better meets their needs. The FCA wanted to find out how effective

these, fairly recent, market strategies had been in facilitating an overall more beneficial result for the consumer.

## Intervention

The FCA analysed data on a randomly selected sample of 500 000 customers of a large bank in the United Kingdom over the period of 2011 to 2014. It assessed:

1. The behaviour of those people that receive their annual summaries early compared this to those who receive them later
2. The behaviour of those who sign up for text alert and mobile banking services, comparing this against those customers' own behaviour before signing up as well as against the behaviour of those who do not sign up at all.

Due to the progressive nature of how annual summaries are rolled out to consumers, it was possible to use those customers who had not yet received their summaries as a natural “control” group against which the researchers could compare the behaviour of those who had.

The researchers conducting the study measured the average balances and overdraft charges on accounts of those customers who have received their annual summaries compared to those who had not to test the impact of sending the summaries on consumer behaviour. Over 15% of the sample of consumers analysed were signed up to text alerts and 7% were signed up to both text alerts and the mobile banking app. The effects of these two services on those who signed up was analysed by looking at the change in consumers' behaviour after two months of signing up to the service in question.

The FCA also aggregated data over 36 months for another bank, analysing the spike in sign-up rates following the release of the mobile banking app, in order to estimate the impact of this app. In this case, the mobile banking app was released within the sample period itself, and there was a spike in sign-up rates immediately following this release. The study tested the effects of the app on those consumers who had signed up shortly after its release to analyse its impact.

## Results and impact

The FCA found that there was no impact of annual summaries on consumer behaviour, showing that some disclosures can have very limited impact on consumer behaviour. Text alerts reduced unarranged overdraft charges by **6%** and mobile apps reduced unarranged overdraft charges by **8%**. Signing up to **both text alerts and mobile apps** reduced unarranged overdraft charges by **24%**.

It was notable also, that the impact of these services varied across age groups, with the mobile app having the largest effect on 30-59 year olds and 50-59 year olds experiencing the largest relative and absolute reduction in monthly overdraft charges of 19% (GBP 0.75). Signing up to text alerts had the largest effect on consumers aged 40-59, with 50-59 year olds experiencing the largest relative and absolute reduction of 14% (GBP 0.52), whilst signing up to both services had the largest effect on 30-39 year olds: a total reduction of 28% (GBP 1.38).

Level of income also affected the results. The mobile banking app had the largest impact on the highest income group, whilst text alerts had the largest effect on mid-income groups. Using both services had the largest effect on higher income groups,

totalling a reduction of 28% (GBP 1.46) for the GBP 2000-GBP 2500 estimated monthly income group.

Middle-aged consumers with higher incomes, who are arguably the busiest, tended to pay the most overdraft charges and switch account the least, and therefore benefitted the most from receiving timely information automatically through text alerts and having the ability to take action using mobile banking apps.

Overall the findings suggested that consumers exert more control over their accounts after signing up to the mobile banking app and text alerts. The additional impact of the combination of both services on unarranged overdraft charges showed the benefit of receiving information upon **automatic triggers** when receiving text alerts, without having to actively acquire it, as well as the **facility** to act quickly upon receiving **timely information** using the mobile banking app.

## Institution

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## Does the framing of retirement income options matter?

Country	United Kingdom
Sector	Financial Services/Retirement Income Products
Institution	Financial Conduct Authority
Start of intervention	December 2014
End of intervention	December 2014
Objective	Ensuring that consumers are making their choice of retirement income products based on a rational understanding of the options available to them, rather than being influenced by behavioural bias
Method	Lab experiment to test whether the framing of retirement options made a difference to people's choice of product
Application	Redesigning FCA rules on information disclosure in retirement products to minimise the impact of behavioural bias

### Problem

We tend to think of our choices as consumers as rational decisions, based on a thorough assessment of all relevant information concerning the product in question. However, as human beings, our decisions are unconsciously affected by the amount of information disclosed to us, as well as the way it is presented by those offering the disclosure. The impact this can have, especially when it comes to financial decisions, can significantly and unknowingly affect our welfare. It is for this reason that regulatory bodies like the UK's Financial Conduct Authority (FCA) exist, to protect consumers, promote effective competition, and maintain the integrity of the UK's financial markets.

As part of its work, the FCA actively utilises behavioural insights to identify, diagnose and remedy problems in financial markets and to understand errors people might make when choosing financial products, reasons why people or firms may behave in the way they do and ways that it can better protect consumers. One of the occasions on which it has done so is in assessing the behavioural biases which might be affecting, potentially to their detriment, how consumers choose their retirement income products.

From April 2015, following changes announced in the 2014 Budget, UK consumers achieved greater choice at retirement over how to access their pension savings. The FCA, which operates independently of the UK Government, decided to conduct a retirement income market study to better understand the impact of this change on consumers.

As part of the study, the FCA wanted to explore consumer decision making over their potential retirement income option and how information on the options is presented, or “**framed**”, to consumers impacts their choices. It wanted to take the information gained from its research and use it to help frame the remedies it proposed, which could ensure that the providers offering retirement income products are not taking advantage of individuals' behavioural bias by presenting information in such a manner that would influence their behaviour one way over another, and that the decisions consumers make

concerning their retirement products are as based on as rational assessment of the options available to them as possible.

## Intervention

The FCA designed an experiment to test the effect of different ways of framing retirement income products, and how this affects consumers' ultimate choice between them. It enlisted a nationally representative sample of 907 individuals aged between 55 and 75 years old, drawn at random from 400 000 UK adults, and presented them with hypothetical choices between alternative retirement income strategies that a 65-year-old might face when choosing how to draw retirement income from a GBP 100 000 pension pot.

The options presented were as follows:

- Purchase a level annuity paying GBP 500 per month until death (the annuity)
- Save the money in a cash account that pays GBP 360 a month forever (the savings account strategy) and consume only this income or consume the same income as provided by the annuity (GBP 500) but run out of money when they reach 90 (the self-annuitise strategy)
- Consume GBP 400 per month until they run out of money when they reach 100 (the amortise to 100 strategy), and
- Consume GBP 540 each month until they run out of money when they reach 85 (the amortise to 85 strategy).

Each respondent was presented with a choice between two of these alternatives and the alternative options were varied so that each respondent was faced with 5 pairs of alternatives over the course of the experiment. The way that these choices were presented was framed in three different ways:

1. **Consumption frame** – consumers were presented with information on the amount of money they could spend in retirement – with no mention of product names
2. **Consumption frame**, with the annuity option named as an “annuity”
3. **Investment frame** – information was presented in terms of investment and returns, and the amount of money in the consumer's pension pot was stated clearly in the introductory text and in each of the alternative strategies – with no mention of product names

The consumer was told what happens to the retirement fund upon death for all strategies. The sample was randomly split into three groups, each assigned one of the frames in questions when making their choices between alternative strategies. Results were judged by the proportion of individuals choosing an annuity as opposed to an income drawdown type product for each type of frame.

## Results and impact

The experiment found that, faced with a choice between the annuity and alternative strategies, consumers, on average, preferred the **annuity** under the **consumption frame** but preferred the **alternative** to the annuity under the **investment frame**. When presented



with the options as a choice about consumption, around 70% of individuals choose an annuity, compared with between 20 and 30% when these were presented as an investment choice.

The term “annuity” also affected consumers’ choices. Without using the term “annuity”, 66% of consumers preferred the cash-flows provided by the annuity to those provided by the savings account. In contrast, merely including the word “annuity” in the choice reduces consumers’ preference for the annuity to 50%. The effect of consumers’ demographics was also explored, and researchers found that those consumers without children had a greater preference for annuities compared to those with children.

Size of household income also had an effect. The group was divided into two groups: those with household incomes above GBP 30 000 and those with household income below. Consumers in households with less than GBP 30 000 appeared to respond more strongly to the framing of retirement choices, with more of these consumers choosing annuities under the consumption frame compared to the other group and more choosing the alternative under the investment frame also. Individually the differences between the choices made by these two different groups were not statistically significant but taking the results in their entirety, given the uniformity of the impact of household income on choice, there is some evidence that household income affects the impact of the frames.

The study was able to conclude that consumers’ choices about how they access their retirement income is significantly affected by the way the relevant information is presented to them, with framing annuity choice as an investment creating a behavioural **bias** amongst consumers against annuities. Consumers seem to associate the term “annuity” with poor value products, with the use of the term “annuity” reducing the number of consumers who choose the annuity.

Since retirement income options are currently presented to consumers through an investment frame, with individuals provided with the value of their pot continually during accrual and at the point of retirement, this creates a consumer aversion to annuities. The findings of this study could influence the way the FCA forms rules on disclosure of information in retirement products going forwards in order to address this bias, and support good decision making.

## Institution

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## Switching savings accounts

Country	United Kingdom
Sector	Retail banking
Institution	Financial Conduct Authority
Start of intervention	-
End of intervention	Published January 2015
Objective	Increasing the switching of cash savings accounts by customers
Method	Randomised Controlled Trial applied to a sample of 20 000 savings account customers
Application	The findings formed the basis of a proposal by the FCA of new mandated requirements for savings account decreases, including improving firms' notification and reminder practices to mitigate behavioural biases which could result in foregone return on savings for the consumer

### Problem

Consumers who take out savings accounts with high introductory interest rates do not always switch to a comparable account when the rate ends, which can result in lower returns in the long term. One reason for consumers failing to take action despite financial incentive could be the effect of behavioural biases such as **limited attention**, where consumers pay insufficient attention to their savings choices and **present bias**, which causes individuals to undervalue long-term gains relative to short-term costs.

The UK's Financial Conduct Authority (FCA) formulates financial regulation designed to protect consumers, promote effective competition, and maintain the integrity of the UK's financial markets. To support its work, the FCA actively utilises behavioural insights to identify, diagnose and remedy problems in financial markets and to understand errors people might make when choosing financial products, reasons why people or firms may behave in the way they do and ways that it can better protect consumers.

As part of its mandate to improve financial outcomes for the UK consumer, the FCA set out to investigate whether it could counteract the biases that might be affecting customers' inertia regarding their savings with the use of "**nudges**" that could motivate consumers to consider switching their account.

### Intervention

The FCA, in partnership with a large financial institution in the United Kingdom, conducted a randomised controlled trial involving over 20 000 savings account customers whose interest rate was about to decrease or had just decreased. The purpose of the trial was to test the effect of **reminders** in motivating consumers to switch their savings account. All of these customers had already received a letter two to three months before the rate decrease informing them of the upcoming change.

The participants in the trial were then randomly split into four groups around the time of the rate decrease, each receiving one of the following communications:

1. No further letter (**control**)
2. **Reminder**: A standard reminder letter, which was the same as the standard letter sent to all groups 8 to 13 weeks before the interest rate change. This included information about the previous and new interest rates
3. **Loss reminder**: This used **loss framing** to highlight the financial losses from not switching, and was intended to test whether invoking **loss aversion** induced more customers to act. It used language that aimed to induce feelings of loss, such as “miss out” and “less” and highlighted that customers could be losing money by not switching (“GBP X interest less per year”), as well as including a table showing the customer’s current interest rate and their new interest rate and the cash difference in interest earned on an assumed GBP 10 000 balance
4. **Gain reminder**: This used **gain framing** to highlight the financial gains from switching, using words like “higher” and “earn”. It encouraged customers to compare savings accounts online, as well as highlighting the best interest rate available on a comparable account with the firm, the average of the three highest interest rates available on comparable products in the market, and the cash amount that customers could gain per year on an assumed GBP 10 000 balance if they switched to either of the options (“move your savings and earn up to GBP X more per year”)

Results were measured as the percentage point increase in switching of accounts for each group who received one of the three types of reminder letter relative to those customers receiving no reminder at all.

## Results and impact

Reminders made a considerable difference to switching behaviour across a range of situations. The reminders increased the percentage of customers taking some action following the rate decrease, whether switching their account internally, or closing the account and moving this to another institution, by between **5.4 and 7.9 percentage points**. Customers were 5.4 percentage points more likely to take action as a result of receiving a **standard reminder** than customers who did not receive a reminder, whilst **loss** and **gain reminders** made customers 7.2 and 7.9 percentage points (respectively) more likely to take action than customers who did not receive a reminder.

The smaller difference in impact between the different types of reminders suggests that the very fact of getting a reminder was more important than the precise phrasing of the reminder. This effect was persistent over time. The reminder both increased the number of people switching, and sped up how quickly the same people took action. Reminders were effective at prompting action across customers of all ages and across a range of cash savings balances, including those with balances equivalent to the national average.

The findings revealed that small changes to communications in relation to the decrease of interest rates on savings accounts can have a significant effect on the number of customers who switch and that there is potential for improved disclosure in relation to savings accounts, which can benefit customers and encourage competition. The study

showed that failure to switch is not purely driven by lack of financial incentives to do so, and that well timed messages can help improve the propensity to switch.

Based on these finding, the FCA proposed mandated requirements for savings account rate decreases, which included improvements to firms' notification and reminder practices.

## **Institution**

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## Insurance renewal: Are you paying too much?

Country	United Kingdom
Sector	Insurance
Institution	Financial Conduct Authority
Start of intervention	2013
End of intervention	2015
Objective	Encouraging customers to switch or negotiate their insurance policy at renewal, to avoid paying unnecessarily high prices
Method	Randomised Controlled Trials x3 & Follow-up Surveys x2 (sample size: 300 000 insurance customers)
Application	Diagnosing behavioural problems and understanding what consumers respond to

### Problem

Are you paying too much for your car insurance? The majority of home and motor insurance policies auto-renew annually at a price chosen by the consumer. Although convenient, this could be blinding consumers to potentially more cost-effective options, unless they actively switch or negotiate. As a result, they could be paying unnecessarily high prices for their insurance.

The UK's independent financial regulator, the Financial Conduct Authority (FCA), wanted to find out if improved renewal notices could encourage consumers to switch or negotiate their insurance policy at renewal.

### Intervention

The FCA conducted three field trials to assess how effective offering different types of disclosure to consumers would be in motivating them to negotiate their insurance policy at the point of renewal. It took a sample of 300 000 customers across one home insurer and two motor insurers, and sent them notices which tested the following four types of disclosures:

1. **Salience:** Including *last year's premium* next to this year's premium in renewal notices
2. **Relevant information/Nudge:** Sending a *leaflet* with renewal notice e.g. guide to shopping around
3. **Simplification:** Simplifying renewal notices by using *bullet points* and *simpler language*
4. **Reminders:** Sending *reminders* two weeks after renewal notices.

The customers were randomly split into nine groups, each receiving one of the following types of notice:

- Standard renewal letter (**control**)
- Last year's premium
- Money Advice Service Guide
- Glossary of terms
- Salient bullet points
- Simpler language
- Reminder letter
- Reminder email
- Reminder SMS.

Results were measured as the number of consumers in each group who switched or negotiated their insurance renewal price following receipt of their type of treated notice, compared to the number who did so following receipt of the standard renewal letter.

## Results and impact

Putting **last year's premium** on renewal notices caused between **11% and 18% more consumers** to switch or negotiate their home insurance policy. The effect was larger for consumers offered higher price increases at renewal. Follow-up surveys suggested that those customers who switched also retained a similar level of coverage, so it is highly likely that disclosure of the previous year's premium allowed customers to obtain better value for money on their insurance.

There was little evidence of price increases at renewal for customers at the two motor insurers and including the previous year's premium had no effect. Other changes to renewal notices, including simplifying renewal notices, sending information leaflets, and sending reminders had little or no impact on consumer behaviour.

The evidence suggested, therefore, that disclosing the previous year's premium on insurance renewal notices could likely help some consumers secure better value for money on their home insurance. The same might be the case for motor insurance customers who receive larger price increases than those observed at the firms used in this trial.

## Institution

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## Selling insurance as an add-on

<b>Country</b>	United Kingdom
<b>Sector</b>	Insurance
<b>Institution</b>	Financial Conduct Authority
<b>Start of intervention</b>	2013
<b>End of intervention</b>	2013
<b>Objective</b>	Preventing anti-competition effects in the general insurance market
<b>Method</b>	Field Experiment – 1 514 UK based members of a YouGov survey panel participating in an online simulated experience
<b>Application</b>	Designing appropriate remedies to competition limitations which negatively influence consumer outcomes in the market for general insurance as an add-on

### Problem

Does selling one product alongside another create consumer bias when buying the “extra” item? Are people less likely to shop around for something when it is offered to them on the spot? The Financial Conduct Authority (FCA) is a financial regulatory body in the United Kingdom, operating independently of the UK Government. It formulates financial regulation designed to protect consumers and maintain the integrity of the United Kingdom’s financial markets.

One of the key objectives of the Financial Conduct Authority’s (FCA) work is to promote effective competition in the market in the interests of consumers. In order for it to do this, it must first understand how consumer behaviour influences the competition environment itself.

The FCA’s first competition market study aimed to do this by understanding how consumer behaviour operates in markets for general insurance sold as an add-on to other primary product or service – for example travel insurance sold alongside a holiday package – in comparison to when sold separately as a stand-alone product. It wanted to know whether selling insurance alongside another product would, by its very nature, reduce market competition compared to if all insurance options were presented to the consumer and compared against one another in isolation to any other transaction.

### Intervention

The FCA, London Economics and academics from University College London (UCL) together designed a controlled experiment to find out whether and how the inherent structure of transactions where insurance is offered as an add-on to another (primary) product has an effect on consumer behaviour, and whether such effects would therefore impede effective competition in the general insurance market.

One thousand five hundred and fourteen UK-based members of a YouGov survey panel participated in a simulated online experience of shopping around for and “purchasing” a primary product and an associated optional insurance product. The participants were made up of a broad mix of ages, education levels, household income and levels of financial and problem solving ability.

The insurance products were presented in a variety of different ways, based on insights taken from behavioural science, and testing how each method of presentation affected the consumers’ choice.

The interventions tested were as follows:

- **Control:** These participants were offered only the option of buying insurance itself as a stand-alone product
- **Complexity** of comparing offers that involve individual prices for several products and no clear total price for the bundle as a whole
- Reduced **transparency** due to the price of the add-on product being revealed only at the point of sale of the primary product (POS)
- **Defaults:** A potential option to search for stand-alone offers from independent insurance providers alongside the add-on offer at the point of sale
- **Barriers** to searching for stand-alone alternatives during an add-on transaction.

Participants were randomly assigned to receive one of these five treatments when completing the transaction. That transaction was then presented in one of two ways to test two further techniques that might affect consumer bias:

- **Perceived lower prices:** the cost of contracts were presented in either yearly or monthly insurance terms, testing the effect perceived lower prices if annual contracts were offered in monthly terms
- **Product labelling:** participants carried out the tasks either with five different “realistic” primary and insurance products (car hire, boiler, etc.) or were allocated to an environment where the five products had the same objective characteristics (for example, price, exposure to loss event) but were labelled in abstract terms (“product 1”, “insurance 1”, etc.). This tested how general or context-specific any effects of the add-on mechanism were, as well as whether participants’ choices were sensitive to the types of products, for example whether likelihood of buying insurance was affected by the price of the insurance relative to the cost of the primary product.

The main objective of the study was to investigate whether the inherent structure of transactions where insurance is offered as an add-on to another product has common effects on consumer behaviour across different insurance markets, and whether those effects impede effective competition.

The controlled experimental environment also allowed a careful exploration of how these individual elements of the add-on transaction – and their typical combinations found in the real market – influence consumer behaviour and choices. This allowed the FCA to assess how consumers shop around for insurance and primary products, how consumers decide whether to purchase a product and how much they are willing to pay and how difficult it is for consumers to identify the best deal. The FCA took an entirely novel approach by applying these principles to the sector in question.



## Results and impact

Results were tested against as a number of variables, according to the type of behaviour being analysed, including:

- Shopping around: the number of alternatives viewed or the likelihood of making a purchase without shopping around at all
- Purchasing behaviour: including take-up rates, price sensitivity and average prices paid
- Quality of choices: likelihood and size of errors in choosing the best deal available as well as indicators of the underlying drivers of those errors, such as limited attention (for example, focusing only on the primary price in choosing a supplier) or confusion (for example, surprise at total cost).

Overall, the study found strong evidence that the structure of the add-on transaction materially affects a range of important consumer behaviours including willingness to shop around, deciding whether to buy insurance at a particular price, and identifying best deals available. Through this, the add-on mechanism can significantly affect consumer outcomes.

Individual interventions had the following effects:

- Although the complexity of **comparing offers that involve multiple prices** (without a total cost, rather than buying insurance separately, did not have a material effect on shopping around for insurance, dealing with multiple pieces of information rather than considering them one at a time reduced consumers' willingness to shop around for the primary product and also led to significant deterioration in quality of consumers' decisions – they were much less likely to identify the best available deals, lost more money as a result, and found calculating total costs challenging
- **Reducing transparency** also acted as a powerful barrier to shopping around, leading more than half the participants to buy the first insurance offer they saw without any further search or comparison and losing on average more money, as they were more willing to accept very expensive insurance offers
- On the other hand, providing an option to search for stand-alone alternatives at the point of sale significantly improved consumer outcomes, as participants generally used the option to shop around and were more likely to reject very expensive offers. This still caused only a small increase in the likelihood of consumers being able to identify the best available option, however, suggested that overall complexity and low transparency of add-on alternatives had an ongoing effect. Moreover, even minimal **barriers** to accessing the stand-alone alternative at the point of sale diminished these positive effects quickly
- Presenting prices of annual contracts in monthly terms rather than as the full cost for the year did not change willingness to buy insurance, but the fact that monthly **prices “looked lower”** reduced the likelihood of consumers shopping around, and the extent to which they did so. Participants were also far more likely to change their minds about buying a particular insurance product when shown the total cost just before confirming their purchase, than when faced with full yearly prices from the start, suggesting they found the monthly format more confusing

- Product labels did not change outcomes, suggesting that it was the structure of the transaction, rather than product-specific features, driving the observed behaviours amongst participants.

The study helped to inform the understanding of how different structure of transactions and the timing when prices are revealed affects the extent and effectiveness of consumers shopping around and their purchasing decisions. It uncovered material ways in which different elements of buying insurance as an add-on can contribute to poor consumer outcomes, as well as important interactions between these elements.

The insights offered by the experiment will allow the FCA to design appropriate behaviourally-informed remedies to competition impediments in the market for general insurance add-ons, as well as more widely in other market contexts.

## Institution

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## Understanding structured deposits

<b>Country</b>	United Kingdom
<b>Sector</b>	Retail markets
<b>Institution</b>	Financial Conduct Authority
<b>Start of intervention</b>	October 2013
<b>End of intervention</b>	December 2013
<b>Objective</b>	Assess the understanding of structured products by retail investors
<b>Method</b>	Online Experiment applied to a sample of 384 retail investors who had bought, or were considering buying structured deposits
<b>Application</b>	Improving regulation of how information about complex financial products is presented by firms to potential investors to address misjudgements informed by behavioural biases

### Problem

Do you really know what you are investing your money in? Innovation in retail financial markets has led to increasing financial product complexity over the past two decades. However, there has not necessarily been a comparable increase in consumers' financial capability to match this. Moreover, when it comes to complex financial products, product features and marketing strategies often exploit behavioural biases, such as focus on headline returns, reference dependence and loss aversion.

The UK's independent financial regulator, the Financial Conduct Authority (FCA), was concerned that potential investors might not be able to understand and adequately assess the products they consider buying, leading to financial detriment. In an effort to better regulate cases where products may be mis-sold to the average investor, the FCA set out to investigate how well consumers understand and value one particular class of widely available complex financial products: structured deposits.

### Intervention

Behavioural science can play an important role in understanding why investors may struggle to understand and assess complex products – insights which can then be effectively used to regulate the way that financial products are designed and presented to the consumer.

Structured deposits are capital-protected term investment products whose returns are typically linked to the performance or price movements of an index or basket of securities and calculated according to a pre-set formula. The FCA's study explored to what extent investors understand how different types of structured deposits work, whether there are systematic biases in investors' evaluation of the expected performance of the structured deposits and whether providing targeted information improves this evaluation. It conducted a survey of 384 retail investors, randomly selected, 80% of who were past

structured product holders, and 20% of who were self-identified potential buyers of this type of product.

The survey consisted of four stages:

1. Structured deposits were described to the investors, who were then taken through multiple choice questions to test whether they had understood them. Respondents were asked respondents what they expected the products to pay based on an initial GBP 1 000 investment and the equivalent annual rate of return and how likely these products were to outperform two benchmarks, 0% return and a fixed return of 3.0% per year over five years. They were then presented with three of five potential products (randomly assigned) of increasing complexity and asked to rank them according to preference
2. The FTSE100 was explained to investors and investors were asked about their views on the performance of the FTSE100 index over the next five years. This was to distinguish between expected returns driven by overall optimism about the market and difficulty in understanding how structured deposit returns derive from an underlying index. The investors' expectations about FTSE100 returns were compared with the returns they expected from different structured products, allowing the researchers to calculate **bias** in how respondents evaluate the structured deposits relative to the index
3. Investors were asked to rank the structured deposits against a range of fixed rate deposits and taking into account the risk of return of the different structured deposits

Three types of **disclosure** about likely payouts of the products under various scenarios and the risk associated with these products were given to the respondents:

1. "Scenarios": information on the product returns given three different FTSE100 performance scenarios (5 000, 7 000 and 8 000)
2. "Scenarios&Charges": information on the returns given three scenarios plus information on the implicit charges of the products. Respondents may have disregarded the fact that all structured deposits have a built-in charge, so this measured the effect of stating the implicit charge on revaluation
3. "Payout": this contained expected product returns obtained from a quantitative model created by FCA's Complex Products Specialists Team.

The version of disclosure presented to each investor was randomised, with there being was a 25% chance of seeing each of Scenarios and Scenarios&Charges, and a 50% chance of seeing the Payout version.

## Results and impact

The study found that, although the vast majority of investors in our survey understood the basic product features, investors did not seem to understand well how product returns are related to the performance of the underlying measure.

The vast majority of investors, especially those without a university degree, reported expectations of structured deposit returns that were inconsistent with their own expectations of the FTSE index growth. This was true even for the simplest structured deposits. Investors estimated structured deposit returns to be much higher compared to

what would be consistent with their expectations of the FTSE index and to the predictions of quantitative model used to design the structured deposits. They overestimated expected product returns by 1.9 percentage points per year on average, adding up to 9.7 percentage points over the five-year term.

Although all five structured deposits in the survey would have been unlikely to return more than simple fixed-term cash deposits, respondents did not recognise this. Investors required relatively high rates of return on risk-free cash deposits to value them over and above structured deposits around 10% of the valuation in terms of the average required rate on a cash deposit was due to the previous overestimation of structured deposit returns.

The disclosure of likely product returns and risk had some effect on investors' ability to adjust for initial incorrect valuations. Investors who had initially overestimated returns or underestimated risk of return were more likely to adjust their valuations following further information. Sixty one per cent of the 337 respondents revalued at least one out of three products they assessed, and 21% revalued all three products after disclosure.

The disclosure of likely product payouts, such as expected return and the chances of receiving at least a certain rate of return, helped respondents more to correct their valuations compared to simply stating what the products would return under various FTSE100 performance scenarios, reducing the valuation of overvalued products by roughly a one-third, whilst the average effect of either "scenarios" disclosure was less than half of this.

The findings from the study showed that investors' understanding of structured deposits is limited: expected returns were consistently overestimated across all five products, even after controlling for investors' expectations of the underlying index. This has important and potentially detrimental implications for consumer outcomes.

Understanding the behavioural biases that lead to this misjudgement on the part of consumers, such as **extrapolation of past performance**, **focusing on headline return**, **loss aversion** and **exponential compounding bias**, enables the FCA to consider how firms present these kinds of product to consumers by focusing on:

- how firms can credibly demonstrate that advisors receive the information needed to address the effects of investor biases when selling such products
- making sure costs are disclosed as a separate fee rather than deducted from the investment amount or built into the products, as investors may overlook them when estimating the realistic returns of the products
- Improving disclosure based on various types of targeted information, in particular likely product returns, to mitigate the inexplicably high expectations of returns.

## Institution

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## Encouraging customers to claim redress

Country	United Kingdom
Sector	Financial Service: Redress
Institution	Financial Conduct Authority
Start of intervention	2013
End of intervention	2013
Objective	Encouraging more customers to claim financial redress
Method	Field Trial conducted on 200 000 customers of a firm who were due redress
Application	Altering the letters sent by firms to customers informing them that they are due financial redress

### Problem

The Financial Conduct Authority (FCA) is a financial regulatory body in the United Kingdom, operating independently of the UK Government. It formulates financial regulation designed to protect consumers, promote effective competition, and maintain the integrity of the UK's financial markets.

Redress to consumers following the mis-selling of financial products is an important regulatory tool to secure an appropriate degree of protection for consumers. Although large redress exercises such as PPI receive considerable publicity, many other instances where consumers are due redress do not. In these cases, the firm alerts customers to a potential issue, often in the form of a letter that gives customers information, which they need to answer.

However, the FCA found that some customers do not respond, even when they have been mis-sold and when it would be in their interest to act. It hypothesised that one reason for this may be that the relevant information is obscured or more complex than necessary, or that consumers suffer from inertia. Firms alone may not have sufficient incentives to correct these issues.

The FCA wanted to find out how it could encourage more consumers who may be due redress to respond to letters, by adjusting the letters themselves.

### Intervention

Using insights taken from behavioural science, the FCA ran a field trial on a real case: a firm that was voluntarily writing to almost 200 000 customers about a failing in its sales process. The FCA developed seven amendments to the standard letter sent being sent by the firm to consumers due redress:

1. **Urgency:** Adding a message to “act quickly” to a plain envelope
2. **Visual cue:** Using the FSA logo in the letter head

3. **Salience:** Replacing the two bullet points at the top the letter with more salient bullet points
4. **Simplification:** Making the body of the letter simpler and more concise, by reducing the text by 40%
5. **Information/Time-Cost /Ease:** Including a sentence in bold explaining that the claims process would only take five minutes
6. **Personalisation** with CEO signature: Using the firm CEO's signature to sign the letter, instead of a generic "Customer Team"
7. **Reminder:** Sending a second letter three to six weeks after the first.

Over a five-week period the firm contacted different groups of consumers with various letters, some receiving the firm's original letter (the control) and some featuring different combinations of the amendments. For each of the seven features listed, it randomly varied whether a particular customer received the treatment or control version. As seven features were varied, each with two versions, there were 128 possible combinations in total and so 128 groups of customers.

The FCA made sure that each of these groups was the same in terms of important customer characteristics, such as age and amount of redress owed, so that the results could be fairly compared.

## Results and impact

**Salient bullets** had the largest single effect out of all the interventions, increasing response rates to the letter by **3.8 percentage points** over the control, just over 2.5 times compared to the original letter. Simplification and including a sentence about the claims process each increased response by 1.4 percentage points, almost doubling the response rate. Changing the envelope had only a small positive effect and there was no impact of using FSA logo. There was actually a small but statistically significant decrease in response using CEO signature.

The interactions between different treatments to the letter produced some interesting results. For example, although using salient bullets and simplification of the letter each encouraged response separately, having both together had less of an effect than merely adding the two separate responses – a 'negative interaction'. Alternatively, the reminder, which was a copy of the original letter and so can interact with the other treatments, had much more of an effect if included salient bullets – a 'positive interaction'.

Reminder letters, sent out between three and six weeks after the original letter, also produced significantly higher responses when sent at the three week point itself.

Although there was little difference in response between gender, or according to the amount of redress the customer was due, age was a significant factor influencing the effectiveness of the interventions used. Receiving the control letter, the middle-aged responded the least and older age groups responded far more. However, when sent the best letter, the young responded the least and response increased with age. This showed that, in this context, behavioural "nudges" have the greatest relative effect on the middle-aged, who are arguably the busiest.



The best combination – using **salient bullets** and a **reminder** letter – improved the response rate from 1.5% (the control) to almost 12%. This was equivalent to an additional 20 000 people claiming redress.

The researchers were able to conclude that making subtle changes to the presentation of information can have large effects. Simplification, bullet points, reminders and providing information on the time-costs of claiming all improved response rates, and additionally in interaction with each other. However, using a logo and CEO signature did not, suggesting that personalising the messenger or including a credible third party is not effective in making a difference to whether people claim.

The results therefore showed that tailoring the letters to increase the readability of letters is the most effective. The effects of **salience** and evidence that the middle-aged respond the least, suggests that when people do open these letters, they process the information very quickly. **Reminding** people therefore helps, and is likely to work as a prompt as well as a signal of importance.

The FCA intends to apply the findings from this trial to other redress exercises to help improve consumer outcomes.

## Institution

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## Building a letter: Engaging customers about their interest-only mortgages

Country	United Kingdom
Sector	Financial services / mortgages
Institution	Financial Conduct Authority (FCA)
Start of intervention	2013
End of intervention	2013
Objective	Encourage consumers to consider how best to repay their interest-only mortgage
Method	Randomised Controlled Trials that tested the effects of four different message framing on customer response rates to letters sent about their mortgage
Application	To inform the framing of messages in communications with customers

### Problem

In 2013, over two and a half million customers had interest-only mortgages (i.e. where the loan is not repaid until the end of the mortgage term). Some 600 000 of these mortgages were due to mature before 2020. FCA research showed a significant minority of people did not have repayment plans in place to repay their loans at the end of their term. Therefore, in May 2013, the FCA published guidance on dealing fairly with interest-only mortgage customers who risk being unable to repay their loan.<sup>1</sup>

The FCA and the industry wanted to increase engagement from customers with the letters that firms were providing. This was to ensure that customers thought about their repayment plans and to encourage them to contact their providers to discuss potential options. The FCA worked with one provider to test the specific messages included in the letters they sent out over a six-month period in 2013.

From previous research carried out by the FCA and elsewhere, it is known that the specific **wording** and **framing** of messages in letters can have profound effects on consumer engagement and subsequent actions. The current research had two aims – to understand how results from other research might be generalisable to this context; and, for this specific case, to help inform interest-only mortgage providers, the Council of Mortgage Lenders and the Building Societies Association.

### Intervention

The FCA worked with an interest-only mortgage provider to run a randomised controlled trial. 8 004 customers were stratified by loan-to-value ratio, age, time to the end of the mortgage period and remaining mortgage outstanding, and then randomly assigned to the control or one of four treatment groups.

1. [www.fca.org.uk/news/interest-only-mortgages](http://www.fca.org.uk/news/interest-only-mortgages).

The five letters were:

1. **Control:** Standard letter written by the firm
2. **Riskless:** Removing the standard repossession risk warning (“Your home may be repossessed if you do not keep up repayments on your mortgage”)
3. **Non-personal:** Removing a table of personal data which included balance and time left on mortgage
4. **Bullets:** Summarising the key information in bolded bullet points at the top of the letter, and
5. **Friendly:** Removing the risk warning and re-writing the letter to be friendlier and more informal in tone.

The firm was able to monitor a number of outcomes including:

- Whether the customer proactively contacted the provider, and
- Whether the customer was open to discussing potential repayment options when contacted by the provider.

## Results and impact

After removing duplicates and those in arrears or who had complained, who may have been treated differently, we analysed data from 7 319 customers.

The rate of response was low (5.5% in the control group). Customers were more likely to respond if they had opened the account within the last six years, were within two years of maturity or if they received the letter in July or October.

Removing the repossession risk warning and making the letter more informal led to statistically significant 1.5% and 2% increase in responses, respectively. Adding bullets reduced the response rate by 1.8% (statistically significant) and removing personal information made no difference from the control.

The results of this trial show that less is more in this context and simplicity is likely to improve response rates. It appears that removing the risk warning on this letter (the warning was not mandated in this case) actually increased the response rate, particularly when combined with a more informal tone. It is possible that this is because the risk warning might scare customers and lead them to put their head in the sand rather than engage with the firm.

However, this result should be seen in the context of this experiment rather than extrapolated, as for example, the FCA was not able to observe the potential long-term educational benefits of the risk warning nor of the effects of risk warnings in other types of product information, such as advertisements.

It is also notable that bullet points reduced response rates, in contrast to the findings in the literature. This is likely to be due to contextual factors; for example, the situation and product in this trial was more complex and the call to action may have been less predictable (calling to discuss plans for a mortgage product, as opposed to claiming redress).

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*Source:* Smart, L. (2016). "Full Disclosure: a round-up of FCA experimental research into giving information", Financial Conduct Authority (FCA), *Occasional Paper 23*, <https://www.fca.org.uk/publication/occasional-papers/op16-23.pdf> (accessed 14 January 2017).

## Please take your cash: Encouraging consumers to claim redress from incomplete cash machine (ATM) transactions

Country	United Kingdom
Sector	Financial services
Institution	Financial Conduct Authority (FCA)
Start of intervention	2012
End of intervention	2013
Objective	Encourage consumers to reclaim money they lost as a result of not taking bank notes requested from and presented by the ATM
Method	Randomised Controlled Trials applied to three treatment and one control design of letters sent to consumers
Application	Results confirm the importance of taking the context into consideration when designing interventions with consumers, as well as the framing

### Problem

Customers of a firm had attempted to withdraw money from ATMs between 2004 and 2011 but had failed to take the money from the machine when it was offered. The money was then debited from their account as normal. Consequently, a redress exercise was undertaken in 2012/2013 to return this money. Some of the customers entitled to redress had since closed their accounts and therefore the firm needed to write to them to get new bank details in order to repay them.

The average (mean) redress due was GBP 95, which included the original value that had been debited but not withdrawn from the ATM and an additional interest payment dependent on the length of time since the failed transaction. The FCA worked with the firm to run a randomised controlled trial to test whether different ways to simplify or frame the information might improve customer take-up of redress.

### Intervention

The FCA tested the firm's original design with two changes: using bullet points and adding information about the process for claiming. They tested four letters:

1. **Control:** Standard letter written by firm
2. **Bullets:** Summarising key information in bullet points at the top of the letter, including the amount that was owed and why and the action the customer could take, with the message "ACT NOW: You are less likely to respond if you delay"
3. **Process:** Summarising the ease of claiming redress in a numbered list in the body of the letter ("1. Complete the attached form within 28 days, being careful to fill out the correct account details. 2. Post the form to us using the provided pre-paid envelope"), and

#### 4. **Bullets and process:** Both treatments included.

A total of 5 589 customers were randomly allocated to receive one of the letters, using a stratified sampling approach which took account of all observable characteristics: the length of time since the ATM use, the amount the customer tried to withdraw, gender and one further characteristic which we redact to protect the anonymity of our partner. As some customers received letters with both changes, we were also able to investigate whether there were any interaction effects.

The firm was able to monitor a number of outcomes including:

- Whether the customer returned the form and therefore claimed the redress, and
- Whether the customer contacted the firm and for what reason.

### Results and impact

Around half of the customers received redress following the trial. In total 2 839 (50.8%) consumers made a claim and received an average redress amount of GBP 95. As expected, those owed more were more likely to make a claim. They also find that more recent transactions were more likely to be reclaimed, which is likely to be a result of reducing address accuracy over time. In fact, this means that the proportion of eligible customers claiming redress could be much higher than observed.

In line with previous research from the FCA, they find women are more likely to respond than men. Joint account holders were even more likely to respond, perhaps because these individuals are more likely to have stable addresses.

The FCA also finds that the Bullets and Process treatments do not affect whether customers claim redress. This is in contrast to the findings of FCA Occasional Paper 2, which found that both salient bullets and text explaining the process for claiming increased the proportion of consumers claiming redress. They note that, in this instance, the average amount claimed is much higher (GBP 95 in this research compared to GBP 21 in Occasional Paper 2) and the proportion of customers claiming redress in the control group is also much higher – in this instance over 50% of customers claimed redress.

While not affecting the level of redress, the bullet treatment led to significantly more customers contacting the firm. Many calls were regarding the letter's authenticity and concerns that the letter might be a phishing scam. Like all the letters, the customer was asked to provide bank details, but perhaps the direct way in which the Bullets letter phrased this request made some people uneasy.

The trial shows that context is very important when designing interventions. While efforts to make communications simpler, such as bullet points and summarising the process to claim might work in some redress cases, in others there may be a risk that changes in directness or style cause customers to question the authenticity of the letter. It is important to be mindful of the specific context of a communications exercise to avoid unintended effects. Where possible, qualitatively road-testing treatment ideas – for example, through user experience testing or interviews – may unearth unexpected effects before putting them into the field.

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## Just for you: Using personalisation to attract attention

Country	United Kingdom
Sector	Financial services / insurance
Institution	Financial Conduct Authority (FCA)
Start of intervention	2014
End of intervention	2016
Objective	To encourage customers to vote on a scheme to review the sale of insurance products
Method	Randomised Controlled Trial testing the effect of handwritten letters for 100 customers receiving redress communications from an insurance firm
Application	To inform understanding of salience in customer communications

### Problem

The FCA worked with a firm which was writing to policyholders of an insurance product as part of a redress exercise. The first part of the exercise involved giving customers the opportunity to vote on a proposed scheme for the company to review the way the product was sold.

In many cases, responses to redress exercises and other letter-based communication campaigns can be low. There is some evidence that **handwritten communications** can increase **salience** and encourage more recipients to open letters and take action. The FCA wanted to find out whether handwritten envelopes would increase the number of customers who responded in this case.

### Intervention

The FCA was restricted to selecting a quasi-random sample of 100 customers from one cohort of those receiving letters (n=20 288) to receive handwritten envelopes. For logistical reasons, the 100 selected were the first consecutive group of 100 customers from the customer list who had not already been in contact with the firm about their insurance product. After removing duplicates (288) and those who had already contacted the scheme (648), the total sample used in the experiment was 19 352, with a control group of 19 252 and a treatment group of 100.

The treatment group of 100 customers received letters in handwritten envelopes and the remaining customers formed a control group, receiving letters in printed envelopes. From this experiment, the firm was able to measure:

- Whether the customer voted on the scheme, and
- Whether the customer claimed redress and whether their claim was upheld.



## Results and impact

In the whole sample (n=19 352), 4 071 customers (21%) voted and 5 462 (28%) got in contact with the firm in relation to redress, with 5 411 customers (28%) ultimately receiving redress.

Analysis showed that randomisation was effective and customers in the treatment and control groups were similar on observable characteristics, including age, gender and region.

Results also showed that there were no statistically significant effects of handwritten envelopes on voting rates or rate of claiming redress.

The FCA also looked at the effect of demographic characteristics on voting rates. Customers living in the North East were more likely to vote. There was an effect of age amongst those whose age the FCA knew (about half the sample): both younger people and older people were less likely to vote, with the peak voting age around 65 years. Customers whose age was unknown were less likely to vote than those whose age was on file.

It is likely that the non-significant effect of the handwritten envelopes is because the trial was underpowered, due to logistical constraints which required a small treatment group. Analysis shows that the experiment had a power of 24.6% for voting rate and 9.6% for claim rates, which is much lower than the 80% usually recommended for social science experiments. While the size of the treatment group was known before the start of the experiment, the FCA had limited control over this and the trial itself was attractive in being relatively simple, since the redress exercise was going ahead anyway. However, it is important in such cases to balance the benefits of testing with the limitations of small samples and to prioritise potential trials accordingly.

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## Attention, search and switching: Evidence on mandated disclosure from the savings market

<b>Country</b>	United Kingdom
<b>Sector</b>	Financial services / consumer choices
<b>Institution</b>	Financial Conduct Authority (FCA)
<b>Start of intervention</b>	Summer 2015
<b>End of intervention</b>	Autumn 2015
<b>Objective</b>	To test the effects of three potential regulatory interventions aimed at helping consumers make better decisions about switching savings accounts
<b>Method</b>	Five randomised controlled trials with five partner financial institutions, testing the effects of search and comparison, ease of implementation and attention on 130 000 consumers
<b>Application</b>	To assess potential policy remedies, including better disclosure, in retail financial markets that will better protect consumers and improve competition

### Problem

Cash savings accounts are the most popular form of household savings in the United Kingdom: 93% of consumers have a savings account amounting to total holdings of GBP 700 billion. Instant access savings accounts, in particular, are among the simplest financial products – their key feature is the interest rate payable on the balance.

Yet significant differences in interest rates persist on similar accounts within providers and across the market. Many providers offer higher interest rates on a visible set of accounts (front book) while reducing the rates on legacy accounts (back book). In principle, higher front-book rates may persuade consumers, especially those on the “back-book” rates, to switch. But in practice this is not widespread — most consumers seldom switch their savings accounts and miss out on higher interest earnings.

The FCA’s review of the UK cash savings market identified several causes for this behaviour: consumers pay little attention to their interest rates, do not search for and compare their accounts to higher paying accounts, and even when they know there are higher paying accounts, they fail to switch. The FCA concluded that, among other things, providers could improve their communications with their customers to help them make better informed decisions, and proposed several remedies, including better disclosure – one of the most popular types of regulatory interventions in retail financial markets.

To inform the FCA’s policy development, they tested the importance of disclosure design in protecting consumers and improving competition.

### Intervention

In designing their intervention, the FCA concluded that, among other things, providers could improve their post-sale communications with customers to help them make better informed decisions and proposed testing regulatory interventions in three areas:

1. **Search and comparison:** Consumers may underestimate the benefits from switching by underestimating the probability that there may be a better deal by other providers. The FCA proposed a “switching box”, which consisted of mandatory disclosure of better alternative products by providers to their customers and would be included in typical communications, such as annual statements of transactions and rate change notifications
2. **Ease of implementation:** Switching itself can be costly and involve a number of steps that are not necessarily known to a consumer upfront, such as paperwork, finding and sending information, and activating their account. The FCA proposed a ‘return switching form’ that would be pre-filled with available customer details and would enable the customers to simply tear-off and return the form in a pre-paid envelope
3. **Attention:** Focusing and maintaining attention over time is costly as information overload, cognitive costs of keeping on track, and limitations to prospective memory can contribute to a failure to act. Since timing is important, the FCA proposed introducing reminders to customers when rates on their savings were decreasing.

To examine empirically the importance of each of these interventions, the FCA, with help from five UK deposit-taking institutions, ran five randomised controlled trials. The trials, one with each financial institution, involved 130 000 savings account holders. The trials were:

1. *Front-page switching box:* Presents different degrees of information on the front page of an annual statement
2. *Reverse-page switching box:* Presents different degrees of information on the reverse of a rate change letter
3. *Return switching form:* Letter tear-off pre-filled for a switch to a higher rate-paying account
4. *Digital reminder:* Rate decrease reminder via email or SMS
5. *SMS reminder:* Rate decrease reminder via SMS.

Customers were assigned randomly into treatment and control groups. The control groups received standard treatments from their banks that differed across trials.

The trials highlighted an opportunity for customers to switch to an equivalent but better paying product, in some cases when the interest rate on their savings was decreasing. The FCA oversampled consumers with large balances in all trials relative to the market to ensure sufficient power to detect switching behaviour among consumers with ample financial motivation to do so. However, they included customers with lower balances to understand the applicability of their findings to those customers.

## Results and impact

Among the interventions, a simple pre-filled return switching form (Trial 3) and well-timed reminders (Trial 4) led to the highest absolute increases in switching. The return switching form increased switching from a baseline of 3% to 12% (9% increase), whereas reminders increased switching from 4.7% to 8.2%.

Prominent disclosures – in particular front page information on better available products (Trial 1) – had marginal, but statistically significant, positive effects, increasing switching from 2.7% to 5.6%. However, non-front page disclosures showed no effect (Trial 2).

The FCA also show suggestive evidence that reminders were more effective when sent shortly before the rate decrease, compared to other timing (Trial 4), consistent with previous research. The switching level in the control groups differed significantly across trials in line with different product contexts and customer samples.

Overall, around half of the people switching in the trials chose to switch to a comparable higher-paying account with their current provider, while the remainder chose different accounts or different providers. The treatments in all trials increased switching within the current provider without stimulating switching to higher rate-paying alternatives on the market. This suggests that multiple factors influence consumer choice of provider.

Despite switching taking only 15 minutes on average, as reported by respondents of the follow-up survey, the switching level is low (17% across all trials) – even among consumers given relevant information about more attractive interest rates.

One explanation is that the amounts of money at stake for many savers were too low to justify switching: for half of the consumers across all trials the amount of additional annual interest income from switching is less than GBP 32. The FCA finds some evidence for this explanation (e.g., switching is higher among savers with higher balances, who benefit more from switching, and among retired depositors, who may be able to dedicate more time to switching). But, switching varies to a limited extent with the level of additional interest income and many consumers in our sample with high amounts of money at stake still do not switch.

Overall, the FCA concludes that good timing, salience of better alternatives, and a straightforward way to take an informed action helped to mitigate the obstacles consumers face, and to some extent increased switching to better alternative products. However, disclosure interventions stimulated switching only within the current providers and had no effect on switching to better-paying products offered by other providers. Their interventions, especially the return switching form, had modest positive effects in increasing switching by long-standing customers on a low interest rate. Their findings reveal that while in some segments of the market there is a notable level of switching when interest rates decrease, limited consumer attention, coupled with the inconvenience of switching, prevents widespread account switching.

## Institution

The United Kingdom's Financial Conduct Authority (FCA) is an independent financial regulatory body in the United Kingdom, which is financed by charging fees to members of the financial services industry. The FCA has three statutory objectives: to enhance market integrity; to secure an appropriate level of protection for consumers; and to promote competition. It actively utilises behavioural science alongside other regulatory tools in research and policy making to achieve its operational objectives.

The FCA has a specialised Behavioural Economics and Data Science Unit (BDU), made up of economists, computer scientists and psychologists. The BDU carries out original research and helps the FCA to apply behavioural insights. Many others in the organisation, including the Chief Economist's department and members of the Policy arm of the FCA also apply behavioural economics in their routine work. All trials and research conducted by the FCA go through a robust review process, in which ethical and other risks are assessed and where appropriate, mitigated.

*Source:* Adams, P. et al. (2016), “Attention, Search and Switching: Evidence on Mandated Disclosure from the Savings Market”, Financial Conduct Authority, *Occasional Paper 19*, <https://www.fca.org.uk/publication/occasional-papers/occasional-paper-19.pdf> (accessed 12 January 2017).

## Promoting retirement security

Country	United States
Sector	Financial services/retirement income products
Institution	Department of Defence (DOD) / Social and Behavioural Sciences Team (SBST)
Start of intervention	Spring 2016
End of intervention	Spring 2016 (5 weeks)
Objective	Increase enrolment among military employees in the Thrift Savings Plan, the Federal Government's defined contribution plan
Method	Pilot tests at Army installations in Fort Bragg, North Carolina and Fort Lewis, Washington
Application	Discover solutions for incumbent military service members to increase enrolment in the Thrift Savings Plan

### Problem

Since 2010, civilian agencies have automatically enrolled new hires in the Thrift Savings Plan (TSP), the Federal Government's defined contribution plan, and enrolment rates for civilian Federal employees are relatively high at 87%. Military employees at DOD, by contrast, are not currently automatically enrolled and participation rates are correspondingly lower at 44%.

Beginning in 2018, mandatory automatic enrolment will begin for new military service members, opening TSP accounts automatically for more than 100 000 service members who join the military each year. SBST is working with DOD on other solutions for incumbent service members who will not be affected by this policy change.

### Intervention

SBST and DOD are expanding on two previous pilots completed in 2015. The first sent a one-time email promoting TSP to more than 800 000 non-enrolled service members, resulting in approximately 5 000 new enrolments and over USD 1 million in additional savings in one month. The second demonstrated that prompting service members to make an optional decision about TSP when they were transferred to a new military base increased enrolment rates by roughly 4.3%.

The 2016 pilot expanded this prior work by implementing an **active choice** intervention at two military bases. This intervention required service members to make a decision about TSP enrolment as they were transferring to new military bases, which is shown by behavioural science research as an effective tool for boosting savings plan enrolment.

This active choice intervention was piloted at Army installations in Fort Bragg, North Carolina and Fort Lewis, Washington over a five-week period in spring 2016. At Fort Bragg, service members were required to submit a modified TSP Election Form with three options: "Yes, I choose to enrol and save," "No, I choose not to enrol and save," or

“I’m already enrolled.” At Fort Lewis, service members were asked to raise their hand at orientation if they wanted to enrol in TSP, and were then led to computers to enrol online. Service members were also provided with a cover sheet and video highlighting the benefits of TSP saving. Results were compared to three other military bases who did not receive the active choice intervention over the same time period.

## Results and impact

SBST and DOD found that requiring an active choice resulted in substantially higher TSP enrolment rates. Enrolment rates at Fort Bragg and Fort Lewis during the five-week pilot period were 10.7% and 8.4%, respectively, compared to a maximum of 1.9% at the other three bases. Taking into account differences across both the time periods and the different bases, the active choice intervention led to an estimated 8.3 percentage point increase in the probability of a service member enrolling in TSP within 4 weeks of the orientation.

## Institution

The Social and Behavioural Sciences Team (SBST) is a cross-agency group of applied behavioural scientists, programme officials, and policymakers—with providing policy guidance and advice to Federal agencies. SBST is a unit located in the Executive Offices of the President under the National Science and Technology Council. SBST was created in accordance with Executive Order 13707, “Using Behavioural Science Insights to Better Serve the American People,” issued by President Obama on 15 September 2015. The Order directs Federal Government agencies to integrate behavioural science insights into the design of their policies and programmes.

The Order calls for the Assistant to the President for Science and Technology, on behalf of SBST, to provide agencies with advice and policy guidance in pursuit of the Order. This guidance helps agencies identify promising opportunities to apply behavioural science insights to Federal policies and programmes. It is organised around four key aspects of Federal policy where research and practice show that behavioural factors may play an especially strong role in programme outcomes: determining access to programmes, presenting information to the public, structuring choices within programmes, and designing incentives.

Department of Defence is America’s oldest and largest government agency as well as the largest employer in the United States. DOD employs over 1.3 million personnel on active duty, 826 000 in the National Guard and Reserve forces, 742 000 civilian personnel. More than two million military retirees and their family members receive benefits.





## Chapter 9

### Behavioural insights case studies: Health and safety

*This chapter provides a series of case studies detailing how behavioural insights have been applied in OECD member and partner countries as a tool for promoting healthy lifestyles, improving access to medical treatments, and changing organisational behaviour. Case studies presented utilise a breadth of experimental methods, ranging from resource-intensive randomised controlled trials to relatively less resource-intensive literature reviews. The open and transparent sharing of what works, and what does not, is vital to ensuring that good quality research and findings are shared widely.*

## Reducing unintended blindness through colour-coded observation charts

Country	Australia
Sector	Health
Institution	New South Wales (NWS) Health and the Clinical Excellence Commission
Start of intervention	2010
End of intervention	Ongoing
Objective	To implement the Between the Flags (BTF) to provide a safety net for deteriorating patients
Method	The implementation of a behaviourally-informed “Standard Observation Chart,” which contains colour-coded Clinical Review and Rapid Response zones
Application	To inform similar future policy interventions that reduce unintentional blindness and cognitive load biases

### Problem

Attracting attention to an idea or behaviour is often difficult to do. Behavioural biases such as “**unintentional blindness**” and heavy “**cognitive loads**” often limit our responses to problems. In New South Wales (NWS), Australia, the Clinical Excellence Commission noticed that a **failure to recognise** and appropriately respond to patients who are clinically deteriorating is a significant issue, not just in NWS but in hospitals around the world.

As a result, the NWS government tested an intervention based on research and “human factor” principles called the NSW Health Standard Observation Chart.

### Intervention

The NSW Health Standard Observation Chart was implemented in response to a recommendation from a major health review, the Garling Commission of Inquiry, which identified the Clinical Excellence Commission’s programme as an opportunity to improve recognition and response to deteriorating patients. In 2010, NSW Health introduced the state-wide Between the Flags programme, with the aim to improve early recognition and response to clinical deterioration and thereby reduce potentially preventable deaths and serious adverse events in patients who receive their care in NSW public hospitals.

The Between the Flags (BTF) programme is the largest and most comprehensive of its kind anywhere in the world, and on the expert advice of the BTF Steering Committee introduced a five-element strategy in all public hospitals across the state which together provide a safety net for deteriorating patients, including:

- Governance structures to ensure ongoing support and sustainability for the programme
- Standardised calling criteria (incorporating a suite of standard observation charts)

- Clinical Emergency Response Systems (CERS), including minimum standards for escalation including processes for both Clinical Review and Rapid Response
- Specially developed education materials, designed to address a gap in knowledge and skills regarding the recognition and response to deteriorating patients, and
- Standard key performance indicators.

An essential element of BTF is the incorporation of the calling criteria into the NSW Health Standard Observation Charts. The charts are “track-and-trigger” tools, color-coded with the Clinical Review (Yellow Zone) and Rapid Response (Red Zone) calling criteria.

The track-and-trigger tool refers to an observation chart that enables vital sign observations to be graphically recorded, with trigger zones clearly identified. These colors help healthcare practitioners easily see when patients are deteriorating. Observations that are recorded in the yellow zone trigger a clinical review of the patient. Observations in the red zone trigger a rapid response

## Results and impact

An interim evaluation report on the BTF system was released in 2013. The report found that the programme as a whole is associated with a 25% reduction in unexpected cardiac arrests. Furthermore, it is popular among staff, finding that:

- 70% of staff agreed/strongly agreed that “the ‘Yellow Zone’ on Between the Flags charts has assisted earlier detection and management of patients at risk”
- 80% of staff agreed/strongly agreed that “the Clinical Emergency Response Systems (CERS) policy has improved the system for obtaining urgent assistance when a patient is clinically deteriorating”
- 87% of staff agreed/strongly agreed that Yellow Zone assisted in earlier detection and management of patients at risk of deterioration
- 82% of staff that agreed/strongly agreed that the extra tier (Clinical Review) has improved patient safety overall.

The evaluation concludes that there is strong evidence to suggest that the Between the Flags Programme is achieving its overall aim of reducing harm to patients from a failure to recognise and respond to deterioration.

## Institution

NSW Health, which is part of the NWS Government, is the biggest public health system in Australia with more than 230 public hospitals and around 108 000 dedicated staff (FTE) who make up the health workforce.

The Clinical Excellence Commission (CEC) provides leadership in safety and quality in NSW to improve healthcare for patients. It was established in 2004 as one of the five key structural reforms outlined in the NSW Health Patient Safety and Clinical Quality Program (PSCQP) and as an evolution of the Institute for Clinical Excellence. Emerging in the midst of system-wide patient and safety concerns, the primary focus of the CEC has been to promote and support improved clinical care, safety and quality across the NSW public health system, and to meet functions specified by the Minister for Health.

Since its development, the CEC has gained local, national and international recognition by developing and driving programmes and initiatives in collaboration with clinicians, managers, consumers and health service partners. The range of areas addressed includes clinical incident review, deteriorating patients, end of life care, falls prevention, human factors, infection control, leadership, medication safety, mortality review, open disclosure, paediatric quality and safety, partnering with patients, pressure injury prevention, safety and quality education, sepsis, teamwork, transfusion medicine and venous thromboembolism prevention. As well, monitoring processes and performance, to provide assurance of clinical quality and safety improvement at a system-wide level, has been a central and distinct role of the CEC within the NSW health system.

*Source:* Hallsworth, M. et al. (2016), “Applying Behavioural Insights: Simple Ways to Improve Health Outcomes”, Doha, Qatar: World Innovation Summit for Health, [http://38r8om2xjhl25mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2016/11/WISH-2016\\_Behavioral\\_Insights\\_Report.pdf](http://38r8om2xjhl25mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2016/11/WISH-2016_Behavioral_Insights_Report.pdf) (accessed 12 January 2017); Green, M. (2013), “Between the Flags program: Interim evaluation report”, April, Clinical Excellence Commission, [www.cec.health.nsw.gov.au/data/assets/pdf\\_file/0004/258151/btf-program-interim-evaluation-report-april-2013-v2.pdf](http://www.cec.health.nsw.gov.au/data/assets/pdf_file/0004/258151/btf-program-interim-evaluation-report-april-2013-v2.pdf) (accessed 12 January 2017).

## Increasing organ donor registration

Country	Canada
Sector	Health
Institution	Ontario Government and the Behavioural Economics in Action at Rotman (BEAR) centre
Start of intervention	February 2014
End of intervention	March 2014
Objective	Increasing the number of citizens registering as organ donors.
Method	Literature Review and Randomised Controlled Trial conducted on all visitors to a government service centre over an 8-week period
Application	Redesigning the format and method of distribution of organ donation forms handed out to visitors at government service centres in Ontario

### Problem

What does it take for someone to become an organ donor? Are individuals not willing to donate their organs after death or is it simply that they need a little “nudge” in the right direction to do so?

The Government of Ontario, Canada’s second-largest province, in partnership with the Behavioural Economics in Action at Rotman (BEAR) centre set out to investigate whether, using the insights learned from behavioural science, it could motivate more of its citizens to sign up to the organ donation register.

### Intervention

The trial took place in the Greater Toronto Area of Canada, and subjects included all visitors to a government service centre on a day-by-day basis for eight weeks. The behavioural principles applied and tested on the visitors were as follows:

- **Simplification:** Simplification and shortening of the registration form to make it easier to register as a donor
- **Opportunity cost:** By handing out the form earlier at a greeter station so that individuals could read it while they waited to see a customer service representative, the opportunity cost to visitors was reduced of completing the form. As the opportunity cost whilst already waiting in line is relatively low, in principle visitors would be more likely to spend the time to read and complete the form
- **Reciprocity and empathy:** Motivational statements were added to the top of the simplified registration form. This included the statement “If you needed a transplant, would you have one? If so, please help save lives today”, which was taken from the UK Behavioural Insights Team’s own organ donor registration trial

- An **informational** brochure designed by the organ donation programme was also handed out alongside the registration form itself.

The effectiveness of applying the principles was judged by measuring the uptake in registration when the changes were made, and comparing this with the normal number of registrations both before and after the trial took place, when no behavioural science-informed adjustments were being used.

## Results and impact

The study found that handing out a **simplified** organ donor form at a greeter station together with an **informative** brochure resulted in 2.29 times more registrations relative to using the old longer registration form. Using **reciprocity** and **empathy** statements made a difference of 2.13 and 2.08 respectively, compared to the form that had no adjustments made.

Overall, the trial found that handing out a shorter form for a person to read and consider while they wait to complete a government transaction increased the likelihood they will complete that transaction. As a result, a move has been made by the Ontario Government to implement the new simplified organ donation form and to hand out that form earlier in service transactions.

## Institution

The Government of Ontario applies behavioural science insights to make its public services more effective, as part of overall strategy of evidence-based public policy and service design. Most notably, the Government has used behavioural insights to inform its Poverty Reduction Strategy, regulatory reduction as part of its Open for Business Initiative and modernisation of ServiceOntario.

The Government retains a small central Behavioural Insights Unit (BIU), consisting of experts in behavioural sciences, in particular Organisational Behaviour, who conducted the study described. In addition, the institution benefits from a formal network of behavioural insights practitioners and support from academic partners.

Behavioural Economics in Action at Rotman (BEAR), located at the University of Toronto's Rotman School of Management, is a centre that combines decades of research in decision-making with empirically-tested tools to facilitate behavioural change. They look at social and economic problems from a behavioural science lens and design solutions that go beyond the traditional approaches of applying incentives, penalties or provisioning information.

BEAR conducts leading edge academic and field research, helps their partners accomplish behaviour change through better touchpoints and interventions, and engage in a variety of educational and outreach activities. Their focus is on non-financial, non-regulatory (not banning) solutions that preserve freedom of choice but guide people toward better decisions. They are solving the “last mile problem” to improve societal well-being and business profitability. Core to the BEAR DNA is scientific testing, and they apply randomised controlled field and laboratory trials to deliver measurable results. They also work closely with their design studio at Rotman DesignWorks as they create behaviourally informed choice environments.

BEAR was instrumental in setting up the Ontario BIU.

*Source:* Robitaille, N. et al. (2016), “Nudging to Increase Organ Donor Registrations in a Prompted Choice Context”, *Working Paper*, BEAR, Rotman School of Management, University of Toronto.

## Using air miles to treat obesity

Country	Canada
Sector	Public health
Institution	Public Health Agency of Canada
Start of intervention	1 April 2013
End of intervention	30 June 2016
Objective	Increasing physical activity levels and reducing obesity amongst the Canadian population
Method	Pilot project – awarding incentives in the form of Air Miles Reward Miles at 15 Young Men's Christian Association (YMCA) locations across Canada
Application	Using loyalty point incentives (i.e., Air Miles Reward Miles) in a public health context to drive positive behaviour change

### Problem

Canada faces ongoing issues of high obesity rates and physical inactivity among its population. Almost 1 in 3 Canadian children and youth and 6 in 10 adults are overweight or obese. Less than 1 in 10 children and youth and less than 1 in 4 adults meet the Canadian Physical Activity Guidelines. This is damaging Canadian citizens' health overall.

The Public Health Agency of Canada wanted to see if it could apply behavioural theory to develop an intervention which would increase physical activity levels amongst Canadians, and thus contribute to reducing obesity.

### Intervention

The Agency's Centre for Chronic Disease Prevention set up an **incentive-based** pilot project to test whether it could motivate Canadian citizens to do more exercise.

Canadians are amongst the highest users of loyalty points in the world. Research shows that most Canadians belong to at least one loyalty point programme, and that the average household collects points from eight different programmes.

Given the popularity of such programmes amongst Canadian citizens, the Public Health Agency decided to join forces with LoyaltyOne Inc., a provider of Reward Miles, to offer Air Miles to citizens at select YMCA locations across Canada. The pilot project was based on using “nudge” theories taken from behavioural economics – the Air Miles serve as a nominal incentive to impact behaviour change. The aim of the project was to encourage Canadians to increase their physical activity levels by awarding them loyalty points in return for participation in physical activity programming at YMCA Canada fitness facilities.

The project was implemented in 15 pilot test YMCA locations across Canada: eight in the Greater Toronto Area, one in Oakville (Ontario), one in Moncton (New Brunswick) and five locations in Calgary (Alberta). It was designed to provide registered YMCA members in the participating locations with Air Miles Reward Miles for reaching pre-defined physical activity milestones on a weekly basis:

- Base Offer: earning one Air Mile Reward Mile for every two visits to a YMCA location, and
- Bonus Offer: earning 10 Air Miles Reward Miles if participants visit a YMCA twice a week and 20 Air Miles Reward Miles if participants visit a YMCA three or more times a week.

The programme design was then modified over a 10-month period to test whether incentives and behavioural insights principles could be applied to increase physical activity. In certain locations, the incentive offers remained the same, in other locations, the lower tiered offer was removed and incentives were only provided if participants visited the YMCA three or more times a week. The programme changes were implemented to test whether participants would be motivated to visit more often in order to avoid losing the incentive bonus.

Over 98 000 participants registered for the programme at the participating YMCA locations, which represent approximately 20% of YMCA's national membership, including West, Central, and East/French. 11 control sites across Ontario (in Toronto, Hamilton and Niagara) did not offer the incentive programme, and provided the same data, that is the number of visits to the YMCA fitness facilities, as the test locations.

## Results and impact

The “Air Miles-YMCA Physical Activity Programme” had the following impact:

- Over 98 000 participants registered for the programme, far exceeding the original target of 25 000
- Year-over-year comparison showed that 62% of active YMCA members in participating locations visited the YMCA at least one more time each week
- YMCA members enrolled in the project (i.e., Air Miles Reward Miles collectors) visited the YMCA approximately 17% more frequently than YMCA members not enrolled in the project (non-Air Miles Reward Miles collectors).

The Public Health Agency found that incentives were, therefore, effective at increasing physical activity levels.

However, the effects were greatest within the first few months of the intervention or when there was a change to the incentive offerings.

Moreover, incentives in the form of Air Miles Reward Miles were not a guarantee of increased physical activity as some YMCA control site locations outperformed YMCA test sites over certain periods of time.

The pilot project is currently under evaluation by the University of Toronto. The evaluation will cover the effects of the removal of incentives for three months post-intervention.



In addition, as part of the project evaluation, a Social Return On Impact (SROI) analysis was completed to assess the social value attained from the project for each dollar invested (based on a rigorous and pre-defined methodology). The SROI, conducted by a third party contractor determined that CAD 3.50 of value was created for every dollar invested in the programme.

## Institution

The Public Health Agency of Canada is an agency of the Government of Canada that is responsible for public health, emergency preparedness and response, and infectious and chronic disease control and prevention.

The Agency is using behavioural insights in the design and implementation of public policy interventions to promote healthy living and prevent chronic disease.

The Agency has recently refocused its policy and programme platform to prevent chronic diseases including cancer, diabetes and cardiovascular disease, by addressing the common risk factors for these illnesses, including physical inactivity, unhealthy eating and tobacco use. There is a clear recognition that economic, social and other interconnections make addressing public health issues more challenging. As a result, behavioural insights can play an important role in assessing the reasons behind these risk factors, and how to go about changing them.

Since 2013, the Agency has been advancing a variety of partnership arrangements and funding models through its transformative “Multi-sectoral Partnerships to Promote Healthy Living and Prevent Chronic Disease” initiative – a funding approach that is grounded in the principle that government, alone, cannot solve the complex social challenges facing Canadian society today, including obesity and related preventable chronic diseases. Using grants and contributions funding, the Agency’s partnership projects involve all sectors of society – including the private sector, charitable sector, organisations outside the health sectors and other levels of government – to test new ways of working and/or scale up proven approaches, such as applying behavioural insights and testing social finance models, to achieve demonstrable results and produce better health outcomes for Canadians. Through the Multi-sectoral Partnerships Approach to date, the Agency is partnering with over 100 new partners, reaching over 1 million Canadians and leveraging over CAD 34 million in funding from private sector and other non-taxpayer sources of funding to support a growing list of multi-sectoral partnerships.

Although the Agency does not itself directly employ behavioural scientists, funded projects through the Multi-sectoral Partnerships Program have employed behavioural experts and academics to be involved in the design and evaluation of projects that apply behavioural insights to change the behaviour of participants. Further, many programme and policy staff at the Agency have backgrounds in social work, psychology, and sociology and are versed with behaviour change theory and practice.

Within the Agency, the Partnerships and Strategies Division within the Centre for Chronic Disease Prevention (CCDP) has been spearheading work in the realm of social innovation and behavioural insights, the Director General of whom is also the Chief Strategy Officer of the Innovation Hub at the Privy Council Office (PCO). The Hub is a central point which brings together Federal departments and agencies in Canada to provide expertise and advice on new approaches and social innovations to respond to policy and service delivery challenges, including the use of behavioural economics in policy making.

The Centre for Chronic Disease Prevention at the Agency has also launched a new Strategic Plan for 2016-19: “Improving Health Outcomes: A Paradigm Shift”. Areas of focus include testing innovative approaches and social financing opportunities, including piloting behavioural economics approaches, in relation to the Agency’s connection to the Privy Council Office (PCO) Innovation Hub.

## “Carrot rewards”

<b>Country</b>	Canada
<b>Sector</b>	Public health
<b>Institution</b>	Public Health Agency of Canada
<b>Start of intervention</b>	16 February 2015 (anticipated launch of app in British Colombia in March 2016)
<b>End of intervention</b>	January 2020
<b>Objective</b>	Improving healthy behaviour amongst the Canadian population
<b>Method</b>	Pilot project will be conducted in British Colombia to test the effectiveness of the app
<b>Application</b>	Mobile technology app which awards users with loyalty points for their chose programme in reward for learning about and adopting healthy behaviours

### Problem

Canada faces ongoing issues of high obesity rates and physical inactivity among its population. Almost 1 in 3 Canadian children and youth and 6 in 10 adults are overweight or obese. Less than 1 in 10 children and youth and less than 1 in 4 adults meet the Canadian Physical Activity Guidelines. This is damaging Canadian citizens’ health overall.

The Public Health Agency of Canada wanted to see if it could apply behavioural theory to develop an intervention which would use incentives in the form of loyalty points to improve healthy behaviours amongst Canadian citizens.

### Intervention

Canadians are amongst the highest users of loyalty points in the world. Research shows that most Canadians belong to at least one loyalty point programme, and that the average household collects points from eight different programmes.

Given the popularity of such programmes amongst Canadian citizens, the Public Health Agency of Canada is designing a mobile app which will use the incentive of loyalty points rewards to motivate individuals towards learning about and implementing healthy behaviours.

The project is designed to provide Canadians registered in popular loyalty programmes the opportunity to be rewarded with their choice of loyalty points for learning about and implementing healthy behaviours. Users are rewarded for downloading the app, for referring friends and family, and for taking healthy actions, such as taking a heart health quiz, learning about healthy eating choices, participating in physical activity or visiting a local YMCA.

The concept was based on behavioural economics and “nudge” theories, the idea being to use incentives in the form of popular loyalty rewards points and accessible mobile app technology to “nudge” individuals towards healthier and more responsible lifestyle choices, and therefore to create behaviour change on a mass scale.

The Public Health Agency of Canada is working with Social Change Rewards Inc. to implement the programme, as well as the British Colombian Ministry of Health, the Heart and Stroke Foundation, the Canadian Diabetes Association, and YMCA Canada.

The app will be first launched and tested in British Columbia in March 2016, with anticipated expansion to interested provinces and territories over a 5-year period.

## Results and impact

The project is currently ongoing. The design phase of the initiative is reaching its conclusion and the launch of the app in British Columbia is to commence in March 2016. The intervention will expand to interested provinces and territories over a 5-year period, ending January 2020.

The success of the app will be measured by recording data on the acquisition of new users, level of engagement, attrition/retention rates, demonstration of improved knowledge assessed against baseline (majority of a cohort answering most of the surveys correctly), and information from wearable devices (e.g. step counts).

Health surveys will be conducted at regular intervals in the project and the programme design also allows for linking with wearable devices to track and reward healthy behaviour. Use of analytics will inform modifications and tailoring of offers and will test whether incentives and behavioural insights principles can be applied to improve healthy lifestyle choices.

## Institution

The Public Health Agency of Canada is an agency of the Government of Canada that is responsible for public health, emergency preparedness and response, and infectious and chronic disease control and prevention.

The Agency is using behavioural insights in the design and implementation of public policy interventions to promote healthy living and prevent chronic disease.

The Agency has recently refocused its policy and programme platform to prevent chronic diseases including cancer, diabetes and cardiovascular disease, by addressing the common risk factors for these illnesses, including physical inactivity, unhealthy eating and tobacco use. There is a clear recognition that economic, social and other interconnections make addressing public health issues more challenging. As a result, behavioural insights can play an important role in assessing the reasons behind these risk factors, and how to go about changing them.

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organisations outside the health sectors and other levels of government – to test new ways of working and/or scale up proven approaches, such as applying behavioural insights and testing social finance models, to achieve demonstrable results and produce better health outcomes for Canadians. Through the Multi-sectoral Partnerships Approach to date, the Agency is partnering with over 100 new partners, reaching over 1 million Canadians and leveraging over CAD 34 million in funding from private sector and other non-taxpayer sources of funding to support a growing list of multi-sectoral partnerships.

Although the Agency does not itself directly employ behavioural scientists, funded projects through the Multi-sectoral Partnerships Program have employed behavioural experts and academics to be involved in the design and evaluation of projects that apply behavioural insights to change the behaviour of participants. Further, many programme and policy staff at the Agency have backgrounds in social work, psychology, and sociology and are versed with behaviour change theory and practice.

Within the Agency, the Partnerships and Strategies Division within the Centre for Chronic Disease Prevention (CCDP) has been spearheading work in the realm of social innovation and behavioural insights, the Director General of whom is also the Chief Strategy Officer of the Innovation Hub at the Privy Council Office (PCO). The Hub is a central point which brings together Federal departments and agencies in Canada to provide expertise and advice on new approaches and social innovations to respond to policy and service delivery challenges, including the use of behavioural economics in policy making.

The Centre for Chronic Disease Prevention at the Agency has also launched a new Strategic Plan for 2016-2019: ‘Improving Health Outcomes: A Paradigm Shift’. Areas of focus include testing innovative approaches and social financing opportunities, including piloting behavioural economics approaches, in relation to the Agency’s connection to the Privy Council Office (PCO) Innovation Hub.

## Nudging smokers away from the doors at CPH Airports

<b>Country</b>	Denmark
<b>Sector</b>	Health / business
<b>Institution</b>	Copenhagen Airports & iNudgeyou
<b>Start of intervention</b>	Tests were conducted in 2013 and 2016
<b>End of intervention</b>	Report published in 2016
<b>Objective</b>	To move smokers away from the doors of the airport before lighting their cigarette
<b>Method</b>	Making a clearly dedicated smoking zone a few meters from the doors, so smokers know exactly what is expected of them, instead of only what is forbidden. The intervention was retested for longevity 3 years after initial implementation
<b>Application</b>	The approach could have effects beyond moving smokers away from doors. Showing people the desired action is sometimes more efficient than telling them what not to do

### Problem

In 2004, more than 600 000 deaths worldwide were attributed to second-hand smoke, amounting to 1% of the worldwide mortality. Against this background, Denmark like many other countries around the world banned indoor smoking back in 2007 from workplaces, restaurants, and other contexts potentially exposing non-smokers to second-hand smoke. While the law has been a huge success in changing smokers' behaviour patterns, it has also created the well-known phenomenon of smokers piling up just outside the doors of public buildings, pubs, and offices.

Though more considerate than smoking indoors, smokers just outside doors impose a health-related risk for those working next to and above door areas. This is especially true since modern ventilation systems in sustainable buildings often integrate natural ventilation from revolving doors, windows and other features of the architecture. Also, a crowd of people smoking just outside the doors might not be the "first impression" any company or organisation would like to give. With modern ventilation systems and more than 26 million travellers a year, of which 25% being smokers, Copenhagen Airports has seen its fair share of this problem.

To solve this problem, the airport initially established strict non-smoking zones just outside the doors and other areas with high passenger flows or ventilation intake. Yet smokers did not seem to care much about the proscription to light up their cigarettes in these zones. Not wanting to escalate into issuing fines to their customers, the Airport teamed up with iNudgeyou hoping to nudge a reduction in health risks from air pollution inside Airport terminals coming from second-hand smoking outside the doors as well as organise smoking behaviour a bit more conveniently for all parties

## Intervention

### *The intervention proceeded in three phases: behavioural mapping, analysis and solutions.*

First, the researchers conducted behavioural mapping by observing 2 000 smokers at Copenhagen Airports in an increasingly structured way. In this phase, behavioural data was collected by observing the multiple actions that make up smoking behaviour in an airport. Initial observations revealed a host of interesting patterns, but in particular, it revealed patterns of what seemed to be purposeful action insofar as the smoking went, but much less so when it came to placement. For instance, smokers, in general:

1. Had their cigarettes in their mouths and lighter in hand while still well inside the revolving doors leading out of terminals
2. Made the ‘tourist stop’ just outside, and
3. Only then searched for a place to smoke.

It was observed that aspects of the immediate environment just outside the door, captured smokers’ gaze, such as benches, ashtrays, pillars, stones, fellow smokers, etc.

Turning to more and more structured observations, behaviour was mapped into main quantifiable categories that seemed relevant, including where smokers came from, where they end up smoking, and where they went afterwards. The process of quantification provided new insights. In particular, the ratio between people coming from inside the airport and people coming from outside was a bit surprising. Airport officials had initially thought “door smokers” mainly were travellers who just had arrived in the airport and smoked one last cigarette before entering the buildings. Yet, the numbers revealed that 85% actually came from inside the building with the 33% of smokers staying in a non-smoking area for the entire duration of the cigarette, and then returning inside.

In the second analysis phase, the researchers determined that people tend to have an effort minimising disposition during decision making. Some research point to the fact that humans are **cognitive misers**, hence, prone to spending the least amount of energy on decision making in order to reduce the consumption of scarce mental resources. This also seemed to be the case with the smokers at the airport. Based on their observations, it seemed this applied here and that the smokers were not willing to put much thought into finding the correct place to smoke.

This apparent challenge gave rise to considerations about what would be the best way to limit the cognitive effort afforded by smokers in order to comply with smoking rules at the airport. The hypothesis was that smokers choose where to smoke outside at a relatively late point in time. The smokers seemingly made the decision about placement only after having lit their cigarette, and that this was the reason for the ‘tourist stop’ mentioned above.

The attractive qualities of the outdoor facilities (benches, ashtrays, etc.) made sense when using the lens of ‘affordances’ on the context of smoking. Following Donald Norman, all objects afford certain interaction and usage. “An affordance is a relationship between the properties of an object and the capabilities of the agent that determine just how the object could possibly be used. A chair affords (“is for”) support and, therefore, affords sitting”.

By analogy, iNudgeyou worked on the assumption that a context may afford for a particular behaviour as well. Based on observations, this perspective implied that smokers were attracted to the areas that afforded them behaviours such as sitting down and leaning against, as well as seeking refuge from wind and weather. An inconsiderate arrangement of the affordances in the environment could thus lead smokers to place themselves in the inappropriate non-smoking zones. In addition other smokers' behaviour was included as part of the context. This led to the standard social psychological hypothesis that smokers are drawn to imitate other smokers' behaviour as social proof of acceptable behaviour in the context.

In the final solutions, considering the analysis it was evident that the usual logic of non-smoking zones seemed backwards. With smokers putting little effort into deciding on a place to stay, it was hypothesised that a prescription might work better than a proscription. Proscriptions constrain people's choices but do not otherwise guide decisions. Hence, proscriptions require effort to follow, rather than making it easy. So the logic was turned around. The intervention came to consist of three layers aimed at the dominant behaviour pattern observed in the behavioural mapping phase – i.e. smokers coming from inside the building, looking down, lighting a cigarette and then deciding on a place to smoke. The three layers were:

1. Stickers on the ground – guiding the search: To prepare smokers to look for where to smoke upon leaving the building, they were given a search cue. Stickers showing an icon of a lit cigarette plus a number of metres were put on the floor inside the airport in those areas where smokers were observed to initiate their smoking behaviour by walking towards the door and reaching into their pockets for their cigarettes
2. Designating zones for smoking – action directing prescription: The stickers showed the way to salient smoking zones a safe distance from open areas and air-condition intakes. This made the zones easier to spot in a lazy search, in accordance. These zones consisted of square zones marked by yellow Duct tape, cigarette icons as well as yellow cylindrical ashtrays to serve as designation for smokers. All was made consistent with the colour and design template of Copenhagen Airports. To the extent possible, the zones were made to look as the recommended option for smokers
3. Re-arrangement of environmental affordances: To make sure the environment afforded considerate smoking behaviour in the zones, the affordances influencing smoking behaviour that could be rearranged was re-arranged. Some of the benches were moved outside the non-smoking zones so as to allow basic comfort affordances in the smoking zones.

Taken together, the three layers of the intervention created and supported an action directing prescription, showing smokers that there were rules they were expected to follow. Furthermore, the intervention also made it easy for them to do so by guiding them through the necessary actions. This is in line with the theory of implementation intentions, stating that intentions to comply with rules and reach goals are much easier implemented when the behaviour leading to them is guided. Thus, on their path out, smokers were met with directional instructions for smoking, and met salient and clearly designated smoking zones. The zones included proper environmental affordances to keep them from deviating from the prescription.



## Results and impact

Three door areas at the Copenhagen Airport were chosen, where researchers initial observations had indicated the greatest concentration of smokers. The sites were known as “door 2”, “door 4” and “door 7”. Implementing the solution at different doors with small differences allowed iNudgeyou to estimate the general effectiveness of the solution by introducing environmental noise.

The three areas were measured for approximately 25 hours each, over a period of 3 months from March 2013 to May 2013. After the baseline-observation, Copenhagen Airports implemented the intervention permanently. Observations were able to resume within a few months. Intervention observations were continued for 24 hours in total, to build up a comparable sample. In the end a total of 3 184 smokers were observed during the entirety of the observational period (baseline = 1 695, intervention = 1 489).

The researchers noted a reduction in non-compliant smoking at all implementation sites. As the implementation sites were slightly different (both intuitively and with relation to base rate compliance level), they decided to weight the effect on each door by sample size, to get an overall estimate of the effect. The results showed a weighted mean reduction of 49.0% in non-compliant smoking.

## Institution

Copenhagen Airports has a vision of expanding their capacity to 24-40 million passengers a year without building new terminals. This means that CPH Airports has to be innovative, and utilise their current infrastructure in the most optimal way. Therefore CPH Airports have collaborated with iNudgeyou and The Danish Nudging Network in order to apply behavioural insights to the way they handle passenger flow and behaviour in the most comfortable way for everyone, while delivering on high demand from a host of different stakeholders.

iNudgeyou is a social purpose company led by behavioural scientist Pelle Guldberg Hansen. The team specialises in the development of nudging – theoretically as well as applied. The name “i-Nudge-you” refers to a fundamental paper published by the team in 2013 that laid out an ethical framework for the responsible use of behavioural insights in society.

iNudgeyou started in 2010 as a blog. Quickly gathering a crowd of interested readers it soon developed into an active research team practicing real world research aimed at creating nudge-interventions with pro-social impacts.

Common to their work is a strong social profile, scientific responsibility and the close integration of insights from applied behavioural science. In fact, a goal of all of their experiments is to produce knowledge according academic standards and get it published.

## Increasing vegetable sales

Country	Denmark
Sector	Health and nutrition
Institution	The Danish Agriculture & Food Council, REMA 1000, Maaltidspartnerskabet and iNudgeyou
Start of intervention	2015
End of intervention	2016
Objective	Increasing the sale of fruit and vegetables in Danish supermarkets by placing pre-cut vegetables next to the meat
Method	The intervention was placed in 12 REMA 1000 supermarkets in Denmark. Two other interventions were tested in 24 other REMA1000 supermarkets with a control group of 12 REMA 1000 supermarkets. The intervention placed pre-cut vegetables next to the minced beef and thereby exposed the customer for a healthy addition to a Bolognese
Application	The mere exposure of a healthier option in the right setting can be very effective in changing actual behaviour. This can be applied in many different settings, once it has been made clear when and where people make the relevant decisions

### Problem

It can be challenging to lead a healthy lifestyle in everyday life, why we sometimes make the easy choice instead of the healthy choice when it comes to food, even though many people have clear preferences for eating healthy. Many people find it difficult to convert advice and recommendations regarding healthy food to actual behaviour, despite having a clear understanding that it is essential for other goals, such as maintaining a healthy body weight. Furthermore, the effort required is often minimal.

When information is abundant and the option is relatively cheap, then why do people fail to integrate the healthy amount of vegetables in their diet that they would like to? One hypothesis is that they just do not think about it in the moment of action. When deciding what to eat for dinner, the healthy vegetables are just **not salient enough** to enter their considerations. This intervention aims at making vegetables more salient in the moment of decision. Previous studies have pointed to that place being in the meat aisle (at least in Denmark).

### Intervention

An intervention to increase the salience of vegetables at the right moment was set up in 12 REMA 1000 stores, with 12 other REMA 1000 stores acting as a control group. Research shows that the type of meat we pick in the cold counter can determine what we choose to eat for dinner. Therefore the intervention was naturally placed in the cold counter.

Packs of pre-cut vegetables were placed next to the minced meat, to inspire more people to add vegetables to their Bolognese. This should in theory raise the salience of vegetables as a possible and easily implemented part of dinner. By raising the salience of

vegetables in the decision moment not only allows people to add vegetables to a Bolognese, but could also have worked as a reminder of a goal of “living a healthy life”, and at the same time giving undecided shoppers a way to reach their overarching goal of living healthy without being forced upon the consumer.

## Results and impact

The results of the intervention show great promise. The intervention resulted in an increase of pre-cut vegetables by 61.3% per customer. By doing nothing more than placing a healthy addition next to a possible and easy dinner, the sales of pre-cut vegetables more than doubled. Not only that, but the sales of minced meat also rose by 32% per customer in the intervention stores suggesting that the intervention not only influenced consumers with an existing dinner plan, but also inspired undecided consumers to opt for a healthy meal.

## Institution

The Danish Agriculture & Food Council represents the farming and food industry of Denmark including businesses, trade and farmers’ associations. Agriculture and food are Denmark’s largest industry and innovation grouping, employing some 170 000 people and exporting agricultural products, food and equipment to an annual value of approximately EUR 20 billion.

The Danish Agriculture & Food Council is the result of a merger of five organisations: Danish Agriculture, the Danish Bacon and Meat Council, the Danish Agricultural Council, the Danish Dairy Board and Danish Pig Production.

The Danish Agriculture & Food Council:

- Promotes the political influence of the agricultural sector
- Offers a comprehensive range of cost-effective services for its members, and
- Implements research and development programmes within food safety and veterinary issues, animal health and productivity, animal welfare, environment and energy.

iNudgeyou is a social purpose company led by behavioural scientist Pelle Guldberg Hansen. The team specialises in the development of nudging – theoretically as well as applied. The name “i-Nudge-you” refers to a fundamental paper published by the team in 2013 that laid out an ethical framework for the responsible use of behavioural insights in society.

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Maaltidspartnerskabet is a public/private network that promotes collaboration across different sectors in the aim of making it easy to eat healthy in Denmark. Businesses, consumer organisations and scientific institutions are all counted among the members of the partnership.

REMA 1000 has more than 280 franchise supermarkets in Denmark, and a wide section of discount goods. REMA 1000 has a deep commitment to their CSR strategy that aims at reducing food waste, supporting organic production and helping their costumers lead healthier lives. Part of this strategy involves testing new interventions to find out how to support healthy lives and good shopping habit in the best way possible.

## Smarter lunchrooms for healthier food choices

Country	Germany
Sector	Health
Institution	Ministry of Defence (BMVg)
Start of intervention	June 2015
End of intervention	October 2015
Objective	Encouraging healthy nutrition choices of the Ministry's employees
Method	Experiment in the canteen of an Air Force Base
Application	Evidence that changing lunchroom displays and settings can increase the choice of healthy food (intervention not yet scaled up and widely applied)

### Problem

Can the way your food looks influence what you decide to eat? Can the location and display of food affect your choices?

The German Armed Forces (Bundeswehr) Medical Service wanted to see if they could improve the health of the employees of the Kaufbeuren Airforce Base in Bavaria simply by changing the layout of their lunch offering in the Base Cafeteria.

### Intervention

An experiment was conducted to test the use of **nudging techniques** which could influence the frequency of healthy choices made by individuals at lunchtime. The choices of food and beverages made by military and civilian employees eating at the dining facility of Kaufbeuren Airforce Base was studied prior to and after nudging interventions, including the positioning and arrangement of food and beverages, the colour of dishes, and posters placed around the lunchroom to enhance awareness. The frequency of healthy choices made by individuals was recorded before the implementation of the interventions, compared to once the interventions had been put in place.

The study was carried out following an intense review process, with all ethical aspects considered, under strict supervision, and fully in agreement with the interest of the participants, as would be the case for any potential future behavioural insight studies conducted by the Ministry. The German Ministry of Defence ensures that the aims of any study conducted are in full agreement with the interest of the study's participants.

### Results and impact

The changes observed in the experiment were significant. Nudging techniques like displaying fruit at eyesight and having less healthy choices on a less prominent position were successful in increasing the frequency of healthy choices, with employees opting for

water over soft drinks, for example, and fruit over cakes. The results of the experiment have not yet been scaled up and applied widely.

### **Institution**

The Federal Ministry of Defence (BMVg) is the supreme federal authority in all issues concerning defence and the armed forces in Germany. It heads the air force, the army, the navy and the central medical services. The Ministry does not currently possess a unit dedicated to behavioural insights, and uses behavioural insights to influence policy making only scarcely.

Behavioural insights were used to learn if nudging techniques may encourage employees towards healthier nutrition. The Bundeswehr Medical Service partnered with the Albstadt-Sigmaringen University to conduct the study. The Ministry is very aware of the potential sensitivity of behavioural insights, as a result of which its use in the Bundeswehr Medical Service was restricted to the study described.

## Healthstyle survey: Segmenting school children and adults

Country	Hungary
Sector	Public health
Institution	National Institute for Health Development (NEFI)
Start of intervention	2015
End of intervention	Ongoing
Objective	Improving the overall health of the Hungarian population
Method	Healthstyle survey
Application	Cluster analysis of healthstyle behaviours amongst the Hungarian population, which will allow for more targeted health interventions

### Problem

The health of the Hungarian population is much worse than it could be in relation to the GDP of the country. One of the main reasons for this is likely to be the unhealthy behaviour which is wide-spread in the population.

The National Institute for Health Development in Hungary (NEFI) felt that behavioural change would constitute one of the most appropriate and important tools to raise the level of health in Hungary. In order to find out what the most effective interventions would be to change people's health behaviour, it conducted a healthstyle survey amongst the population, with the objective of finding a suitable segmentation method which it could use to tackle people's health.

### Intervention

Several blocks of questions were developed for the survey, based on the **COM-B model** of behavioural science. The COM-B model synthesises the most recognised models of behavioural change by conceptualising behaviour as part of an interacting system involving the components of "Capability", "Opportunity", "Motivation" and "Behaviour".

The questions in the survey designed by NEFI covered knowledge on and attitude to health, somatic and mental health status, subjective well-being, psychological characteristics (TIPI, sensation seeking, self-efficacy, aspiration, etc.), health behaviours, social support, media consumption, health-related information seeking, and socio-demographic characteristics.

Before finalisation and administration of the questionnaires, qualitative testing and pilot studies were conducted. Nationally representative two-stage samples for 5th, 7th, 9th graders and adults of 18+ age group were drawn and the observed samples were 7 500 and 5 500, respectively. Iterative weighting was applied, supplemented with a design weight correcting design effects. In a random sample of classes in 7th grade, a different

questionnaire, followed by personal interviews of students and teachers were conducted for social network analysis. For segmentation, latent cluster analysis was used.

## Results and impact

According to the results, 13 health styles were identified based on the representative sample of adults, three school children in Grade 5, and five school children in Grade 9. The lack of definable health style groups among 7th grade schoolchildren is presumably due to the specific developmental stage which characterises the children in this age (also called as early adolescence). All groups possess different “traits” (i.e. health styles) which necessitate applying different behavioural change methods and prevention strategies for each group.

For example, in the first group of the 5th grade children often consume fast food, energy drink, chips and live a sedentary lifestyle. The group members lack self-confidence, have limited access to the computer at home and are not motivated to attend school. Low self-confidence and motivation for school is might correlated with lack of trust in self-competence. Consequently, if we can enhance success in school and enable them to improve self-confidence and experience self-competence, we can positively influence motivation and attitudes towards school and learning. School activities which target prominent skills of the children provide experiences of success and competence, are probably suitable to increase motivation and commitment towards learning. Subsequently, health-related interventions in school will probably be more effective, because children will be able to understand the impact of their actions, and will know how to control their own behaviours and how to adopt new behaviours.

## Institution

The National Institute for Health Development (*Nemzeti Egészségfejlesztési Intézet* – NEFI) is a government based agency planning, co-ordinating, monitoring and evaluating public health and health promotion at the national level in Hungary. Established in 1958, NEFI has five decades of experience in health promotion and disease prevention.

Until now, NEFI has rarely used behavioural insights in its planning and policy making. The Healthstyle survey conducted in 2015 was a first step in using behavioural insights to increase the efficiency of health promotion interventions by generating change in health behaviour. It was an initiative of researchers which was funded from the European Social Funds.

Behavioural insights are not yet institutionally applied in NEFI. The first results from the case study described are under preparation for communication.

*Source:* Michie, S., M. van Stralen and R. West (2011), “The behaviour change wheel: A new method for characterising and designing behaviour change interventions,” *Implementation Science*, Vol. 6/42, <https://implementationscience.biomedcentral.com/articles/10.1186/1748-5908-6-42> (accessed 12 January 2017).



## Treating tuberculosis effectively

Country	Moldova
Sector	Healthcare
Institution	United Nations Development Programme (UNDP)
Start of intervention	April 2014
End of intervention	Ongoing
Objective	Improving adherence to medication and overall well-being amongst tuberculosis patients by using Virtually Observed Treatment (VOT)
Method	Randomised Controlled Trial applied to 400 patients of tuberculosis
Application	Treatment of patients with tuberculosis in Moldova

### Problem

Tuberculosis remains a huge challenge for the public health sector in Moldova. Among the primary concerns is the increasing rate of the multidrug-resistant tuberculosis in the country, which is harder and more expensive to treat.

One of the major reasons for this is the low drug adherence rate – people tend to discontinue treatment once they leave the hospital. After release from the hospital, patients are required to take pills daily in the presence of a medical professional. This is called Directly Observed Treatment (DOT) and is a safe way to ensure the necessary medications are taken to fully wipe out the infection. However, after leaving the hospital, many patients tend to stop taking their medication as required.

Discussions with stakeholders have suggested that the reason for this is friction costs – once home, a patient has to travel back and forth to the hospital just to swallow a pill in front of a doctor, which is expensive, time-consuming, and tiring. The United Nations Development Programme (UNDP) wanted to see if it could find a way to reduce these friction costs for tuberculosis patients in Moldova, and test how effective this would be in increasing the rate of adherence to medication once they leave the hospital.

### Intervention

In partnership with a local NGO, Act for Involvement (AFI), and the UK Behavioural Insights Team, the UNDP is testing the use of Virtually Observed Treatment (VOT), as opposed to Directly Observed Treatment (DOT), in improving the likelihood that tuberculosis patients would continue to take their follow-up medication once leaving the hospital.

VOT would **reduce the friction costs** involved in taking medication, by eliminating the need for the patient to make a daily visit to the clinic, as they would under DOT. Instead, the patient can simply take the pill in the front of their computer and send a video

message using an app. They also receive **personalised feedback** in a video from the observer and **reminders** if they do not send a video.

The UNDP and AFI are conducting a trial to evaluate the use of VOT in parallel to DOT, which is a standard TB treatment procedure in the country. They have placed 400 tuberculosis patients (chosen at random) under VOT against a control group of 200 patients receiving DOT, to see whether using VOT yields higher rates of medication adherence and overall patient well-being than the usual DOT does.

## Results and impact

Final results for the trial are not yet available. However, it is estimated that the patients receiving VOT will, on average, be observed taking their pills one more day a month than those in the comparison group. If this is the case, the practice of VOT could potentially achieve a reduction in days of non-adherence to medication of one day per month for tuberculosis patients in Moldova.

## Institution

The UNDP is the United Nations' (UN) global development network. The UNDP has been using behavioural insights in order to test new approaches to programme design and to achieve better outcomes, as part of a broader attempt to promote innovation in development. It has applied behavioural insights through a network of practitioners, in addition to forming external partnerships to build knowledge networks and facilitate organisational learning in regards to behavioural insights.

“Incipient practitioners” at the UNDP are “learning by doing” by implementing joint projects with advanced partner organisations, such as the UK Behavioural Insights Team, which has been conducting the trial in Moldova in combination with a local NGO, Act For Involvement (AFI), and the UNDP.

## Screening for diabetes during Ramadan

Country	Qatar
Sector	Health
Institution	Hamad Medical Corporation and Action on Diabetes
Start of intervention	Ramadan 2014
End of intervention	Ramadan 2014
Objective	To test whether Ramadan is a timely moment to conduct pre-diabetes screening
Method	Pilot study involving 20 pre-diabetes screening stations set up at the State Grand Mosque of Qatar
Application	Identifies the benefit of choosing timely moments to offer effective entry points for interventions

### Problem

People are more receptive to changes at moments that seem significant to them. These moments can be prompted by external events that disrupt existing patterns of behaviour, or by a person's internal reflection on their current situation. There are many other moments that may offer effective points of intervention, such as religious or cultural holidays, the start of the year, month or week, and positive or negative life events (for example, becoming a parent, losing a close relative or moving house).

In Qatar, a team from the Hamad Medical Corporation (the main hospital in Qatar) and the NGO Action on Diabetes identified a timely moment to conduct pre-diabetes screening – the religious holiday of Ramadan.

Qatar has an estimated prevalence of type 2 diabetes in 13% of its adult population (17% in the Qatari population). Around one-third of the people with diabetes have not been diagnosed and are unaware of their disease. For all those who have developed type 2 diabetes, at least the same number again have pre-diabetes and, without lifestyle changes, are likely to go on to develop the disease.

There are two main ways of diagnosing diabetes or pre-diabetes. Point-of-care (POC) capillary blood glucose (CBG) testing is cheaper and more effective at identifying early or pre-diabetes than the alternative hemoglobin A1c. However, CBG requires participants to fast for some time to give accurate results, and this is difficult to arrange in a whole community.

The below intervention tests the effectiveness of setting up pre-diabetes screening stations during Ramadan to test whether this is a **timely moment** to conduct CBG testing.

### Intervention

Fasting is required for POC CBG measurement to be accurate, which is difficult to organise in a community setting. However, in Qatar, and all Muslim countries, most people observe fasting during Ramadan. The team recognised that if POC CBG is applied between 12:00 and sunset, then all values are at least nine hours after the morning meal

and are considered fasting values. As well, the team tested POC CBG after the evening prayer, which is about three to four hours after the evening meal.

During Ramadan 2014, the team set up 20 screening stations at the State Grand Mosque of Qatar, each staffed by two nurses. Worshippers at Juma'a prayer, who had been fasting since sunrise (more than nine hours), were invited to CBG testing. Imams, as the leaders of the religious community, were involved in encouraging worshippers to take the opportunity for testing.

A total of 2 177 individuals were screened in 2 days, 75% were men and 25% were women representative of 40 different nationalities with most from Egypt (743, 38%), India (348, 23%) and Qatar (146, 7%).

## Results and impact

Of those screened, 11.7% already knew that they had diabetes from a previous diagnosis. However, 5.3% were found to have undiagnosed diabetes, and 26.6% were identified as being pre-diabetic. Therefore, almost one-third of those screened were unaware that they had diabetes or were likely to develop the disease. These people were referred to dietary and lifestyle education programmes to prevent or reverse the progression of the disease.

The success of the screening programme meant it was repeated in 2015 with similar results.

In conclusion, the particular behavioural patterns of fasting and prayer during the holy month of Ramadan provide a timely moment in Islamic communities to screen for diabetes or pre-diabetes. This approach is reinforced when championed by religious leaders, who are important messengers in the community.

## Institution

Hamad Medical Corporation (HMC) is the main provider of secondary and tertiary healthcare in Qatar and one of the leading hospital providers in the Middle East. For more than three decades, HMC has been dedicated to delivering the safest, most effective and compassionate care to all its patients.

HMC manages eight hospitals – six specialist hospitals and three community hospitals – as well as the National Ambulance Service and home and residential care services. To meet the needs of a rapidly growing population, HMC has announced ambitious plans to expand capacity across its network through to 2030. This expansion plan includes a further three new hospitals in Hamad Bin Khalifa Medical City.

HMC is leading the development of the region's first academic health system – combining innovative research, top-class education and excellent clinical care – and is committed to building a legacy of healthcare expertise in Qatar. HMC collaborates with key partners who are experts in Qatar and beyond, including Weill Cornell Medical College-Qatar, the Institute for Healthcare Improvement and Partners Healthcare, Boston.

The Action on Diabetes brings together the experts in diabetes care in Qatar and internationally. It is a new partnership between the Supreme Council of Health, Hamad Medical Corporation, Qatar Diabetes Association, Maersk Oil, and Novo Nordisk. It aims to help deliver The Emir's vision of a healthy and prosperous Qatar, and support the Qatari authorities to reduce the incidence of diabetes. This will be achieved through

health and wellbeing initiatives and a major programme to raise awareness and stimulate action amongst all people in Qatar. Action on Diabetes was launched on 24 November 2011.

*Source:* Hallsworth, M. et al. (2016), “Applying Behavioural Insights: Simple Ways to Improve Health Outcomes”, Doha, Qatar: World Innovation Summit for Health, [http://38r8om2xjhl25mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2016/11/WISH-2016\\_Behavioral\\_Insights\\_Report.pdf](http://38r8om2xjhl25mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2016/11/WISH-2016_Behavioral_Insights_Report.pdf) (accessed 12 January 2017); Alkasem, M. et al. (2014), “Screening for diabetes in Ramadan: A pilot study”, *Q Science*, [www.qscience.com/doi/abs/10.5339/qfarc.2014.HBPP0881](http://www.qscience.com/doi/abs/10.5339/qfarc.2014.HBPP0881) (accessed 12 January 2017).

## Promoting healthy lifestyles through a computer-based “HIV risk game”

<b>Country</b>	South Africa
<b>Sector</b>	Health
<b>Institution</b>	Western Cape Government
<b>Start of intervention</b>	
<b>End of intervention</b>	2015 – Results published in the Journal of Economic Behaviour and Organisation
<b>Objective</b>	To test whether a simple, computer-based “HIV risk game” leads to better understanding of the relationship between HIV-risk and age among low-income South African adolescents, compared to the traditional brochure approach
<b>Method</b>	Randomised controlled trial using a behaviourally designed computer guessing game, designed to assess knowledge of relative risk of contracting HIV
<b>Application</b>	Results used to design behaviourally-informed interventions

### Problem

Sub-Saharan Africa is the centre of the global HIV/AIDS epidemic, with an estimated 25 million of the total worldwide population of 35.3 million living in this region in 2012. Of this region, South Africa has the largest number of people – an estimated 5.6 million – living with HIV/AIDS.

However, this greatly conceals large variation by gender and age. First, a disproportionate share of the burden of HIV falls on women, who account for 57% of all people living with HIV in sub-Saharan Africa. Second, this gender disparity is not uniform with respect to age, but rather largest among younger cohorts. HIV-infection risk is particularly acute for girls and young women compared with boys and young men of similar ages. Evidence shows that both physiological – younger women are more physiologically vulnerable to HIV – and non-physiological – inequalities in education, economic opportunities, vulnerability to intimate partner violence, and women having sex with older men – reasons account for these stark gender inequalities.

Focusing on the age-disparate partnerships, research has found two mechanisms through which women have an increased risk for HIV: first, HIV prevalence peaks five years later for men than women, meaning that women in age-disparate relationships are more likely to be having sex with an HIV positive man. Second, evidence shows that there is likely to be a partner age-gap in regards to behaviours concerning safe sex, such as a reduced likelihood that the younger partner will negotiate sex with a condom.

Education campaigns have included leaflets and brochures providing information on the risks of getting infected with HIV/AIDS. Education campaigns tend to be general in nature, centring on informing people not to have unprotected sex and providing basic tips like “wear a condom” to reduce the risk of HIV/AIDS.

In Cape Town, research has shown that, among other causes, the perception that older males are more responsible and less risk adverse has increased their popularity among younger women. However, the opposite is true as, of the 15-60 year old age range, the 15-19 year old age bracket has the lowest HIV prevalence rates, followed by 20-24 year olds.

The Western Cape Government decided to better understand some of these misbeliefs and test possible corrections to **prior beliefs** of South African teenagers about the relative risks of being exposed to HIV depending on the age of their sexual partner.

Could a change in the way **information is framed and delivered** increase the salience of age-disparate HIV rates, make information campaigns more effective and therefore help reduce the risk of HIV/AIDS infection?

## Intervention

The Western Cape Government (WCG), as part of a partnership established in 2012 to study the application of behavioural insights to four policy areas, worked with ideas42 and the University of Cape Town to conduct an intervention that tested the effects of a behaviourally-informed ‘HIV risk game’ against the traditional brochure method for promoting HIV awareness. 162 subjects were recruited from a public library in Khayelitsha, Cape Town, of which all but 5 were in the targeted 15-19 year old age bracket. Subjects were randomly assigned to treatment and control groups with the following interventions:

- Control group: read through a brief essay about HIV and sexual risk, which included a brief discussion of relative risks by age. This approach mimics the more traditional information campaigns that rely on pamphlets or brochures to disseminate information
- Treatment group: played ten rounds of a computer-based “HIV risk game”. In each round, subjects were presented with the age and sex of two randomly generated individuals, and asked to choose which of the two was more likely to have HIV. Treatment subjects also received immediate feedback as to whether or not they had guessed correctly.

The experiment took place over four days, with a total of nine sessions. The “HIV risk game” presented the treatment group with individuals uniformly distributed between the ages of 15 and 40. Feedback received by the treatment group was based on data from the South African National HIV, Behaviour and Health Survey 2012. After completing the tasks, both groups were given a questionnaire, which asked them questions about HIV risk and age based on the study’s key outcome variables. These questions were: Is a 20-year old man (woman) or a 30-year-old man (woman) more likely to have HIV? All subjects answered both questions (i.e., one question comparing two men, and another comparing two women). Approximately three months after the study, participants were re-contacted by phone and asked to say again whether a 20-year-old man or a 30-year-old man were more likely to have HIV to examine the persistent effects of understanding HIV risk.

The fundamental behavioural intervention being tested in this experiment is the **learning and updating of priors** based on the information presented. While both groups received new information, the researchers posit that the reasons to believe the treatment is more effective than the control are:

1. **Dosing:** Control groups receive a single “dose” of HIV-related information, whereas the treatment group answers a series of questions about HIV risk and age sequentially
2. **Feedback:** The control group receives no feedback, whereas the treatment group receives immediate feedback.

## Results and impact

The first central result of the experiment finds that treatment subjects are significantly more likely to correctly identify which of two individuals is more likely to have HIV than control subjects are. Results show that 80% of subjects in the treatment group correctly identified the older of a pair of men as being more likely to have HIV, which is 18 percentage points higher than the control group ( $p < 0.05$ ). The effect size is largest when female subjects answer the question about which of two women are more likely to have HIV.

Secondly, results show that treatment subjects answer more questions about HIV-risk and age correctly than control subjects do. Only 7% of those in treatment get both questions asked wrong, compared with 35% of those in control (difference of 28%,  $p < 0.01$ ); meanwhile, 63% of those in treatment get both questions right, compared with only 28% of controls (difference of 36%,  $p < 0.01$ ). Regression estimates indicate that the treatment increases the mean number of questions a subject answers correctly by around 0.6 ( $p < 0.01$ ).

As well, results showed that the treatment group subjects, especially women, remain more likely to identify older male as more risky in follow-up survey. Three months after the intervention, those of our original treatment group who responded to the follow-up survey were 18 percentage points more likely to correctly identify an older man as being more likely to have HIV than those formerly in the control group. Interestingly, the largest effect is among female respondents, for whom the original treatment was weakest. 85% of females who had been in the treatment group answered the question correctly, compared with a mere 47% of former controls.

The experiment suggests that playing a short “HIV risk game” with repetition and instant feedback leads to substantially more accurate perceptions of the relationship between HIV risk and age among our subject pool than equivalent information being provided through a more traditional “brochure approach”, especially when initial beliefs are relatively less accurate. The results from this experiment have helped to inform day-to-day processes in the Western Cape Government and may be incorporated into the design of future interventions.

## Institution

The Western Cape Government works in co-operation with national government to create laws for and provide services to the people of the Western Cape. The WCG consists of 13 departments that are responsible for implementing laws and providing services, including on health, environment, economic development, social and human development. The application of behavioural insights has been spearheaded by the Policy and Strategy Directorate within the Department of the Premier.



Ideas42 is a non-profit design and consulting firm that uses insights from behavioural sciences to design scalable solutions to some of society's most difficult problems. Initially formed at Harvard in 2008, ideas42 brings together professionals from different backgrounds and disciplines to work on projects worldwide to solve problems in health, education, criminal justice, international development, and government efficiency.

The Research Unit in Behavioural Economics and Neuroeconomics (RUBEN), based at the University of Cape Town, is an interdisciplinary group of researchers who use economic experiments, often together with fMRI imaging techniques, to examine the role that social, cognitive and emotional factors play in economic decision-making. RUBEN is currently the only centre for experimental research in economics on the African continent, providing training, research leadership and technical resources for the benefit of researchers throughout the continent.

*Source:* Datta, S. et al. (2015), "Risking it all for love? Resetting beliefs about HIV risk among low-income South African teens", *Journal of Economic Behaviour and Organisation*, Vol. 118, pp. 184-198.

## Walk for Health: Healthy Lifestyles Pilot

Country	South Africa
Sector	Health
Institution	Western Cape Government (WCG)
Start of intervention	September 2013
End of intervention	February 2014
Objective	Increase healthy behaviours among Western Cape Government employees
Method	Before/after pilot programme that tested how competition, salience and role models affected physical activity
Application	To inform potential workplace-based wellness programmes for targeting the obesity epidemic

### Problem

Rising obesity rates is becoming an epidemic throughout the world. In South Africa, a recent World Health Organisation survey found that 41% of females and 21% of males are obese. The rising rates of obesity are related to increases in obesity-related disease and healthcare costs.

This is particularly true amongst the rising population of skilled office workers, whose sedentary jobs offer little opportunity for physical activity throughout the workweek, which contributes to an increase in weight and illness. Moreover, from an employer perspective, obesity-related diseases can have a significant impact on workplace productivity, absenteeism, and premature turnover.

As part of a partnership established in 2012 to study the application of behavioural insights to four policy areas, the Western Cape Government (WCG) worked with ideas42 and the University of Cape Town, as well as other health-sector partners, to diagnose and identify routines and social norms present in the culture of government workers. They discovered two main underlying mechanisms and behavioural barriers informing healthy (or unhealthy) choices:

- **Information bias:** Employees tended to underestimate the impact of small changes in their behaviour on their overall health. This led them to taking no action at all, thinking that no benefit would come from anything other than a drastic change in lifestyle
- **Limited attention:** Employees did not think about engaging in healthy habits while in the workplace, as their mental bandwidth was consumed with other issues.

Moreover, they found that people also had a distinct mental model of exercise and healthy eating habits, with many of them conceptualising healthy behaviours as something one does at home or after work, rather than in the workplace. They also identified instances of the **action-intention gap** at work, in which some employees intended to engage in healthy behaviours after work, but admitted to not following through on their good intentions. There were instances of **overconfidence**, with some

employees believing that they were relatively healthy even when their BMI suggested otherwise.

Could an increase in the **salience and enjoyment** of exercise, along with introducing some **friendly competition**, help to increase physical activity for improved health?

## Intervention

The WCG created the “Walk4Health” initiative in partnership with ideas42, the Sports Science Institute of South Africa, the Heart and Stroke Foundation for South Africa, ICAS\HealthInSite e|Care, and the University of Cape Town (UCT). The initiative had the goal of promoting a culture of health and wellness in the Western Cape.

The intervention was tested through a six-week pilot. Fifty participants, representing all 13 departments of the WCG, were each given a pedometer device that tracked their daily steps. Recognising the power of social norms on small lifestyle choices in a group setting, the programme incorporated **incentives** for participation generated through competition and senior level participation, timely **feedback** via personal pedometers, and **gamification** to generate sustained attention within the teams into the challenge pilot.

For the challenge pilot, teams of four employees, spanning all seniority levels of government, competed with each other to take the highest number of steps each day. A public leader board was announced and tracked weekly, enabling participants to compare their progress to that of others and motivate them to stay on track and climb higher in the rankings. Each team also had Wellness Ambassadors to their respective government departments that would serve as a model for other employees to take up healthy habits and more active daily routines.

To gauge the success of the Walk4Health pilot, the Sports Sciences Institute recorded participants’ biometric measurements at the beginning and after the pilot programme.

## Results and impact

Although the sample size was small, the results were statistically significant and suggest that the pilot may have helped participants achieve their goal of engaging in healthier habits with measurable progress.

Of the 50 participants who took part in the challenge, 30 participants completed both a pre- and post-assessment. On average, 70% of participants lost weight, with an average weight loss of 2.8 kilograms. This 70% also saw a decrease in BMI, from greater than 31 (moderate) to less than 30 (low). Moreover, participants experience a reduction in waist, chest and thigh circumference, and increased their physical fitness capabilities as measured by a 12 minute motion test (with 97% covering the distance within 12 minutes).

Qualitative interviews and feedback after the Walk4Health challenge further supported the positive results among members of the community. The pilot demonstrated that a very simple, small behavioural intervention that accounts for human nature – providing a friendly, community-based competitive atmosphere – can provide people with the nudge they need to transform their existing good intentions to make lifestyle changes for the better into action.

Moreover, and applicable to many types of social problems, the insights gain from the Walk4Life project show that making goals both salient and enjoyable may make people more likely to engage in the behaviours that will make them healthier in the long term, rather than looking for an unsustainable quick fix.

The findings from this initial small-scale pilot acted as a proof-of-concept that could form the basis of a larger experiment consisting of a full RCT in the future. Moreover, the results have wide-reaching implications for the application and scalability in South Africa, and globally. It was noted that continuous efforts to produce this intervention would require more resources, both in terms of monetary support and an engaged staff of personnel committed to building the initiative. As well, concerns about participation fatigue and self-selection of teams, whereby some were fitter than others and thus made the event less competitive, would require attention in future iterations of this intervention.

## Institution

The Western Cape Government is the regional authority responsible for the Western Cape province, which includes Cape Town. They work closely with the national government and municipalities in the Western Cape to ensure that the citizens of the province have access to the services, facilities and information they need.

Ideas42 is a non-profit design and consulting firm that uses insights from behavioural sciences to design scalable solutions to some of society's most difficult problems. Initially formed at Harvard in 2008, ideas42 brings together professionals from different backgrounds and disciplines to work on projects worldwide to solve problems in health, education, criminal justice, international development, and government efficiency.

The Sports Science Institute of South Africa strives to optimise the health and sporting performance of all South Africans. They use exercise and health promotion as tools to improve human performance at all levels, for: lifestyle, recreation and enjoyment; competition and improved sporting performance; and high performance. They achieve this through the application of evidence-based scientific research as well as experience in the field.

The Heart and Stroke Foundation of South Africa aims to reduce the cardiovascular disease burden in South Africa. Their mission is to empower people in South Africa to adopt healthy lifestyles, make healthy choices easier, seek appropriate care and encourage prevention.

Health|Insite provides corporate wellness and occupational health service providers and deploys a range of health and wellness services. Through their Exec|Care, Health|Onsite, Occu|Fit, and e|Care programmes, they provide services that span employee wellbeing; corporate health screenings and events; chronic illness and disease management; HIV & AIDS; occupational health; executive health solutions, business intelligence, reporting and analytics; and work/life matters.

*Source:* Ideas42 (2014), "South Africa Project Healthy Lifestyles Pilot: Designing a Culture of Wellness", *ideas42*, [www.ideas42.org/wp-content/uploads/2014/12/Project-Brief-SA-Walk4Health-copy.pdf](http://www.ideas42.org/wp-content/uploads/2014/12/Project-Brief-SA-Walk4Health-copy.pdf) (accessed 12 January 2017).

## Public safety pilot

Country	South Africa
Sector	Health and safety
Institution	Western Cape Government (WCG)
Start of intervention	October 2014
End of intervention	November 2014
Objective	Discover behavioural-based interventions to make weekends safer for youth
Method	Randomised controlled trial testing the impacts of a computer and mobile-based application
Application	Supporting the development of alternative crime prevention strategies that are based on smart planning and developing diversionary activities to keep youth engaged and safe

### Problem

South Africa has one of the highest per-capita crime and murder rates of any country in the world. Between 2012 and 2013, for the first time in six years, South Africa experienced an increase in both the number and rate of murders and attempted murders. During that period of time, the Western Cape province had the second highest murder rate and the highest rates for sex crimes, common robbery and common assault of all provinces in the country.

Additionally, the Western Cape province experienced a 10% increase in violent crimes, with 2 580 murders in 2013 amounting to seven murders a day. In Cape Town, violence and murder are problematic throughout the many marginalised communities, but is worst in Nyanga where 260 murders were reported in 2013 (an average of one every 36 hours) and countless other violent crimes.

Municipal crime data indicated that the vast majority of violent crimes in Cape Town's poorest neighbourhoods occurred on Friday and Saturday nights, when people were more likely to be out of the house, in unsafe environments, with unfamiliar people, and often in the presence of drugs and alcohol. Moreover, most of the victims were young people between the ages of 16-26.

The Western Cape Government (WCG) Department of Community Safety worked with ideas42 and researchers from the University of Cape Town to identify other, behaviourally-informed solutions to improving safety in South Africa's low-income communities. Through examining municipal crime data and a review of the literature on the determinants of violence and crime in urban and developing countries, ideas42 discovered four key behavioural bottlenecks and contextual features that they believe contribute to the problem:

- **Crime is contextual and opportunistic.** Most perpetrators do not commit premeditated crimes, but rather take advantage of situational opportunities to commit crime, such as darkness and open spaces, to target mostly strangers. What

this means is that there are no clear a priori “perpetrators” or even “victims” per se, but instead contexts that invite people to become perpetrators of crime.

- **Perception of safety is contextual and built on social networks.** People reported feeling safest in environments that were familiar, and with people they knew, but when young people went out they often went without plans and in search of their friends, ending up in unfamiliar environments and in company of strangers. Therefore, safe locations in this context are places that are familiar and predictable, where unexpected individuals or events are less likely.
- **Young people stick to the status quo for weekend activities.** Youth consider few options when going out on weekend evenings, and often stick to their status quo activities, leading them to go to undesirable and unsafe locations.
- **Young people do not make concrete plans about their weekend evenings.** Even if youth did consider options that deviated from the status quo, they may not have followed-through on those activities because they did not plan the details ahead.

In this context, ideas42 sought to develop a scalable behavioural-based intervention that would reduce the incidence of violence in Cape Town’s townships through removing status quo bias and improving youth planning for the weekends.

## Intervention

Using these insights, the researchers created a prototype “Safety Tool,” a computer or mobile-based applications designed to help young people choose safe weekend and evening activity options, and make plans around those options. The Safety Tool presented users with an activity suggestion (e.g. start a pickup football game) and prompted them to make an **active choice** about whether they wanted to do the activity. If they did, they were prompted to develop a plan about where, when and with whom. If they did not want to do the activity, they would be shown new activities until they found one they liked.

Once users made plans about their chosen activity, they were shown a summary of their choice, and were encouraged to call or text their friends to commit to the plan. The tool was designed to leverage the participant’s local knowledge of what areas and times of day were safe, so that the plans they made were safer than their status quo choices. As a result, the tool drew on behavioural insights that people are:

- Less likely to go with the status quo option when they are forced to make an active decision about all available options
- More likely to follow through on their intended actions when they make public commitments and plan ahead.

The prototype was tested through a month-long intervention with 156 low-income, at-risk youth who resided within Cape Town’s metropolitan townships. Participants were randomised into either a treatment population that interacted with the tool or control population that received information about safety statistics in the Western Cape. During each week of the intervention, on either a Thursday or Friday, the treatment population would interact with the tool, and thus be prompted to make plans for the weekend. On the following Monday or Tuesday, both the treatment and control populations were surveyed about what they did over the weekend, and how safe they felt.

## Results and impact

The results of the experiment showed that the tool had a powerful effect: at the end of the intervention, the treatment population was found to be half as likely to participate in unsafe activities as the control population ( $p < 0.05$ ). Even more remarkably, not only were the treatment participants 61% as likely as the control group to report feeling very unsafe ( $p < 0.05$ ), but they were also found to be half as likely to experience violence than the control population ( $p < 0.05$ ).

These results have significant implications for how we think about improving safety and reducing crime. In many parts of the world violent crime is a serious problem, policy makers and practitioners often look to increased investment in enforcement as a way of mitigating the problem. This pilot project illustrates that supporting targeted decision-making and planning for both potential victims and perpetrators has the potential to significantly reduce violent crime.

However, with such a small and specific sample, these results would need to be validated in larger populations and different contexts.

## Institution

The Western Cape Government is the regional authority responsible for the Western Cape province, which includes Cape Town. They work closely with the national government and municipalities in the Western Cape to ensure that the citizens of the province have access to the services, facilities and information they need. The Department of Community Safety aims to increase safety for all the people in the Province through effective oversight of policing, making safety everyone's responsibility and optimising safety and security risk management.

Ideas42 is a non-profit design and consulting firm that uses insights from behavioural sciences to design scalable solutions to some of society's most difficult problems. Initially formed at Harvard in 2008, ideas42 brings together professionals from different backgrounds and disciplines to work on projects worldwide to solve problems in health, education, criminal justice, international development, and government efficiency.

*Source:* Ideas42 (2014), "South Africa Safety Pilot: Overcoming Dangerous Defaults", *ideas42*, [www.ideas42.org/wp-content/uploads/2014/12/Project-Brief-SA-Safety.pdf](http://www.ideas42.org/wp-content/uploads/2014/12/Project-Brief-SA-Safety.pdf) (accessed 12 January 2017).

## Increasing the number of organ donors in the United Kingdom

Country	United Kingdom
Sector	Public health
Institution	Behavioural Insights Team (BIT)
Start of intervention	2013
End of intervention	Intervention lasted five weeks.
Objective	Increasing the number of people on the Organ Donor Register
Method	Randomised Controlled Trial conducted on a sample of over one million vehicle owners renewing their vehicle tax online
Application	Incorporating behavioural nudges into communications used by the NHS to encourage more people to sign up to the UK Organ Donor Register

### Problem

On average in the United Kingdom, three people die every day because there are not enough organs available for life-saving transplants. Many people who express a desire to join the Organ Donor Register in the United Kingdom fail to do so in practice. Current opinion polls suggest that 9 out of 10 people support organ donation, but fewer than 1 in 3 people are registered. Is there a way to close the gap between intention and action?

The UK Behavioural Insights Team (BIT) conducts a number of trials to enhance the effectiveness of government policy initiatives using behavioural science. It works across the entire policy spectrum and often collaborates with other government departments and agencies towards achieving a specific policy agenda. In this case, BIT, NHS Blood and Transplant (NHSBT), the Government Digital Service (GDS), the Department for Health (DH), and the Driving & Vehicle Licensing Agency (DVLA) combined to explore whether, using interventions informed by behavioural science, they could increase the number of people registering to become organ donors in the United Kingdom.

### Intervention

The five departments worked together to conduct what was one of the largest Randomised Controlled Trials ever run in the United Kingdom. The trial tested the effect of including different messages, based on behavioural insights, on a high traffic webpage on GOV.UK that encourages people to join the NHS Organ Donor Register. It targeted over one million people who were renewing their vehicle tax online, by including a prompt to join the NHS Organ Donor Register as a separate page that appeared once individuals had completed the process either of renewing their vehicle tax or of registering for a driving licence.

BIT trialled eight different webpage variants, each including a different form of messaging and pictures, to determine which would be most effective in encouraging organ donation amongst the visitors. Each individual was randomly assigned to see one of



the eight webpage variants once they had completed their vehicle tax renewal. The nudges tested were as follows:

1. A **basic request**, with no additional information: “Please join the NHS Organ Donor Register.” This was also included in every other variant webpage, and was the control against which the other prompts were compared
2. **Social norms**: “Every day thousands of people who see this page decide to register”
3. **Social norms** plus **visual cue**: a generic group photo; testing the effect of **salience**
4. **Social norms** plus **visual cue**: an organ donation website logo; testing the effect of **salience**
5. **Loss framing**: “Three people die every day because there are not enough organ donors”
6. **Gain framing**: “You could save or transform up to nine lives as an organ donor”
7. **Reciprocity**: “If you needed an organ transplant, would you have one? If so, please help others”
8. **Call to action**: “If you support organ donation please turn your support into action”.

The rate of registration as an organ donor for each variant was measured, and compared against that of the visitors who received the basic request alone.

## Results and impact

All interventions, apart from that which used social norms plus a generic group photo, were found to have a positive effect on increasing the rate of organ donor registration. Inducing **reciprocity** by asking “If you needed an organ transplant, would you have one? If so, please help others.” was found to be the most effective in encouraging people to sign up to the register. **1 203** more people registered under this variant, as compared to the basic request. **Loss framing**, by incorporating the message “Three people die every day because there are not enough organ donors.” was found to be significantly more effective than gain framing, suggesting that third party loss aversion played a role in people signing up to the register.

Although the social norms message “every day thousands of people who see this page decide to register” alone had a positive effect on registrations, when paired with the picture of a group of people it had a negative effect, compared to the basic request to join the register. This might have been because the use of a stock photo discouraged individuals, who saw it as a marketing gimmick.

The results of the trial have informed all subsequent messaging used by the NHS, with the best performing message of **reciprocity** being put in place on the government webpage. This is estimated to have an impact of **96 000 additional registrations** in one year as compared to using the basic request alone, saving up to 6 more lives a year.

## Institution

The United Kingdom's Behavioural Insights Team (BIT) is a social purpose company, jointly owned by the UK Cabinet Office, employees and the innovation charity Nesta. It was set up within the United Kingdom government as the world's first government institution dedicated to the study and application of behavioural sciences. Its purpose is to apply behavioural insights to government policy in the United Kingdom, and to evaluate what works through the use of rigorous research methods.

The BIT is made up of experts from a mixture of disciplines, with expertise in behavioural science and economics a common qualification. It also retains an Academic Advisory Panel, made up of other Academic Experts who collaborate on trials and provide peer-reviews. In addition, BIT engages a number of PhD students who work with the team as Research Fellows.

The Behavioural Insights Team works across entire policy spectrum and also collaborates with other government departments and agencies to undertake projects with a specific policy agenda.

## Using social norms to reduce the over-prescription of antibiotics

Country	United Kingdom
Sector	Health
Institution	Public Health England and the UK Behavioural Insights Team (BIT)
Start of intervention	September 2014
End of intervention	March 2015
Objective	To test whether behaviourally-informed social norms feedback could reduce the over-prescription of antibiotics
Method	Two randomised controlled trials, each containing a treatment and control group of GP practices found to be in the top 20% of prescribing rates for antibiotics who would then receive social norms feedback
Application	To apply social norms feedback to areas where there are undesirable variations in clinical practice or outcomes are observed

### Problem

Humans are a social species and are strongly influenced by what they observe – or infer from – others doing in the same situation. These **social norms** are often considerably more powerful than messages about health risks or benefits, which have been the traditional focus of health improvement efforts. In addition, behaviours that become social norms can spread quickly and unpredictably through social networks.

An effective way of using social norms is to simply tell people what others do in the same situation. People may overestimate the extent to which their peers are engaging in unhealthy behaviours, or vice versa. Simply pointing out that a beneficial behaviour is more prevalent than expected can increase levels of that behaviour. Equally, informing someone that few other people perform the same behaviour can lead them to stop doing it.

The growth of antimicrobial resistance (AMR) has been recognised as a worldwide public health problem that increases mortality, morbidity, and the cost of health care. There are concerns that future resistance will rise to levels that seriously disrupt important medical procedures. An important driver of resistance is the medical use of antibiotics when they are not clinically indicated. UK data showed that some doctors are prescribing antibiotics much more often than others.

The UK BIT team worked with England's Chief Medical Officer to test whether sending out letters with behaviourally-informed social norms messaging could reduce the over-prescription of antibiotics.

### Intervention

The trial employed a randomised  $2 \times 2$  factorial trial design (resulting in two treatment and two control groups) using publicly available databases to identify GP practices whose prescribing rate for antibiotics was in the top 20% for their National Health Service (NHS) Local Area Team.

Eligible practices were randomly assigned into two groups by the NHS Local Area Team. The treatment group was sent a letter from England's Chief Medical Office on 29 September 2014 and a leaflet on antibiotics for use with patients. The letter stated that the practice was prescribing antibiotics at a higher rate than 80% of practices in its NHS Local Area Team. GPs in the control group received no communication.

The sample was re-randomised into two groups, and in December 2014, GP practices were either sent patient-focused information that promoted reduced use of antibiotics or received no communication.

In total, 1 581 GP practices were recruited and assigned into the intervention group, evenly split between the treatment (791) and control (790). The re-randomisation in December 2014 resulted in 777 practices in the patient-focused intervention, and 804 in the control group. In total, letters were sent to 3 227 GPs in the intervention group. Results were tracked between October 2014 and March 2015. The primary outcome measure was the rate of antibiotic items dispensed per 1 000 weighted population, controlling for past prescribing.

## Results and impact

Over six months, the doctors who received the letter reduced their antibiotic prescribing by 3.3% compared to those who were not sent the letter (statistically significant). This reduction amounted to 73 406 fewer doses of antibiotics across 790 practices. The patient-focused intervention did not significantly affect the primary outcome measured by the first treatment. Importantly, after letters were sent to all practices in the sample at the end of March 2015, the control group showed the same effect as the treatment group.

They further calculate that their feedback intervention would equate to a 0.85% reduction in antibiotic items nationally during the study period (if the control group was also treated).

In total, the intervention cost only GBP 4 335, which equates to GBP 0.06 per prescription prevented during the study period. The researchers estimate that this intervention created GBP 92 356 savings in direct prescription costs for the public sector.

The researchers conclude that giving social norm feedback can reduce antibiotic prescribing. This approach could be applied to other areas where there are undesirable variations in clinical practice or outcomes.

## Institution

Public Health England serves to protect and improve the nation's health and wellbeing, and reduce health inequalities. They are an executive agency of the Department of Health, and a distinct delivery organisation with operational autonomy to advise and support government, local authorities and the NHS in a professionally independent manner. Public Health England was established on 1 April 2013 to bring together public health specialists from more than 70 organisations into a single public health service.

They employ 5 000 staff (full-time equivalent), mostly scientists, researchers and public health professionals and have 8 local centres, plus an integrated region and centre for London, and 4 regions (north of England, south of England, Midlands and east of

England, and London). They work closely with public health professionals in Wales, Scotland and Northern Ireland, and internationally.

The United Kingdom's Behavioural Insights Team (BIT) is a social purpose company, jointly owned by the UK Cabinet Office, employees and the innovation charity Nesta. It was set up within the UK Government as the world's first government institution dedicated to the study and application of behavioural sciences. Its purpose is to apply behavioural insights to government policy in the United Kingdom, and to evaluate what works through the use of rigorous research methods.

The BIT is made up of experts from a mixture of disciplines, with expertise in behavioural science and economics a common qualification. It also retains an Academic Advisory Panel, made up of other Academic Experts who collaborate on trials and provide peer-reviews. In addition, BIT engages a number of PhD students who work with the team as Research Fellows.

The Behavioural Insights Team works across entire policy spectrum and also collaborates with other government departments and agencies to undertake projects with a specific policy agenda.

*Source:* Hallsworth, M. et al. (2016), "Applying Behavioural Insights: Simple Ways to Improve Health Outcomes", Doha, Qatar: World Innovation Summit for Health, [http://38r8om2xjhl25mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2016/11/WISH-2016\\_Behavioral\\_Insights\\_Report.pdf](http://38r8om2xjhl25mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2016/11/WISH-2016_Behavioral_Insights_Report.pdf) (accessed 12 January 2017); Hallsworth, M. et al. (2016), "Provision of social norm feedback to high prescribers of antibiotics in general practice: A pragmatic national randomised controlled trial", *The Lancet*, [www.thelancet.com/journals/lancet/article/PIIS0140-6736\(16\)00215-4/abstract](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(16)00215-4/abstract) (accessed 12 January 2017).

## Stating appointment costs in SMS reminders to reduce missed hospital appointments

Country	United Kingdom
Sector	Health
Institution	UK National Health Service (NHS)
Start of intervention	November 2013
End of intervention	May 2014
Objective	To test the effects of behaviourally-informed persuasive message content in SMS appointment reminders
Method	Two randomised controlled trials, each testing the effects of four different framings of SMS messages
Application	To inform policy regarding the content of messages sent out in appointment reminders, specifically in regards to the benefit of adding persuasive messages

### Problem

Behavioural science has shown that we have only a limited capacity for focusing on and processing information. Therefore, we have developed strategies for separating important or relevant pieces of information from the rest. However, these strategies also mean that the way we notice and process information can harm our health.

These problems of attention are particularly bad when people have a heavy “cognitive load” – in other words, they have a lot to think about. In the United Kingdom, “Did Not Attend” (DNAs) occur when a patient unexpectedly fails to attend an appointment. In 2012–13, around 5.5 million National Health Service (NHS) outpatient appointments were missed in England (9.3% of the total).

While it is difficult to establish the exact financial impact of DNAs, a recent estimate claimed that missed first outpatient appointments cost the NHS up to GBP 225 million in 2012–13. Furthermore, DNAs lead to worse care for patients, the inefficient use of staff, and increased waiting times. Hospitals may also engage in complex compensating behaviours, such as overbooking, which introduce problems of their own.

Survey evidence indicates that the main reason for a DNA is the patient forgetting their appointment. Thus, attention has focused on the effective use of reminders. In this study, the UK BIT partnered with the Centre for Health Policy at the Imperial College of London, the UK Department of Health, Public Health England and Harvard’s Kennedy School of Government to test the effects SMS messaging on DNA rates.

### Intervention

Systematic reviews show that sending SMS reminders is effective, but there is no evidence on whether their impact is affected by their content. Accordingly, the researchers undertook two randomised controlled trials that tested the impact of rephrasing appointment reminders on DNA rates in the United Kingdom.

The first trial took place in an NHS Trust (Barts Health) that used an SMS provider (iPlato) to send outpatient appointment reminders. Participants were all patients with a valid mobile telephone number and an outpatient appointment in November and December 2013 and January 2014 in at least one of five specialities: rheumatology, ophthalmology, gastroenterology, neurology, and cardiology. These specialities were chosen because they were not currently the subject of any other initiatives to reduce DNAs, apart from the SMS reminders already in use.

Appointments were randomly allocated to one of four reminder messages, which were issued five days in advance (three chosen by the study team, and one chosen by the Trust). The four interventions were:

1. **Control:** the normal message sent to outpatients at the clinic, which instructed clients to “cancel or rearrange call the number on your appointment letter”
2. **Easy call:** Included the telephone number for cancelling appointments in the body of the SMS reminder, thereby reducing the effort (friction) required to reschedule or cancel
3. **Social norms:** Message included the line “We are expecting you at [clinic] on [date] at [time]. 9 out of 10 people attend” and included the telephone number for cancelling appointments. This message sought to correct perceptions that can change behaviour
4. **Specific costs:** Message included the line “We are expecting you at [clinic] on [date] at [time]. Not attending costs NHS GBP 160 approx.” and included the telephone number for cancelling appointments. This is based on emerging evidence that making such costs salient may influence behaviour.

The first trial included 10 111 participants who were randomised into each of the three treatments and the control.

Following the first trial, the researchers amended the original protocol to build in the results described below. This trial took place in March, April and May 2014. All other aspects of the trial design and methods are identical to Trial One. They carried out the same analytic procedures as in Trial One, with the exception that the Specific Costs message (i.e. the best-performing message from Trial One) was used as the control intervention. The four messages were:

1. **Specific costs:** As described above
2. **General costs:** Same as specific costs, but the wording regarding costs was changed to “Not attending wastes NHS money”. This was done to test the general effects of the cost message, which requires less effort to adopt at scale, but evidence also shows that tailored messages are more likely to attract attention and trigger conscious thought
3. **Empathy:** Same as specific costs, but line about costs is replaced with “please be fair to others waiting and call [number] if you need to cancel or rearrange”. There is much evidence that situationally-induced empathy (asking someone to “put yourself in others’ shoes”) leads to an increase in pro-social behaviour
4. **Recording:** Same as the easy call message from Trial One, but added “or we will record as a missed apt.” This is based on evidence from other fields that increasing “visibility” of an individual’s actions through creating data records (and notifying them of that fact) increases pro-social behaviour.

Trial Two included 9 848 participants, randomised into each treatment group.

## Results and impact

For trial one, the Specific Costs message produced a DNA rate of 8.4%, compared to a rate of 11.1% or the Control message, and was statistically significant. No other messages had a significant effect on DNA rates. Interestingly, however, the study found that the Social Norms message led to more appointment cancellations (10.5%), compared to the control (8.8%), and was statistically significant.

Trial Two replicated this effect (DNA rate 8.2%), but also found that expressing the same concept in general terms was significantly less effective (DNA rate 9.9%, statistically significant). Empathy was also significantly less effective than the Specific Costs message (10.7%). The Recording message produced a DNA rate of 9.6%, which is not significantly higher than the Specific Costs message, although it was close to significant at the 95% level ( $p = 0.07$ ).

The researchers calculated that the lower DNA rate produced by the Specific Costs message (compared to the Control message) in Trial One would result in 5 800 fewer missed appointments for Barts Health across all outpatient specialities, if sustained over the course of a year. The study's main limitations are that it took place in a single location in England, and that it required accurate phone records, which were only obtained for 20% of eligible patients.

They conclude that missed appointments can be reduced, for no additional cost, by introducing persuasive messages to appointment reminders.

## Institution

The NHS Trust Barts Health group of hospitals provides a huge range of clinical services to people in east London and beyond. They operate from four major hospital sites (The Royal London, St Bartholomew's, Whipps Cross and Newham) and a number of community locations, including Mile End hospital. Around 2.5 million people living in east London look to their services to provide them with the healthcare they need.

The United Kingdom's Behavioural Insights Team (BIT) is a social purpose company, jointly owned by the UK Cabinet Office, employees and the innovation charity Nesta. It was set up within the UK Government as the world's first government institution dedicated to the study and application of behavioural sciences. Its purpose is to apply behavioural insights to government policy in the United Kingdom, and to evaluate what works through the use of rigorous research methods.

The BIT is made up of experts from a mixture of disciplines, with expertise in behavioural science and economics a common qualification. It also retains an Academic Advisory Panel, made up of other Academic Experts who collaborate on trials and provide peer-reviews. In addition, BIT engages a number of PhD students who work with the team as Research Fellows.

The Behavioural Insights Team works across entire policy spectrum and also collaborates with other government departments and agencies to undertake projects with a specific policy agenda.

*Source:* Hallsworth, M. et al. (2016), "Applying Behavioural Insights: Simple Ways to Improve Health Outcomes," Doha, Qatar: World Innovation Summit for Health, [http://38r8om2xjhl25mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2016/11/WISH-2016\\_Behavioral\\_Insights\\_Report.pdf](http://38r8om2xjhl25mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2016/11/WISH-2016_Behavioral_Insights_Report.pdf) (accessed 12 January 2017); Hallsworth, M. et al. (2015), "Stating Appointment Costs in SMS Reminders Reduces Missed Hospital Appointments: Findings from Two Randomised Controlled Trials", PLOS ONE 10(10): e0141461. doi: 10.1371/journal.pone.0141461.



## Increasing the uptake of condoms in rural Zambia

<b>Country</b>	Zambia
<b>Sector</b>	Health – HIV/AIDS prevention
<b>Institution</b>	German Federal Ministry of Economic Cooperation and Development (KfW)
<b>Start of intervention</b>	2012
<b>End of intervention</b>	2012
<b>Objective</b>	Increasing the uptake of condoms in rural areas through social marketing campaigns
<b>Method</b>	Field experiment conducted in rural Zambia
<b>Application</b>	Condom distribution programme, selling subsidised social marketing condoms to the rural population in Zambia

### Problem

Why is the demand for condoms so low in developing countries despite a long history of social marketing campaigns, especially in rural areas? Is the rural population willing and able to pay for condoms, or do free condoms at the clinic “crowd out” demand for social marketing condoms, that is branded condoms which are sold at a subsidised price through social marketing programmes? What is the influence of other barriers to condom acquisition?

Moreover, what should be the main goal – cost coverage or a wide availability of social marketing condoms even in sparsely disbursed areas? How can access in rural areas be improved?

The German Federal Ministry of Economic Cooperation and Development (KfW) was scratching its head after evaluating a programme that, while successful in increasing the uptake of condoms through social marketing, had also faced limitations in reaching out to rural areas...

### Intervention

KfW partnered with Heidelberg University, American Institutes for Research, Family Health Trust, a Zambian NGO, and Palm Associates, a Zambian-based research institute, to estimate the effect of price on demand for condoms and investigated the influence of travel time, privacy, stock outs, and convenience of condom acquisition, including behavioural effects related to this.

It conducted a four-month field experiment in rural Zambia where, prior to the study, condoms were only available at health clinics free of charge. KfW randomly assigned one of three prices to 119 village clusters located at different distances from the next clinic. In the experiment, community health volunteers living in these village clusters were recruited as sales agents and sold branded condoms at the price assigned to their cluster.

KfW observed the number of condoms acquired in the entire study area by collecting data at each community sales agent and at the clinics. In addition, the researchers collected data on every person who acquired condoms during the study period. This allowed them to estimate the price sensitivity of demand for branded condoms and the effect of access to free unbranded condoms. In addition, it revealed preferences about price and location for acquisition by demographic characteristics.

## Results and impact

The study found that condom uptake is **sensitive to price**. Demand dropped by about 44% when the price increased from 25 ngwee to 50 ngwee and by about 46% when the price increases to 100 ngwee, which was the subsidised social marketing price found in the nearest town.

At the same time the rural population is **willing to pay for condoms**, even though there are free generic condoms available at the clinics. During the study period, incidences of acquisition at the agents were 12 times as high as at the clinics. The number of condoms sold was three times as high compared to the number of condoms given out at the clinics.

Other important barriers to condom acquisition were found, in particular **travel costs** and **convenience** of acquisition. The great majority of agent customers (57%) reported that they chose to buy condoms because the clinic was too far away. Furthermore, the population living in the same village as an agent bought more condoms than those living in the surrounding villages, which suggests that even small distances matter.

Demographics also played a role – only about 15% of the people acquiring condoms were female. The customers at the agents were also on average younger, better educated, have fewer children, and are more likely to be single than those acquiring free condoms at the clinics. This is important information for targeting of condom distribution programmes as it reveals who is not reached and which model of provision is suited best to reach certain groups.

The study showed, therefore, that in order to reach the rural population, policy makers have to provide highly subsidised condoms, as price sensitivity affects uptake of condoms even at very low prices.

Working with community health volunteers as condom sales agents and a local NGO to manage restocking and accounting was shown to be a promising model to increase condom use in rural areas. The health volunteers were trained in HIV education and make a small profit per condom pack sold as an incentive.

The Family Health Trust decided to keep the condom distribution programme created as part of the experiment running for another year to provide access to the population after the study had ended.

## Institution

The Federal Ministry of Economic Cooperation and Development manages Germany's international development policy, and works on a number of projects in developing countries around the world. It has been regularly using behavioural insights in the planning and design of projects in various sectors.

The Ministry of Development uses behavioural insights as part of its ongoing development of new methods and instruments to integrate into the organisation's day-to-day work. Central responsibility for behavioural insights approaches rests with the organisation's unit *Kompetenzcenter Entwicklung, Governance und Frieden* (Competence Centre Development, Governance and Peace). However, new insights in the field are also being followed and generated by other in-house competence centres, for example in sectors such as health and financial system development, and the organisation's staff have approached university researchers in order to discuss options for accompanying studies as well. Several staff in the department have in-depth knowledge on behavioural economics from their higher education or doctorate programmes themselves.

There has been some skepticism within the organisation about the effectiveness of subliminal manipulation of behaviour through such approaches, and also misgivings about whether this is ethical. However, the Ministry has undertaken internal trainings to sensitise staff to the use of behavioural insights within its work, by educating them on the harmful effects that lack of action can equally have on outcomes too.



## Chapter 10

### Behavioural insights case studies: Labour market

*This chapter provides a series of case studies detailing how behavioural insights have been applied in OECD member and partner countries as a tool for improving access to the labour market, improving labour market skills, and changing organisational behaviour. Case studies presented utilise a breadth of experimental methods, ranging from resource-intensive randomised controlled trials to relatively less resource-intensive literature reviews. The open and transparent sharing of what works, and what does not, is vital to ensuring that good quality research and findings are shared widely.*

## Matching jobs and job-seekers

Country	Canada
Sector	Employment and labour
Institution	Employment and Social Development Canada (ESDC)
Start of intervention	June 2015
End of intervention	October 2015
Objective	Improving the take-up of job-matching services
Method	Weekly rotation of nudges on Job Bank Job posting pages applied to all users (750 000 per week)
Application	Re-designing the way in which the Job Match link is posted on the Job Bank's job posting pages

### Problem

How can jobs and job-seekers be better matched?

Job Match (JM) is a component of the Job Bank service, the Government of Canada's main source for jobs and labour market information across Canada. Job Match allows job seekers to find jobs that more closely fit their skills, experiences and knowledge and helps them actively connect with the right employers. To take advantage of the Job Match service, interested Canadians need to go through a two-phase process that requires them to first create an individual account and then to create their user profile.

Employment and Social Development Canada (ESDC), the department of the Government of Canada responsible for social programmes and the labour market at the federal level, found that there was a relatively low take-up of the service. In fact, at the time when this study started, approximately 50% of Canadians who have created their JM account did not actually complete and activate their user profiles and therefore cannot be matched to available jobs.

### Intervention

ESDC set out to test whether and to what extent **nudges** based on behavioural insights principles could be used to improve the overall take-up of the Job Match service, with a particular focus on account creation.

Staff from the Behavioural Economics and Service Innovation Research Unit of the ESDC, in close collaboration with the Skills and Employment Branch, designed an intervention which involved introducing behavioural insights principles into the Job Bank's Job Posting pages, to test whether and which nudges would be effective in influencing Job Bank users and to create a Job Match user account.

The principles tested were:

- Framing

- Social norms
- Call-to-action/salience
- Sense of commitment.

Each nudge was implemented on a rotating weekly basis on Job Posting pages to which all Job Bank users nationwide had access (750 000 per week) from June to October 2015, and each was reintroduced in the system at least 3 times over the period. Results were measured by recording the number of visitors to the pages who clicked on the Job Match link located on the Job Posting website and the number of new Job Match user accounts for each nudge tested and also when there was no nudge used.

The department encountered some internal concerns related to behavioural insights in regard to potentially highly negative public perceptions of what could be seen as governments' attempts to influence citizen and clients' behaviours with respect to programme and service use. Some managers also expressed significant discomfort with the very notion of using Canadian citizens as the subjects of research projects or initiatives testing the uses of nudges.

In the context of these trials, concerns were expressed about providing different information to different clients, which could be considered unequal treatment, and testing alternative messages, some of which could in fact potentially lead to sub-optimal programme outcomes, on very large samples of Canadians could be considered unethical.

To address these concerns, ESDC made significant efforts to clarify the “light touch” nature of most of the behavioural related interventions it conducted, as well as to educate various departmental stakeholders with respect to the importance of testing innovative approaches on smaller population before full implementation, so as to avoid the large scale implementation of undesirable ideas.

Since Behavioural Insights is a nascent field in the federal public sector, ESDC has mainly chosen projects which are simple to do and offer high potential for success in the short terms in order to build success and a solid evidence base. These projects mainly concern the simplification of existing information and application of Behavioural Insights to existing departmental communication materials.

## Results and impact

All nudges generated more clicks than the control posting – from 67% to 122% more, depending on the nudge. Moreover, those who clicked on a nudge on a Job Bank Job posting page had a higher probability of creating an account than did Job Bank users coming into the Job Match website without having been exposed to a nudge. This shows that the nudges had a persisting effect on Job Bank users, as they went farther in the sign-up process than when unexposed to any nudge in the control.

The results from the trial also revealed that important factors relating to the timing of a posting affect its performance. However, these could not be explored in detail due to technical limitations which prevented the intervention being applied as a Randomised Controlled Trial.

Though only a small share of those viewing job postings clicked on the nudges and went on to complete their profile, the trial nevertheless demonstrated the effectiveness of nudging as a means to increase the uptake of the Job Match service. The Job Bank team in the Skills and Employment Branch of ESDC have therefore operationalised the results

of the study and have made the Framing nudge a permanent component of its job postings pages. These nudges help Canadians make the most of ESDC's services which can lead to a more effective labour market.

## Institution

ESDC has been using behavioural insights to support departmental strategic directions and priorities related to service delivery, employment, labour market information, post-secondary education, and social development.

Behavioural insights are also contributing to help address sub-optimal take-up and use of key departmental programmes. Formal thinking and concrete applications of behavioural insights are still fairly new for the department, and mostly concentrated in the area of programme and service delivery research, although some concrete programme design changes based on behavioural insights have already occurred.

ESDC has a research unit dedicated to behavioural insights, from the Service Research Division in the Service Strategy and Policy Branch which leads the implementation of the department's nudge trials. It has also created an Innovation Lab, which plays a central role in developing innovations in service improvements and policy ideas across the department.

The department also has an internal community of interest on behavioural insights called the ESDC Nudge Team which consists of members from across the portfolio, including from its service delivery organisation, Service Canada. The Nudge Team meets quarterly to share information on BI related advancements inside the Department and externally. ESDC has started to develop small scale relations and contracts with external academics from the University of Toronto to support internal work.

Significant interconnections with other researchers and analysts across the Government of Canada also exist. In particular, ESDC, together with the Privy Council Office, co-chairs the Behavioural Insights Community of Practice (CoP), which convenes a horizontal community of BI practitioners across the federal government to exchange advises and on best practices. It regularly participates in and hosts conferences and workshops on behavioural insights, co-hosting Canada's first ever Behavioural Economics Conference for the Public Sector in March 2016 which brought together public servants at all levels, academics and practitioners for a discussion on the application of behavioural insights to public policy, programmes and service delivery.



## Matching jobs and job-seekers 2

Country	Canada
Sector	Employment and labour
Institution	Employment and Social Development Canada (ESDC)
Start of intervention	April 2015
End of intervention	May 2015
Objective	Bringing people back onto the Job Match service website and having them complete and activate their user profile on the website
Method	Randomised Controlled Trial using sample of 3 784 Job Match account owners
Application	Results from the trial have the potential to inform the contents and design of future government messaging to citizens

### Problem

How can jobs and job-seekers be better matched?

Job Match (JM) is a component of the Job Bank service, the Government of Canada's main source for jobs and labour market information across Canada. Job Match allows job seekers to find jobs that more closely fit their skills, experiences and knowledge and helps them actively connect with the right employers. To take advantage of the Job Match service, interested Canadians need to go through a two-phase process that requires them to first create an individual account and then to create their user profile.

Employment and Social Development Canada (ESDC), the department of the Government of Canada responsible for social programmes and the labour market at the federal level, found that there was a relatively low take-up of the service. In fact, at the time when this study started, approximately 50% of Canadians who have created their JM account did not actually complete and activate their user profiles and therefore cannot be matched to available jobs.

### Intervention

ESDC set out to test whether and to what extent **nudges** based on behavioural insights principles could be used bring users back to the Job Match service and motivate them to complete their job profile.

The trial consisted of sending five different emails to a randomly selected sample of 3 784 Job Match account owners nationwide who had not completed and activated their user profiles. The sample was split into five groups – one group was sent the standard email with no nudge, whilst the other four groups were each sent an email with a specific nudge incorporated into the messaging in the email.

The principles tested were:

- Framing
- Social Norms
- Call-to-Action/Salience
- Sense of Commitment.

These principles were chosen following a literature review that preceded the trial which informed the design of the nudges used. Results were judged by the number of persons clicking on the email link, and the number of Job Match profiles activated.

The department encountered some internal concerns related to behavioural insights in regard to potentially highly negative public perceptions of what could be seen as governments' attempts to influence citizen and clients' behaviours with respect to programme and service use. Some managers also expressed significant discomfort with the very notion of using Canadian citizens as the subjects of research projects or initiatives testing the uses of nudges.

In the context of these trials, concerns were expressed about providing different information to different clients, which could be considered unequal treatment, and testing alternative messages, some of which could in fact potentially lead to sub-optimal programme outcomes, on very large samples of Canadians could be considered unethical.

To address these concerns, ESDC made significant efforts to clarify the “light touch” nature of most of the behavioural related interventions it conducted, as well as to educate various departmental stakeholders with respect to the importance of testing innovative approaches on smaller population before full implementation, so as to avoid the large scale implementation of undesirable ideas.

Since Behavioural Insights is a nascent field in the federal public sector, ESDC has mainly chosen projects which are simple to do and offer high potential for success in the short terms in order to build success and a solid evidence base. These projects mainly concern the simplification of existing information and application of Behavioural Insights to existing departmental communication materials.

## Results and impact

All nudge informed-emails led to significantly more clicks on the link to Job Match website than the control email – from 51% to 92% more, depending on the behavioural insight principle used. The four behavioural insight-informed emails also generated more profile activations – a 106% improvement.

However, once the link to the Job Match sign-up process had been used, there was no discernible difference in profile activation rates between individuals who received any of the nudge-based emails and those who received the standard email. This suggests that nudge effects did not persist over the entire Job Match sign-up process.

Moreover, differences in impacts between the different nudge-inform emails were not always statistically significant, and it was therefore impossible to determine which specific nudge worked best.

The trial demonstrated that nudges based on behavioural economics principles do matter and clearly outperform standard government messaging in some contexts, but that the content of the nudges is less relevant than the fact of their being used. It also

suggested that the impact of using nudges in messaging may tend to be only immediate or short term, rather than having longer term effects.

## Institution

ESDC has been using behavioural insights to support departmental strategic directions and priorities related to service delivery, employment, labour market information, post-secondary education, and social development.

Behavioural insights are also contributing to help address sub-optimal take-up and use of key departmental programmes. Formal thinking and concrete applications of behavioural insights are still fairly new for the department, and mostly concentrated in the area of programme and service delivery research, although some concrete programme design changes based on behavioural insights have already occurred.

ESDC has a research unit dedicated to behavioural insights, from the Service Research Division in the Service Strategy and Policy Branch which leads the implementation of the department's nudge trials. It has also created an Innovation Lab, which plays a central role in developing innovations in service improvements and policy ideas across the department.

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## Reducing dependence on income support

Country	United Kingdom
Sector	Labour market
Institution	Behavioural Insights Team (BIT)
Start of intervention	January 2013
End of intervention	January 2014
Objective	Reducing the number of people needing unemployment benefits
Method	Stepped Wedge Cluster Randomised Controlled Trial; sample of 110 838 jobseekers
Application	Applying behavioural science to JobCentre Plus processes to increase the number of people able to find employment

### Problem

In June 2016 there were more than 700 000 jobseekers claiming unemployment benefits in the United Kingdom. The purpose of JobCentre Plus is to help those without jobs in the United Kingdom find employment, and, as a consequence, to eliminate the need for those individuals to receive unemployment benefits, which are known as “JobSeekers Allowance” (JSA) from the UK Government.

The UK Behavioural Insights Team (BIT) conducts a number of trials to help enhance the effectiveness of government policy initiatives using insights taken from behavioural science. BIT set out to explore whether applying these insights to the processes used by JobCentre Plus to help people find work could improve their chances of succeeding.

### Intervention

BIT conducted a trial in 12 Job Centres in Essex, modifying the ways in which the Centre offered its visitors support in their search for employment using methods adopted from behavioural science.

The intervention involved the **simplification** of job search processes, and the introduction of a **planning** aid to encourage people to search for work.

It took the form of a stepped-wedge trial, in which 110 838 jobseekers were randomly selected to receive the treatment informed by behavioural science when visiting JobCentre Plus, whilst a control group continued to receive the ‘business as usual’ model used in JobCentre Plus.

The intervention involved two tranches of changes to this model:

1. **Simplification:** The first appointment in JobCentrePlus was streamlined, with jobseekers building a relationship with their advisor and discussing their job search from the start

2. **Planning aid:** Based on the wide range of evidence on planning aids and “implementation intentions”, a commitment pack was developed. This pack encouraged jobseekers to plan their job search activities with their advisors by specifying where, when and how they were going to complete their job search activities. The commitment pack was completed prospectively by asking jobseekers to plan their job search and then carry it out, rather than the previous document, which simply required that jobseekers document what they had done retrospectively.

The trial took the form of a stepped-wedge cluster randomised controlled trial, in which JobCentres were grouped into nine clusters. Over time, these clusters switched from offering ‘business as usual’ support to jobseekers (control group) to the behaviourally informed intervention (treatment group). The order in which the clusters made this switch was randomised. In total, 110 838 jobseekers were either in the treatment or control group.

Results were assessed by measuring the off-flow from benefits after 13 weeks, which is the numbers of recipients of benefits who were no longer receiving those benefits after 13 weeks, of those jobseekers who received the updated treatment relative to the numbers of those who experienced the business as usual model when visiting JobCentre Plus.

## Results and impact

BIT found that applying the interventions informed by behavioural insights to JobCentre Plus processes resulted in a **1.7 percentage point** increase in the proportion of people flowing off of benefits in 13 weeks relative to the business as usual model.

This suggests that simplifying processes, focusing on job search rather than meeting minimum requirements, and planning aids were successful at supporting jobseekers to find employment.

These interventions have subsequently been rolled out nationally in England in JobCentre Plus. Similar interventions have since been trialled in Australia and have also proven to be successful.

## Institution

The United Kingdom’s Behavioural Insights Team (BIT) is a social purpose company, jointly owned by the UK Cabinet Office, employees and the innovation charity Nesta. It was set up within the UK Government as the world’s first government institution dedicated to the study and application of behavioural sciences. Its purpose is to apply behavioural insights to government policy in the United Kingdom, and to evaluate what works through the use of rigorous research methods.

The BIT is made up of experts from a mixture of disciplines, with expertise in behavioural science and economics a common qualification. It also retains an Academic Advisory Panel, made up of other Academic Experts who collaborate on trials and provide peer-reviews. In addition, BIT engages a number of PhD students who work with the team as Research Fellows.

The Behavioural Insights Team works across entire policy spectrum and also collaborates with other government departments and agencies to undertake projects with a specific policy agenda.

## Acquiring data from postal firms

Country	The Netherlands
Sector	Postal market
Institution	The Netherlands Authority for Consumers and Markets (ACM)
Objective	Increasing compliance amongst postal firms in terms of providing company data to ACM
Method	Behavioural Analysis/Policy Implementation
Application	Using a telephone script to contact non-compliant firms to persuade them to provide the required data

### Problem

The Netherlands Authority for Consumers and Markets (ACM) is a regulator which ensures fair competition between businesses, and protects consumer interests. By doing so, it aims to create more opportunities and options for both businesses and consumers.

ACM deals with the oversight of a number of markets, including the postal market in the Netherlands. Part of its work involves analysing the market using data acquired from postal companies, and providing this analysis to the Dutch Ministry of Economic Affairs.

Although some postal firms provided data about their company without any problems, ACM was struggling to acquire the required information from others. It set out to find a way to influence the non-compliant firms to co-operate. To an extent, the same interventions were used the next year to influence the whole group of firms.

### Intervention

ACM began by conducting a behavioural analysis of the non-compliant firms, based on the experiences of ACM staff who had previously contacted the entrepreneurs in the Dutch postal market. It combined the analysis with a review of literature about the behaviour of not delivering company data.

The researchers found that there were a number of factors that caused companies not to fill in the survey that ACM sent them to acquire the relevant data. These included:

- Inertia/Status quo bias
- **Lack of time** to fill in the survey
- **Lack of knowledge** required to fill in the survey
- Filling in the survey was **not a priority** for the firm
- The firm did not want to fill in the survey.

Based on this initial behavioural assessment, ACM then designed an intervention to influence the non-compliant postal firms to provide their company data.

The intervention took the form of a telephone script. This was because ACM wanted to make sure that there was **personal contact** with each of the companies with whom it was getting in touch to ask for data.

The script was based on behavioural insights, which were designed to counteract the biases that had already established to have been causing the problem in the first place. The insights were adopted both from the literature reviewed on the subject, as well as from lessons taken from other trials conducted by the UK's Behavioural Insights Team (BIT) and the World Bank.

The insights used included:

- Framing the earlier not-filling in as a **deliberate choice**
- Disrupt-then-reframe-technique
- Making things **easier** for the firm to fill in the survey
- **Descriptive social norm** – “We are only waiting for you, the rest already did it”
- Making it the **personal responsibility** of only one person in the company to complete the survey
- **Creating commitment** by asking the firms themselves what they thought would be an appropriate date for them to deliver the data to ACM
- Acknowledging the fact that they probably did not have the time to fill in the survey, in order to **reduce resistance**
- Accepting the fact that the information would be only an estimate, instead of the total correct data, in order to reduce the problem of caused by **lack of knowledge**.

## Results and impact

Phone calls were made to the firms using the behaviourally informed telephone script. Following the conversation, 24 of the 27 companies eventually provided the required data to ACM. The ACM employees who conducted the calls to the firms explained that especially after mentioning the descriptive social norm, the entrepreneurs agreed to send the data as soon as possible. Had the script been used from the start, this would have helped the team to save time and immediately choose the most effective approach. This was put in practice the year after, which led to faster data collection because more firms were compliant from the start.

The project team behind the study agreed that, were it to encounter a similar situation, it would use the knowledge of a behavioural expert earlier in the process. In hindsight, this would have helped the team to save time and immediately choose the most effective approach to encourage the firms to comply.

Based on this case study, ACM plans to use the same behavioural insights for other projects where data delivery by certain companies is an issue as well.

## Institution

The Netherlands Authority for Consumers and Markets is the Dutch competition and market regulator. It works to protect consumers and promote fair competition between businesses. ACM has been actively using behavioural insights in order to achieve more effective market oversight.

The Authority is particularly interested in using behavioural insights to make consumers more aware and active, to increase compliance amongst businesses, and to obtain information from regulated companies, especially in the energy, telecom and postal sectors.

ACM has a Behavioural Insights Team consisting of 10 people. It organises workshops open to all employees and information meetings for managers. In order to increase the organisational knowledge of behavioural insights, ACM also participates in international conferences and networks with universities and other regulators and government bodies that apply behavioural science.

Although there was some initial scepticism, questions and concerns about ethics across all layers of the organisation regarding the use of behavioural insights by ACM, as the use of behavioural insights became increasingly visible, this has decreased over time.



## Encouraging on-time payment of levies

Country	Singapore
Sector	Employment and labour
Institution	Ministry of Manpower (MOM)
Start of intervention	February 2014
End of intervention	April 2014
Objective	Increasing on-time payments by employers of levies on foreign domestic workers
Method	Randomised Controlled Trial applied to a sample of 1 000 employers of foreign domestic workers
Application	Redesign of the reminder letter sent to employers of foreign domestic workers

### Problem

About 96% of Foreign Domestic Worker employers in Singapore pay their levies on time, via automated bank account deductions. Every month, the Ministry of Manpower sends reminder letters to about 8 000 Foreign Domestic Worker employers. Can the compliance rate be further increased?

The Ministry of Manpower wanted to test whether a “nudge” could make more employers pay their levy promptly, avoid penalties for late payment, and reduce the resources spent to follow-up on the late payments.

### Intervention

A two-arm trial was designed to test “nudges” in reminder letters sent to employers who had defaulted on their previous month’s levy payment. A sample of 1 000 Foreign Domestic Worker employers who had not paid their previous month’s levy were chosen on a purely random basis. A control group was utilised to whom the existing reminder letters were sent unchanged as a point of comparison. The tested “nudges” included:

- **Salience:** the use of boxes in a new letter template to draw attention to key action steps and indicating ‘Your foreign worker levy is overdue’ in the letter header
- **Social norms:** “96% of Foreign Domestic Worker employers pay their levies on time”
- **Priming:** printing reminder letter on pink paper
- **Personalisation:** including the Foreign Domestic Worker’s details in the letter.

### Results and impact

The trial found that the payment rate for levy defaulters was higher for the treatment group:

- 76% of employers who were sent letters which included the Behavioural Insights interventions made a full payment and 85% made a partial payment, compared to 71% and 82% respectively for the control group
- The use of salient messaging and social norms appeared effective in encouraging levy payments from recalcitrant Foreign Domestic Worker employers.

The Ministry of Manpower estimated that the application of “nudges” to reminder letters would translate into an annual increase of 3 800 employers making prompt levy payments of about SGD 1.5 million.

Interestingly, however, not all “nudges” worked and for which purpose they are use matters. Following this trial, a separate department in the Ministry of Manpower sent out pink reminder letters to encourage a particularly recalcitrant group to respond to a mandatory household survey. Although the response rate increased for this group, it also attracted a number of complaints from respondents who felt that the use of pink reminder letters was unnecessarily alarming. The use of pink paper was effective in nudging the recipients into action, but it also implied some drawbacks.

A reminder letter with salience and social norm nudges has been rolled out by the Ministry of Manpower for all 8 000 overdue Foreign Domestic Worker reminder letters. This has led to a 3% increase in the compliance rate, which was sustained over a 6 month period.

## Institution

The Ministry of Manpower (MOM) is a ministry of the Government of Singapore which is responsible for the formulation and implementation of labour policies related to the workforce in Singapore. It oversees matters related to immigration, issuing of Employment Passes to foreign workers, student passes, passport, visa and granting of residency/citizenship amongst others.

The Ministry of Manpower has been using behavioural insights as tool of evidence-based policy design, which helps it to design and implement policies and services that better meet user needs based on a deeper understanding of customers’ behaviours and decision making environment. The practice of testing to discover what works in behavioural insights also helps the Ministry ensure efficient use of its resources.

The Ministry possesses a central unit called Behavioural Insights and Design Unit, through which behavioural insights are applied across the institution. The unit consists of experts from diverse disciplines including design, accounting, economics, business, sociology and psychology and was established with guidance from the UK Behavioural Insights Team. The Ministry also partners with private consultancies and academic institutions for more efficient use of resources and in order to tap into different expertise in behavioural insights.

## Helping job seekers find employment

<b>Country</b>	Singapore
<b>Sector</b>	Employment and labour
<b>Institution</b>	Ministry of Manpower (MOM)
<b>Start of intervention</b>	August 2014
<b>End of intervention</b>	October 2014
<b>Objective</b>	Increasing the job placement rate of the Workforce Development Authority's career centres
<b>Method</b>	Observation; interviews; Randomised Controlled Trial (sample of 24 000 new job-seekers per month)
<b>Application</b>	Redesign of the employment facilitation process in Singapore

### Problem

The Workplace Development Authority is an arm of Singapore's Ministry of Manpower (MOM) which helps job-seekers in the country find work more effectively. It runs five career centres, where job-seekers can access services to improve their training and employability, and where they receive advice and support from dedicated career consultants at the centres to help them find job placements.

The MOM wanted to see how it could improve this service, to help more job-seekers find work as a result of their visiting the career centres it runs.

Inspired by successful trials the UK's Behavioural Insights Team had conducted in job centres in the United Kingdom, the Ministry set out to redesign its own employment facilitation process, with the aim of increasing the job placement rate for job-seekers in Singapore.

It began by conducting observations of the employment facilitation process and interviewed career consultants and job seekers. The researchers found that there were four key barriers for job seekers in finding employment:

- Reliance on career consultants to find jobs: Job seekers tended to be very passive in the job search process and relied on career consultants to look out for and arrange job interviews for them
- Poor commitment to the job search process: Job seekers did not turn up for the training sessions or job interviews arranged by the career consultants
- Unrealistic job goals: Some job seekers were only willing to accept higher paying jobs
- Lack of motivation and self-esteem: Some job seekers became demoralised if they were unable to find jobs after multiple attempts.

Based on these findings, the MOM's Behavioural Insights and Design Unit set out to investigate if it could alter job seeker behaviours by applying insights taken from behavioural science to the employment facilitation process they would go through.

## Intervention

A two-arm trial was conducted at a career centre, where a sample of 24 000 new job seekers per month was randomly allocated to career consultants in two different groups. One group (the control) went through the existing employment facilitation process where they met their career consultants once or twice to discuss their job search plans and progress. The career consultants would contact the job seekers if there were openings and interviews they deemed suitable for them.

The other group were invited to join a job search programme where they had to commit to take ownership to work out their job search plans and meet their career consultants up to five times. The programme utilised the following behavioural science techniques:

- **Commitment device:** Job seekers were given job booklets (in their preferred language) where they signed on the cover page to indicate their commitment to the job search programme.
- **Chunking:** The job search booklet guided job seekers to plan the specific job search activities they would undertake in the next one to two weeks before their next meeting with the consultant. This broke down the job search process into a series of smaller tasks that would eventually lead to securing a job. They were required to review their accomplishments with their consultants, and in the process received feedback that helps to reinforce their positive behaviour.
- **Incentive:** To create a sense of progress, those who successfully completed each session were awarded a stamp. Upon completing five sessions, or finding a job, whichever was earlier, they received a SGD 100 voucher.
- **Social norms and priming:** The consultant rooms for the intervention group were also re-designed to 'prime' job seekers with subtle motivational messaging. The rooms used stars to visually represent the number of people who succeeded in finding jobs through the career centre and included a board for job seekers to write down their commitment to the job search process. It also included salient information on "hot jobs", statistics of the top job vacancies and average salary ranges to nudge job seekers into adopting more realistic job expectations.

Results were assessed by measuring and comparing the percentage of job seekers in each group who found jobs within three months of visiting the Workfare Development Authority's redesigned career centre.

## Results and impact

The rate of job placements was significantly higher for those job-seekers enrolled on the job search programme informed by behavioural science techniques, compared to those who went through the standard employment facilitation process.

Three months after visiting the career centres, **49% of job seekers** who had gone through the updated programme had found work, whereas only 32% of those who had experienced the normal, existing employment facilitation process were in jobs.

This demonstrates that motivating job seekers to take greater **ownership** of their search process, reframing activities in the job search process to make the job search more **manageable**, increasing **morale**, and assisting job seekers to set more **realistic** job **expectations** is effective in helping more people to find work.

Beyond improving job placement rates, it appeared that the increase in frequency of meetings and the structured job search process had nurtured stronger and more positive relationships between career consultants and job seekers. The qualitative feedback from job seekers indicated that they felt their consultants cared for them and were genuine in helping them with their job search.

Moreover, the trial revealed the benefits of co-design, as it involved manual interventions in which career consultants had to interact with the job-seekers in different ways. In order for them to do this, it was important to engage the consultant themselves by training them on basic BI concepts and to involve them in co-designing the interventions to ensure strong commitment and support, as well as smooth implementation of the trial.

Further, although the career consultants were concerned initially that the job seekers would misplace their booklets or fail to bring them to their meetings, the trial revealed that all the job seekers in the treatment group developed a sense of ownership and accountability and always had their job search booklets with them when they arrived for career consultations. This highlights the significance of using behavioural insights interventions to test pre-existing assumptions about what does and does not work.

If implemented across all five of the Workplace Development Authority's career centres in Singapore, redesign of the employment facilitation process in the manner applied in the trial could potentially translate to **4 000 more job seekers per year** finding work within three of months of visiting the centres.

## Institution

The Ministry of Manpower (MOM) is a ministry of the Government of Singapore which is responsible for the formulation and implementation of labour policies related to the workforce in Singapore. It oversees matters related to immigration, issuing of Employment Passes to foreign workers, student passes, passport, visa and granting of residency/citizenship amongst others.

The Ministry of Manpower has been using behavioural insights as tool of evidence-based policy design, which helps it to design and implement policies and services that better meet user needs based on a deeper understanding of customers' behaviours and decision making environment. The practice of testing to discover what works in behavioural insights also helps the Ministry ensure efficient use of its resources.

The Ministry possesses a central unit called Behavioural Insights and Design Unit, through which behavioural insights are applied across the institution. The unit consists of experts from diverse disciplines including design, accounting, economics, business, sociology and psychology and was established with guidance from the UK Behavioural Insights Team. The Ministry also partners with private consultancies and academic institutions for more efficient use of resources and in order to tap into different expertise in behavioural insights.

## Training SME mentors

Country	United Kingdom
Sector	Enterprise
Institution	Department for Business, Innovation and Skills (BIS)
Objective	Encouraging the take up of online training among Small and Medium Business (SME) mentoring volunteers.
Method	Randomised Controlled Trials conducted on volunteer mentors.
Application	Behavioural nudges were applied to email reminders sent to volunteer mentors to remind them to complete their training.

### Problem

BIS set up a mentoring scheme for small businesses, which aimed to harness the experience of established business people to train them as mentors and share their expertise with new and growing businesses increasing their success rate.

The Get Mentoring campaign, delivered by the Small Firms Enterprise Development Initiative (SFEDI) aimed to train 15 000 volunteer mentors for SMEs. However, despite lots of people registering to become mentors, relatively few had completed the necessary training.

BIS set out to find out if, by utilising insights taken from behavioural science in its communications with the mentors, it could increase the rate of mentoring training taken up by the volunteers.

### Intervention

Leandro Galli of Warwick Business School conducted a series of Randomised Controlled Trials to test the effectiveness of different **nudges** in motivating volunteers to complete their training. The nudges were applied to the email reminders volunteer mentors were sent.

The messaging and framing used in the emails included the following:

- **Priming altruism** by including a quote by Adam Smith about the value of volunteering
- **Expressing gratitude**, either in terms of helping future mentees or for their contribution to economic growth
- Messages about **anticipated pride**, how proud people could feel for helping future mentees.

Results were measured as the proportion of volunteers who completed their mentoring training when sent reminder emails informed by behavioural insights messaging.

The volunteer mentors could, in addition, sign up to become members of the Institute of Enterprise and Entrepreneurs (IOEE), which would provide access to learning and training materials. Behavioural insights were also applied to the emails sent out to the volunteers to encourage them to sign up.

## Results and impact

The trial found that:

- **Priming altruism** successfully increased the number of people completing their mentoring training by **18%**
- **Anticipated pride** messaging also demonstrated success in persuading people to become mentors
- **Expressing gratitude**, however, had a significant effect only when combined with priming altruism, and did not have a significant effect when used alone. The trial further revealed the importance of a “fit” between the messenger saying thank you and the recipient of the benefits. For example, if the expression of thanks comes from the minister, the benefits highlighted should be for the economy, whereas if the message is coming from the mentees the benefits highlighted should be for the mentee. Prospective mentors responded better to thank you messages from the mentees rather than from the minister.

The trial highlighted differences between men and women in responding to the various kinds of messaging. In terms of the anticipated pride message, this needed to be combined with an emotional norm for women in order to yield a response rate as high as the male response rate, whereas for men, adding the emotional norm made no statistically significant difference. As a result of the campaign, an additional 1 855 mentors were made accessible through [mentorsme.co.uk](http://mentorsme.co.uk).

## Institution

The Department for Business, Innovation and Skills (BIS) was a ministry of the UK Government responsible for business regulation and consumer affairs, higher and further education including training and skills development, and science and research. It has now merged with the Department of Energy and Climate Change (DECC) to form the Department for Business, Energy and Industrial Strategy (BEIS). Adult Skills and Higher Education have now moved to the Department for Education which is now responsible for overseeing the Adult Skills and Knowledge Centre.

BEIS uses behavioural insights in research, design, and implementation to inform its evidence-based approach to policy making. Behavioural science holds significant potential to influence numerous policy areas which BEIS deals with, including, consumer behaviour, energy use, and business behaviour and compliance

The Department has a small central unit dedicated to behavioural insights, and also maintains an informal network of practitioners throughout the organisation. Introductory training on behavioural insights is available to all employees of the organisation.

## Increasing demand for mentoring amongst SMEs

Country	United Kingdom
Sector	Enterprise
Institution	Department for Business, Innovation and Skills (BIS)
Start of intervention	February 2013
End of intervention	May 2013
Objective	Improving the attitudes towards and increasing demand for mentoring amongst Small and Medium Enterprises
Method	Experiment as part of a survey
Application	Framing the content of communications sent by policymakers to SMEs with behavioural insights-informed messaging

### Problem

Small and Medium-sized Enterprises (SMEs) represent over 99% of all private sector businesses in the United Kingdom. They play a key role in growth by driving competition and stimulating innovation and accounting for 59.3% of private sector employment.

The Department for Business, Innovation and Skills (BIS) was a ministry of the UK Government responsible for business regulation and consumer affairs, higher and further education including training and skills development, and science and research. An important of BIS's remit was to find ways to support small businesses to grow and tackle market failures that can affect their inception and/or success.

As a part of this, BIS set up a mentoring scheme for small businesses, which aimed to harness the experience of established business people to train them as mentors so that they could share their expertise with new and growing businesses.

BIS found that businesses have a preference for learning to be informal, delivered by peers and individually tailored. Mentoring had been shown to deliver benefits across a range of areas, including leadership skills and business planning. SMEs that had ever used or were currently using a business mentor reported that it can boost their business performance in terms of sales and profit.

In order to increase the supply of trained mentors available to SMEs, the Department of Business, Innovation and Skills launched the 'Get Mentoring' campaign, as a result of which 1 855 mentors were made accessible through [mentorsme.co.uk](http://mentorsme.co.uk). However, it also wanted to increase the number of small businesses actually using the mentors available.

### Intervention

Overall, the trial found that **promotion priming**, as opposed to prevention priming, led to more positive responses on perceptions of mentoring, **regardless of the type of message it is used with**.



These results may have been due to the link between **promotion priming** and **opportunity recognition**. Evidence suggests that when promotion primed, people tend to concentrate on gains and think more broadly. Since mentoring represents an opportunity to receive support and guidance that can make a difference in the attainment of an entrepreneur's goals, this could explain why entrepreneurs were more likely to report positive attitudes towards mentoring when it was promotion focused

Furthermore, getting people to think about their hopes and aspirations could result in positive thoughts. This positive mood may have then influenced respondents' evaluation of mentoring.

Additional analysis revealed that the observed difference between promotion and prevention priming was primarily down to three types of SME owners:

1. Those who had been in business for longer periods of time (i.e. more than 20 years)
2. Those who had experienced an increase in their business revenue over the past year
3. Those who had a low need for closure (i.e. who scored below the median on a need for closure scale in the survey).

SME owners who received promotion messaging scored marginally higher on the attitude scale with regards to their attitudes towards mentoring than prevention messaging, but the difference was not significant.

This suggests that in general, once primed, it does not appear to make a difference to perceptions of mentoring whether the benefits of having a mentor are framed in prevention or promotion terms.

The experiment looked at how priming and messaging changed survey responses and we do not know how these would relate to longer term attitude changes or to behaviour.

## Results and impact

Overall, the trial found that **promotion priming**, as opposed to prevention priming, led to more positive perceptions of mentoring, **regardless of the type of message it is used with**.

These results may have been due to the link between **promotion priming** and **opportunity recognition**. Evidence suggests that when promotion primed, people tend to concentrate on gains and think more broadly. Since mentoring represents an opportunity to receive support and guidance that can make a difference in the attainment of an entrepreneur's goals, this could explain why entrepreneurs were more likely to report positive attitudes towards mentoring when promotion focused

Furthermore, getting people to think about their hopes and aspirations could result in positive thoughts. This positive mood may have then influenced respondents' evaluation of mentoring.

Additional analysis revealed that the observed difference between promotion and prevention priming was primarily down to three types of SME owners:

1. Those who had been in business for longer periods of time (i.e. more than 20 years), which could be explained by the more experienced entrepreneurs having gradually lost sight of their hopes and aspirations over time, thereby accentuating the positive effect of a promotion prime
2. Those who had experienced an increase in their business revenue over the past year, which could make their hopes and aspirations more accessible and so render priming more effective
3. Those who had a low need for closure (i.e. who scored below the median on the need for closure scale), who maybe did not seek certitude to the same extent and were therefore more easily able to think broadly and willing to explore opportunities.

Those SME owners who received promotion messaging scored marginally higher on the attitude scale with regards to their attitudes towards mentoring than prevention messaging, but the difference was not significant.

This suggests that in general, once primed, it does not appear to make a difference on entrepreneurs' perceptions of mentoring if the benefits of having a mentor are framed in prevention or promotion terms.

The results of the trial have been used to provide advice to policymakers on how to increase demand for mentoring amongst SMEs by using behavioural insights to inform their communications with the businesses.

## Institution

The Department for Business, Innovation and Skills (BIS) was a ministry of the UK Government responsible for business regulation and consumer affairs, higher and further education including training and skills development, and science and research. It has now merged with the Department of Energy and Climate Change (DECC) to form the Department for Business, Energy and Industrial Strategy (BEIS). Adult Skills and Higher Education have now moved to the Department for Education which is now responsible for overseeing the Adult Skills and Knowledge Centre.

BEIS uses behavioural insights in research, design, and implementation to inform its evidence-based approach to policy making. Behavioural science holds significant potential to influence numerous policy areas which BEIS deals with, including, consumer behaviour, energy use, and business behaviour and compliance

The Department has a small central unit dedicated to behavioural insights, and also maintains an informal network of practitioners throughout the organisation. Introductory training on behavioural insights is available to all employees of the organisation.

## Reading newsletter emails

Country	United Kingdom
Sector	Enterprise
Institution	Department for Business, Innovation and Skills (BIS)
Start of intervention	2013
End of intervention	-
Objective	Increasing opening and click-through rates for GREAT newsletter emails
Method	Randomised Controlled Trial
Application	Altering the subject lines and email content of the GREAT newsletters sent out to Small and Medium Enterprises in the United Kingdom

### Problem

Small and medium-sized enterprises (SMEs) represent over 99% of all private sector businesses in the United Kingdom. They play a key role in growth by driving competition and stimulating innovation and accounting for 59.3% of private sector employment.

The Department for Business, Innovation and Skills (BIS) was a ministry of the UK Government responsible for business regulation and consumer affairs, higher and further education including training and skills development, and science and research. An important of BIS' remit was to find ways to support small businesses to grow and tackle market failures that can affect their inception and/or success.

BIS conducted an experiment to see if it was possible to increase the number of businesses opening and clicking through on the content of a newsletter (the GREAT newsletter), which was sent to around 18 000 existing and potential SMEs that had subscribed to receive it.

### Intervention

Using randomised controlled trials, Leandro Galli of Warwick Business School tested the use of various behavioural insights messaging within the GREAT newsletter email subject lines and content. The aim of the trials was to see if the use of **nudges** would improve opening and click-through rates on the monthly newsletters, and which of the interventions would be most effective in doing so.

Four different newsletters were sent out, each testing the application of a different psychological concept taken from regulatory focus theory:

1. **Value/cost of free:** using the word 'free' in the subject line of the email
2. **Promotion priming:** framing the message in terms of positive effects of action
3. **Prevention priming:** framing the message in terms of the negative effects of inaction in the face of an improving economic climate

4. **Entrepreneurial identity:** appealing to the newsletter readers' self-image as entrepreneurs in order to make emails appear more personally relevant to them.

Results were assessed by measuring opening and click-through rates for each kind of email sent, as compared to sending the emails without any specific interventions applied.

## Results and impact

Applying **prevention priming** to the email content was the most effective, increasing click through rates to links by 30% in the case of pre-start-up businesses.

In contrast, using the word “**free**” in the subject line in reference to the information and advice contained within the newsletter had no positive effect on the opening rates and click through rates to links, and actually had a pronounced negative effect when coupled with **promotion priming**.

**Entrepreneurial identity priming** had mixed effects, depending on the nature of the business targeted. For pre-start-up entrepreneurs and start-up businesses entrepreneurial identity priming reduced opening rates by 23%, which may suggest that aspiring entrepreneurs and recent starters do not yet actually see themselves as entrepreneurs.

## Institution

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## Increasing uptake of government programmes

<b>Country</b>	United Kingdom
<b>Sector</b>	Enterprise
<b>Institution</b>	Department for Business, Innovation and Skills (BIS)
<b>Start of intervention</b>	2014
<b>End of intervention</b>	2015
<b>Objective</b>	Increasing applications to the Growth Vouchers programme
<b>Method</b>	Randomised Controlled Trial
<b>Application</b>	Including information about government programmes and messaging informed by behavioural insights into government emails sent to small businesses in the United Kingdom, in order to increase the uptake of government programmes which have the potential to benefit those businesses

### Problem

A key part of the Department for Business, Innovation and Skills' (BIS) remit was to provide support to small businesses in the United Kingdom. BIS explored a number of initiatives to help these businesses to grow.

One of these was “Growth Vouchers” – a programme of matched funding with a GBP 30 million budget. Businesses could apply for funding to help subsidise the cost of obtaining expert advice on topics such as: finance, HR, use of IT in business processes or how they could increase productivity by upskilling their leadership teams. The programme was also designed to test the effectiveness of different delivery mechanisms such as carrying out an analysis of the business' support needs in person with an advisor or through an online questionnaire.

Growth Vouchers formed part of one of the biggest trials ever run in the United Kingdom in the business support area – an overall initiative by HM Treasury and Department of Business, supported by the Cabinet Office Behavioural Insights Team (BIT), who wanted to test a variety of Government interventions aimed at helping small businesses to grow. The aim was to see if there was a way to increase the number of applications made by businesses to the programme, using HMRC's dataset of emails.

### Intervention

The Department conducted a trial to find out how effective the use of different behavioural nudges would be in encouraging more application to the Growth Vouchers Programme.

The trial selected at random 376 738 small businesses who were signed up to the HMRC's email distribution list, and sent them emails about applying to the Growth Vouchers programme with messaging informed by behavioural insights. The four different emails emphasised:

- Incentives
- Social norms
- Deadline
- Informing businesses that they had been **chosen** to receive information about the programmes
- A “business as usual” message designed with a focus group.

A control group was sent the ‘business as usual’ message. Results were measured by comparing click-through rates to look at the terms and conditions of the Growth Vouchers programmes of the businesses sent messages with interventions included against those of the control group.

## Results and impact

The trial found that click through rates were significantly higher for the group of businesses who received the email that included behavioural insights-informed messaging, compared with those who received a standard email. In general, simplifying messages worked well.

However, certain types of messaging were more effective than others. The study found that informing firms that their type of organisation had been **chosen** to receive information on the programmes was the most effective of all.

The relative effect size was substantial: those sent the 'chosen' email were more than 40% more likely to click through than those sent the control message.

The sheer number of emails sent also significantly increased sign-ups to the programmes, demonstrated by the peaks in demand in the period following the release of emails. The trial demonstrated that using behavioural insights in messaging sent through government email channels has the potential to increase the uptake of government programmes.

## Institution

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## Maximising survey responses

<b>Country</b>	United Kingdom
<b>Sector</b>	Enterprise
<b>Institution</b>	Department for Business, Innovation and Skills (BIS)
<b>Start of intervention</b>	2014
<b>End of intervention</b>	2015
<b>Objective</b>	Maximising response rates for surveys which were part of an evaluation of the Growth Vouchers programme
<b>Method</b>	Randomised Controlled Trial using a sample of 7 000 small businesses enrolled on the Growth Vouchers Programme
<b>Application</b>	Altering the messaging in surveys sent to small businesses enrolled on the Growth Vouchers Programme

### Problem

A key part of the Department for Business, Innovation and Skills’ (BIS) remit, was to provide support to small businesses in the United Kingdom. BIS explored a number of initiatives to help these businesses to grow.

One of these was “Growth Vouchers” – a programme of matched funding with a GBP 30 million budget. Businesses could apply for funding to help subsidise the cost of obtaining expert advice on topics such as: finance, HR, use of IT in business processes, or how they could increase productivity by upskilling their leadership teams. The programme was also designed to test the effectiveness of different delivery mechanisms such as carrying out an analysis of the business’ support needs in person or through an online questionnaire.

Growth Vouchers formed part of one of the biggest trials ever run in the United Kingdom in the business support area – an overall initiative by the HM Treasury and BIS, which wanted to test a variety of Government interventions, aimed at helping small businesses to grow. In order to help evaluate the effectiveness of the intervention, BIS conducted a telephone survey of the businesses in the programme. However, motivating businesses to complete surveys is an ongoing challenge and testing behavioural insights in this area could be very useful and have wider impacts.

### Intervention

BIS conducted a trial to see how it could utilise behavioural “nudges” to maximise response rates for the surveys.

- Over 7 000 small businesses who were participants in the Growth Vouchers trial were selected for the survey and randomly assigned to five different groups. Each group heard a different version of the introductory text to the survey. The

introductions were modified using principles taken from behavioural science including: Reciprocity

- Commitment reminder
- Social norms
- Simplified text (based on control text).

One group (the control) heard a version with a ‘business as usual’ introduction to the survey. The response rate of the other groups (i.e. treatment groups) was then compared against those businesses who had heard the business as usual message.

## Results and impact

The trial found that introducing the surveys with messaging based on behavioural insights, specifically a commitment reminder, increased the survey response rate by 5 percentage points relative to using the standard survey introduction.

This demonstrated that leveraging principles from behavioural science could successfully increase take-up of activities by small businesses participating in the UK Government’s Growth Vouchers Programme.

The messaging shown to be most effective from the trial was incorporated in future follow-up surveys sent to participants of the Growth Vouchers Programme.

## Institution

The Department for Business, Innovation and Skills (BIS) was a ministry of the UK Government responsible for business regulation and consumer affairs, higher and further education including training and skills development, and science and research. It has now merged with the Department of Energy and Climate Change (DECC) to form the Department for Business, Energy and Industrial Strategy (BEIS). Adult Skills and Higher Education have now moved to the Department for Education which is now responsible for overseeing the Adult Skills and Knowledge Centre.

BEIS uses behavioural insights in research, design, and implementation to inform its evidence-based approach to policy making. Behavioural science holds significant potential to influence numerous policy areas which BEIS deals with, including, consumer behaviour, energy use, and business behaviour and compliance

The Department has a small central unit dedicated to behavioural insights, and also maintains an informal network of practitioners throughout the organisation. Introductory training on behavioural insights is available to all employees of the organisation.



## Chapter 11

### Behavioural insights case studies: Public service delivery

*This chapter provides a series of case studies detailing how behavioural insights have been applied in OECD member and partner countries as a tool for improving the way government delivers services to citizens, as well as improving compliance amongst regulated entities. Case studies presented utilise a breadth of experimental methods, ranging from resource-intensive randomised controlled trials to relatively less resource-intensive literature reviews. The open and transparent sharing of what works, and what does not, is vital to ensuring that good quality research and findings are shared widely.*

## Renewing vehicle licences online

Country	Canada
Sector	Public Service Delivery
Institution	Ontario Government and the Behavioural Economics in Action at Rotman (BEAR) centre
Start of intervention	January 2014
End of intervention	February 2014
Objective	Increasing the uptake of online public service delivery
Method	Randomised Controlled Trial with a sample size of 626 212 vehicle owners due to be sent renewal notices
Application	Redesigning the vehicle licence plate sticker renewal notices sent to vehicle owners in Ontario

### Problem

Vehicle owners in Ontario are required to hold a vehicle licence, which is renewed annually. Every year, owners are sent a notice reminding them to renew their vehicle licence plate sticker. The expiration of the sticker, and as a result the timing of when the renewal notice is issued, is tied to the vehicle owner's birthday. There are two ways in which owners are able to renew their licence: either at a service counter or online.

The Government of Ontario, in an effort to improve the efficiency of vehicle licence sticker renewals, collaborated with the Behavioural Economics in Action at Rotman (BEAR) centre to see if the Government could encourage more vehicle owners to renew their sticker online.

### Intervention

The Government's Behavioural Insights Unit designed a randomised controlled trial to test whether applying principles established in behavioural science literature, such as **salience** and **gain/loss framing**, to the notice issued, and would result in an increase in the number of individuals who chose to renew their licence online as opposed to in person.

A randomly selected sample of 626 212 vehicle owners in the jurisdiction who were due to be sent renewal notices at the time that the trial took place were sent a modified letter which was informed by insights taken from behavioural science. In this letter, information about the web service was presented against a blue background colour so that it stood out, testing the application of **salience**, and the benefits of renewing their license online, such as saving time, were highlighted, testing the application of **gain and loss framing**.

Three intervention conditions were tested, with the renewal notice sent to vehicle owners who were due to renew their licence plate stickers modified as follows:

1. The location of the web service was made more **salient**

2. The location of the web service was made more **salient** and promotional material about the online service was framed as the **benefits** of using the online service
3. The location of the web service was made more **salient** and promotional material about the online service was framed as the **losses** associated with not using the online service.

A control group of vehicle owners received the standard renewal notice, which already included the web address of the online service and promotional materials in the same locations on the notice as the intervention materials. Results were measured by comparing the number of licence plate sticker renewal transactions conducted online by those owners who received the modified letters against the number of online transactions conducted by those who received the standard, unmodified, notice.

## Results and impact

The most effective intervention was that which incorporated both **salience** and **gain framing** – that is where the online service was highlighted against a different background and the benefits of renewing online emphasised. When sent this version of the notice, vehicle owners demonstrated a 4.3 percentage point increase in online uptake compared with those who were sent the original letter. The percentage of online transactions rose from 10.3 to 14.6% of total renewals.

Applying **salience** and **loss framing**, where the notice was framed with the losses of not applying online, rather than the gains of doing so, had a slightly reduced impact, with a rise in online uptake of 3 percentage points compared to the control.

Using **salience** alone resulted in an increase of only 1.3 percentage points, suggesting that just changing the visual presentation of the online service information on the notice to make it more obvious, but without discussing its benefits, was less effective than the two methods in combination.

From the trial, the Ontario Government was able to conclude that making a web service more **salient** on a notice sent to citizens and discussing the **benefits** of using the online service can increase uptake of that service. The 8-week trial alone resulted in avoiding CAD 28 000 in transaction fees as a result of more owners renewing their licences online as opposed to in person. As a result, the Government has applied the **salience** and **gain framing** interventions to all renewal notices sent to vehicle owners in Ontario.

Since implementation of the intervention, analysis has revealed that using the modified notice has accelerated the pace of year-over-year increase in online service uptake by about 1 percentage point. This was evaluated using a difference-in-difference approach whereby the periods immediately before and after implementation were compared against those same periods 12 months earlier and demonstrates the potentially ongoing effects of using behaviourally science to inform public service design.

## Institution

Ontario is the second-largest province in Canada. The Government of Ontario applies behavioural science insights to make its public services more effective, as part of overall strategy of evidence-based public policy and service design. Most notably, the Government has used behavioural insights to inform its Poverty Reduction Strategy,

regulatory reduction as part of its Open for Business Initiative and modernisation of ServiceOntario.

The Government retains a small central Behavioural Insights Unit (BIU), consisting of experts in behavioural sciences, in particular Organisational Behaviour, who conducted the study described above. In addition, the institution benefits from a formal network of behavioural insights practitioners and support from academic partners.

Behavioural Economics in Action at Rotman (BEAR), located at the University of Toronto's Rotman School of Management, is a centre that combines decades of research in decision-making with empirically-tested tools to facilitate behavioural change. They look at social and economic problems from a behavioural science lens and design solutions that go beyond the traditional approaches of applying incentives, penalties or provisioning information.

BEAR conducts leading edge academic and field research, helps their partners accomplish behaviour change through better touchpoints and interventions, and engage in a variety of educational and outreach activities. Their focus is on non-financial, non-regulatory (not banning) solutions that preserve freedom of choice but guide people toward better decisions. They are solving the “last mile problem” to improve societal well-being and business profitability. Core to the BEAR DNA is scientific testing, and they apply randomised controlled field and laboratory trials to deliver measurable results. They also work closely with their design studio at Rotman DesignWorks as they create behaviourally informed choice environments.

BEAR was instrumental in setting up the Ontario BIU.

*Source:* Castelo, N. et al. (2015), “Moving Citizens Online: Salience and Framing as Motivators for Behavioral Change”, *Behavioral Science and Policy*, Vol. 1/2, pp. 57-68.

## Incomplete company registration forms

<b>Country</b>	Denmark
<b>Sector</b>	Business
<b>Institution</b>	Danish Business Authority
<b>Start of intervention</b>	-
<b>End of intervention</b>	Report published in 2014
<b>Objective</b>	Reducing the number of company registration forms submitted to the Danish Business Authority missing the necessary appendices required to process the case
<b>Method</b>	Experiment changing the format of the registration form, conducted over two two-week periods with one two-week control period in between – sample size 1 070 registrations
<b>Application</b>	Focusing on those companies who do not use professional assistance to complete registration forms (shown to reduce errors) for further experiments

### Problem

When someone wants to establish or modify a certain type of company in Denmark, it is required to complete a “Company Registration Form”, which is processed manually by the Danish Business Authority. The form can either be filled in on-screen and submitted using a digital signature or printed and sent by ordinary post.

Incoming notifications from companies are registered by the Business Support arm of the Authority. However, if certain appendices required for processing the notification are lacking, the case will not be processed. The case officer will either reject the case and write to the business indicating what needs to be submitted in order for the case to be processed, or the case officer can suspend the case and send a letter to the business specifying the documents that must be submitted by the business before the case can be processed.

Every day, roughly 80 new cases of company registration are submitted to the Danish Business Authority. However, the documents and appendices submitted for manual case processing often contain many errors and deficiencies, and frequently lack the information needed for the case to be processed. As a result, that the Authority spends a lot of time getting the companies to submit the correct information, since cases cannot be processed until the businesses have submitted the correct documents. A manual count showed that errors were found in roughly 20% of cases, usually missing appendices.

The Danish Business Authority wanted to get companies to submit the correct documents (appendices) the first time they use the “Company Registration Form”. Reducing the number of notifications lacking appendices would reduce the number of suspended cases, incoming phone calls with questions and correction letters. This, in turn, would shorten the overall case-processing time.

## Intervention

In order to reduce the workload for both Business Support and businesses, the Danish Business Authority decided to conduct an experiment to test the effect of make some behaviourally-informed changes to the company registration form itself. It wanted to see whether these modifications could nudge the companies to fill in the form more completely and accurately.

First, the Authority conducted a diagnosis to establish the behavioural biases that were preventing the relevant companies from completing their forms correctly the first time around. It analysed, categorised and evaluated the form to identify areas that would benefit from being changed.

It found two major problems:

1. Position of signature

Businesses tend to overlook certain elements on forms, including the “fine print”. The current sequence of signing and enclosing appendices did not help users to remember to enclose appendices, as the signature field was positioned at the bottom of page 8 on the form, whilst there was no reminder about, reference to and support for adding appendices until page 10. When the notifier was asked to sign, this signalled that the notifier had finished filling in the form. Placing the enclosure of appendices after the signature field was not expedient, because it made it easy to overlook the fact that appendices must be enclosed.

2. Lack of instructions about what should be done at the end

Given that the signature indicates the end of filling in a form, this would be a good place to get the notifier to consider whether he/she has remembered everything. The original form also contained this element by virtue of the mandatory ticking of “The signatory hereby declares that the information is correct and that the changes will be reported to the Danish Business Authority”. However, this mandatory ticking of the box did not involve reminding the notifier about enclosing appendices or about other types of general errors which a notifier risks making. The mandatory/compulsory ticking of the box would make this a good place to draw the notifier’s attention to relevant actions that the Danish Business Authority would like to have the notifier take.

Based on its diagnosis, the Authority made the following adjustments to the form:

1. The signature field was moved to the last (separate) page, after the appendix-enclosure page
2. A compulsory tick box was added to the signature field with the words “I hereby declare that I have enclosed all the appendices required for this notification”. This was designed to employ the behavioural principle of **success feedback**: the text gives a specific consideration whose accomplishment requires the ticking of a box, clearly indicating that the action is completed, which gives the notifier the feeling of having achieved his/her goal
3. The following text was added to the signature field: “AVOID DOING IT AGAIN: Please note that if you do not make sure to enclose the correct and appropriate appendices, you will be asked to fill in this form a second time.” This activated **loss aversion**

4. The following text was added to the signature field: “Are you uncertain about which appendices you must enclose? Then phone 7220 0030.” Offering assistance helped to emphasise the importance of enclosing the correct appendices.

The Danish Business Authority used its modified registration form in an experiment which ran over two two-week periods with one two-week control period in between.

In the second round of the experiment, a checklist was also included on the form in addition to the other interventions. This added on the last page just before the signature field and all tick boxes were made compulsory. The idea behind using the checklist was to draw attention to the appendices, to weed out other general errors and to provide a more comprehensive range of final instructions for action and success feedback (by ticking a box).

## Results and impact

The experiment did not have the desired effect of reducing appendix errors. There were no significant differences in the number of errors in forms submitted during the experimentation periods, compared to those submitted during the period of control. Much of the data was also lost during the data collection process, making it more difficult to assess results.

The reason that the experiment did not manage to reduce the number of appendix errors might have been that the companies are not aware of which appendices need to be attached. Therefore, pointing out that appendices need to be attached before the notifier completes his/her registration did not turn out to be an adequate solution. However, since the company registration form can be used for a wide variety of notification types, providing information to notifiers about which appendices are correct for the notification concerned would be a complicated process.

Additional data suggested that the number of errors in the registrations was impacted by who submitted the registration form. The data-collection process showed that fewer errors occurred when professionals (lawyers and accountants) were responsible for the notification, rather than the business itself.

Since more errors occurred when companies do not use professional assistance for the notification, the experiment suggested that the greatest benefit would be achieved by focusing on notifiers who fill in the company registration form without professional assistance, and that new experiments could benefit from targeting this group.

## Institution

The Danish Business Authority is responsible for regulation pertaining to businesses in Denmark, and for creating effective conditions for growth in the country.

The Authority has been using behavioural insights consistently in its work to help create a system of legislation and services that allows interaction between Danish businesses and the Authority in the easiest and most cost-effective way. The Authority's work has centred on designing behaviourally informed interventions and testing these, using behavioural insights to research problems, design solutions and implement new interventions.

The Danish Business Authority's efforts have been anchored in a central project team, which has overseen the development of various initiatives and the development of tools that support the application of behavioural insights within the organisation. In addition to individual projects, the Authority has been running a training programme for relevant employees pertaining to behavioural insights.

The organisation has faced some internal concerns relating to whether or not the businesses that would be exposed to a "new" form of communication or process through behavioural testing would accept it, or whether this could cause unforeseen problems. Criticism has also revolved around whether or not certain initiatives or experiments would create additional work for the Authority's employees. However, in general, the overall introduction of initiatives based on behavioural insights have been met with a positive attitude.

In order to counteract any potential concerns, the Authority has sought to devise initiatives that balance the needs of the businesses with the needs of the Authority, working primarily on compliance and on making it easy and simple to comply with the current legislation. It has not performed experiments on highly politically sensitive areas, instead focusing on smaller initiatives that create measurable changes when combined. All initiatives carried out have been of a kind that fall within the boundaries of government to business communication.

The Authority has maintained a strong focus on effect and on data in its behavioural science-related work, so that it has been able to change things if unintended consequences or side-effects were detected during experimentation. The project group spends time preparing and explaining the process and the outcomes of each initiative and has listened to and incorporated any concerns. Through the focus on data and feedback, it has managed to ensure that no unexpected problems have occurred.

The Danish Business Authority has been working in collaboration with The Danish Nudging Network, and is also engaged in a Ph.D. partnership with Roskilde University to develop a policy model for behavioural insights until September 2017.



## Redesigned letters to improve response rates from businesses

<b>Country</b>	Denmark
<b>Sector</b>	Business
<b>Institution</b>	Danish Business Authority & Copenhagen Economics
<b>Start of intervention</b>	-
<b>End of intervention</b>	Report published in 2014
<b>Objective</b>	Increasing the number of responses the Danish Business Authority receives when sending out letters to Danish businesses
<b>Method</b>	Experiment: Sending out nearly 600 letters to businesses redesigned to include several nudges to help the receiver understand the purpose and expectation of the letter
<b>Application</b>	Learning how to address businesses in the most effective manner can reduce administration costs for both the authority and the business and increase the satisfaction of businesses dealing with the authority because of increased clarity

### Problem

Many businesses and individuals do not respond to letters from public institutions at all, or they do not respond in the way the institution had intended them to. This leads to un-necessary administrative costs for the business as well as for the public institution.

Therefore, the project team wanted to carry out an experiment with the purpose of increasing the response rate to a specific letter that the Business Authority sends out to certain businesses urging them to sign up to the public database the Nutrition Base.

Before the intervention, only half of the businesses that received the letter replied and even less sign up to the Nutrition Base. The consequences are that the Business Authority had to do follow up with another letter and eventually an indictment, both of which entail additional expenses.

### Intervention

First the team analysed the original letter to identify behavioural barriers that could lead to fewer responses. The project team identified the following factors in the original letter as being potential barriers for businesses to respond to the letter:

- It was impersonal in its enquiry
- The setup of the text was messy
- Key information was not highlighted
- The costs of failing to act as requested was not clear
- It was not explicitly stated what specific action was required on the part of the business (which is to sign up to the Nutrition Base).

After the initial analysis, the project team designed a new letter using the nudges below, which according to previous experience from behavioural economics, have demonstrated to be successful in increasing the response rate to similar type letters:

- **Specifically addressing** a person or the business by name
- Including boxes to tick off to **make it easy** for businesses to conclude whether the criteria for signing up to the Nutrition Base apply to them
- **Highlighting** key pieces of information to emphasise the costs of not responding
- Presenting how to sign up to the Nutrition Base in an **action-oriented way** and with illustrations
- **Reposition the option** to argue why the business is not eligible for the Nutrition Base by moving it from page 1 to page 2.

The letters were sent out to three randomly selected groups of businesses, which under normal circumstances would all have received the original letter. In total, almost 600 businesses received a letter. The original or control letter was sent out to close to 200 businesses, the new letter on white paper was sent out to another 200 businesses and the new letter on red paper was sent out to the remaining 200 businesses.

## Results and impact

The changes in the new letter caused the response rate to increase significantly. They found that 57% of the businesses that had received the original letter (control group) responded, either by signing up to the Nutrition Base or by explaining why they did not need to register (which is the two ways in which the businesses can respond). The response rate in the group that received the new letter on white paper was 65%, while it was even higher, 69%, in the group of businesses that received the new letter on red paper.

In addition, a larger share of the businesses that received the new letter actually signed up to the Nutrition Base. They found that 29% of the businesses in the control group signed up to the Nutrition Base, while that share increased to 35% for the group that had received the new letter on white paper and 42% in the group that had received the new letter on red paper.

The results of this experiment are striking. Based on the results from the experiment, an actual business case could be made estimating costs and benefits of making the new letter the standard one.

## Institution

The Danish Business Authority is responsible for regulation pertaining to businesses in Denmark, and for creating effective conditions for growth in the country.

The Authority has been using behavioural insights consistently in its work to help create a system of legislation and services that allows interaction between Danish businesses and the Authority in the easiest and most cost-effective way. The Authority's work has centred on designing behaviourally informed interventions and testing these, using behavioural insights to research problems, design solutions and implement new interventions.

The Danish Business Authority's efforts have been anchored in a central project team that has overseen the development of various initiatives and the development of tools that support the application of behavioural insights within the organisation. In addition to individual projects, the Authority has been running a training programme for relevant employees pertaining to behavioural insights.

The organisation has faced some internal concerns relating to whether or not the businesses that would be exposed to a "new" form of communication or process through behavioural testing would accept it, or whether this could cause unforeseen problems. Criticism has also revolved around whether or not certain initiatives or experiments would create additional work for the Authority's employees. However, in general, the overall introduction of initiatives based on behavioural insights have been met with a positive attitude.

To counteract any potential concerns, the Authority has sought to devise initiatives that balance the needs of the businesses with the needs of the Authority, working primarily on compliance and on making it easy and simple to comply with the current legislation. It has not performed experiments on highly politically sensitive areas, instead focusing on smaller initiatives that create measurable changes when combined. All initiatives carried out have been of a kind that fall within the boundaries of government to business communication.

The Authority has maintained a strong focus on effect and on data in its behavioural science-related work, so that it has been able to change things if unintended consequences or side-effects were detected during experimentation. The project group spends time preparing and explaining the process and the outcomes of each initiative and has listened to and incorporated any concerns. Through the focus on data and feedback, it has managed to ensure that no unexpected problems have occurred.

The Danish Business Authority has been working in collaboration with The Danish Nudging Network, and is also engaged in a Ph.D. partnership with Roskilde University to develop a policy model for behavioural insights until September 2017.

Copenhagen Economics is the leading economic consultancy in the Nordic region. Founded in 2000, the firm employs more than 70 staff and operates across the world. The Global Competition Review (GCR) lists Copenhagen Economics as one of the top 20 economic consultancies in the world and has done so since 2006.

They provide independent advice based on established research methods, and our experts have in-depth sector knowledge.

## General access point for government services

<b>Country</b>	Spain
<b>Sector</b>	Public service delivery
<b>Institution</b>	Ministry for Finance and Public Administrations (MINHAP)
<b>Start of intervention</b>	July 2013
<b>End of intervention</b>	October 2014
<b>Objective</b>	To improve citizens interaction with public administrations online and in person
<b>Method</b>	Invitation of external experts and literature review of other experiences from other countries
<b>Application</b>	Insights gained from the intervention were used to design the General Access Point platform and social media accounts

### Problem

In the context of an economic and financial crisis, in 2012 the Spanish Council of Ministers set up the Commission for the Reform of Public Administrations (CORA). Its goal was to study and produce proposals to make public administrations more austere, useful and effective. The final report from the CORA commission was presented in June 2013 and included 217 proposals to reform public administrations.

A key part of the CORA report dealt with measures to design and implement digital tools to simplify administrative procedures. One of the most popular suggestions by citizens was the implementation of a single or General Access Point (GAP). Created by the Secretary of State for the Civil Service of the Ministry for Finances and the Civil Service, the GAP ([administracion.gob.es](http://administracion.gob.es)) allows access to information on public administrations' activities, organisation and actions to any interested person. This web portal facilitates citizens and businesses access to administrative procedures and formalities.

The CORA report also promoted the creation of social media accounts by the General Administration of the State and the consultation of citizens in the public decision process. Since the administrative organisation in Spain is complex – with public competencies distributed between the state, autonomous administrative regions and local administrations – the implementation of the GAP required extensive co-ordination between different public administrations through consultative bodies and working groups.

### Intervention

The CORA team operated a wide consultation process where by citizens could provide their opinions through Twitter, face-to-face through the 060 Information Office, through telephone number 060 and a consultative online platform created especially for the purpose of this reform process.

The administration classified the data considering the type of burden confronting citizens in their interactions with public administrations and their suggestions to eliminate them. Once the information was analysed the administration suggested measures to reduce them.

The administration used a structured administrative form to receive these suggestions, which facilitating the analysis of the information provided by asking citizens to describe the subject, description and suggestions for reform.

Citizens made over 1 000 suggestions. A group of experts then selected 900, taking into consideration their significance and coherency to further study the proposals. The administration classified the suggestions in a semi-automated way by using different categories: digital administration, change to legislation, simplification/reduction of administrative burdens, citizens information, type of administrative burden, affected public body and if the solution was viable.

## Results and impact

The Ministry for Finance and the Civil Service used the conclusions from this intervention to improve its digital channels of communications with citizens, as well, to enhance their back end management systems.

The design of the General Access Point to the Administration is an ongoing activity. The goal is to attend citizen's needs in the best possible way on: design issues (friendly design for citizens, intuitive to browse, accurate and easy to understand language) as well in its content (contents orientated to live events, guides etc.)

As a result of the intervention communication between citizens and the government has improved. The efficiency of administrative processes has also improved.

## Institution

The Ministry for Finances and the Civil Service is in charge of designing and implementing Spain Government policies in the following areas: public finance, budget, expenditure; public enterprises; public administrations financing systems; co-operation with the regional and local authorities; support to delegations and sub-delegations of Spain Government in the Autonomous Communities; the civil service; public employment, training of public servants; reform and organisation of the General Administration of the State's administrative procedures; inspection of services; promotion of Digital Administration; evaluation of public policies; improvement of public services.

## Encouraging compliance: Improving submissions to the FCA by mutual societies

Country	United Kingdom
Sector	Financial services / mutual societies
Institution	Financial Conduct Authority (FCA)
Start of intervention	2013
End of intervention	2014
Objective	To help mutual societies (a type of firm that must be registered by the FCA) submit their annual returns to the FCA on time
Method	Randomised Controlled Trial of 7 984 mutual societies in the form of three treatment groups, each receiving different messages, and one control group
Application	To inform the timing and content of future communications between the FCA and regulated sectors

### Problem

The FCA receives the annual returns and financial accounts of mutual societies in their capacity as registering authority for these societies (distinct from their role as a financial regulator). Societies must submit their annual accounts at specified points in the year based on their financial year-end date. This was historically defaulted to 31 December, but societies can choose to change this if they wish. In the past, not all societies have submitted their return on time and some failed to submit at all. Late submissions or failure to submit costs the FCA time and resources to chase societies. It also has consequences for the societies who can lose their registration or receive a fine after successful prosecution by the FCA.

There are many possible reasons why mutual societies fail to provide annual returns on time. Societies are often small organisations run by a small number of volunteers. They may exhibit inertia, and societies who have never submitted annual returns have little impetus to start doing so now (in their sample, 8.55% had never submitted returns and 7.73% had not submitted returns for three years prior). Other possible explanations include forgetfulness, given that the time allowed for societies to submit after the year-end is a period of seven months or a change of society secretary – the new secretary may not be made aware of the requirement to submit the annual return and accounts by the outgoing secretary.

The FCA wanted to see if there were **specific messages** they could use when communicating with societies, which would draw their attention and encourage them to submit on time.

## Intervention

The FCA sent letters to a sample of 7 984 mutual societies<sup>1</sup> who were stratified by type of organisation, the month of their financial year-end and the last year they took action, and then randomly allocated to different treatments or to a control group. The treatments were:

- **Bullets (Salience):** Including salient bullet points and a message about penalties: “Last year mutual societies like yours were fined up to GBP 3 000 for failing to provide this information on time”
- **Warning:** Adding a warning to the envelope: “*It is a legal obligation to complete and return the enclosed form*”, and
- **Timing:** Sending the letters on different dates (26 May, 3 June or 8 July). This helped the FCA to estimate the effects of the length of time between the letter and the deadline on compliance.

The treatments were designed to test some of the behavioural insights that have been effective in other contexts, including reminding recipients of penalties and legal requirements.

The FCA also combined treatments to create 12 different groups; for example, one group was sent a letter on 26 May with no bullet points and no envelope warning and another was sent a letter on 3 June with bullets but no envelope warning.

For the purpose of testing the effects of bullet points and warnings, the control group was formed of those who received no bullet points and envelope warning, but whose letters were sent on all three of the above dates. For the purpose of testing the effects of timing, the control group was the first cohort (26 May), but all groups contained a similar number of people who received bullet points, envelopes and both or neither.

The FCA measured whether societies had interacted with the FCA in two ways ten months after the communication. Either the society had submitted its annual return to the FCA or the society’s status had been changed towards losing its status as a mutual society (an indication that the society was closing, either initiated by the society itself or the FCA).

## Results and impact

Of the societies in the trial, 6 456 took action (80.9%), while 1 528 (19.1%) did not take any action.

Examining each treatment, the FCA found that the bullets and warning treatments failed to change the behaviour of societies compared to the control. However, the timing of the letters did affect the firms’ response. Societies who were sent a letter in July (and who therefore had, on average, a shorter deadline – median of 23 days for July rather than 66 for May and 58 for June) were 2.4 percentage points more likely to respond to the communication. Across all groups, those with a shorter deadline were more likely to respond than those with a longer deadline.

1. Specifically, industrial and provident societies.

The FCA also found a relationship between likelihood to take action and whether or not societies chose their own end of year accounting date or stayed with the default. Societies who chose their own accounting end date were less likely to take action than those who kept the default date of 31 December (and hence a submission deadline of 31 July), though it is difficult to separate this from possible seasonal effects. Please see Table 6 in the Technical Appendix for details.

## Institution

The United Kingdom's Financial Conduct Authority (FCA) is an independent financial regulatory body in the United Kingdom, which is financed by charging fees to members of the financial services industry. The FCA has three statutory objectives: to enhance market integrity; to secure an appropriate level of protection for consumers; and to promote competition. It actively utilises behavioural science alongside other regulatory tools in research and policy making to achieve its operational objectives.

The FCA has a specialised Behavioural Economics and Data Science Unit (BDU), made up of economists, computer scientists and psychologists. The BDU carries out original research and helps the FCA to apply behavioural insights. Many others in the organisation, including the Chief Economist's department and members of the Policy arm of the FCA also apply behavioural economics in their routine work. All trials and research conducted by the FCA go through a robust review process, in which ethical and other risks are assessed and where appropriate, mitigated.

*Source:* Smart, L. (2016), "Full Disclosure: a round-up of FCA experimental research into giving information", Financial Conduct Authority (FCA), *Occasional Paper 23*, <https://www.fca.org.uk/publication/occasional-papers/op16-23.pdf> (accessed 12 January 2017).



## Help is here: Helping firms apply for authorisation

<b>Country</b>	United Kingdom
<b>Sector</b>	Financial services
<b>Institution</b>	Financial Conduct Authority (FCA)
<b>Start of intervention</b>	2015
<b>End of intervention</b>	2016
<b>Objective</b>	To increase engagement with FCA emails of firms applying for authorisation
<b>Method</b>	Randomised Controlled Trials applying a series of A/B testing of email subject lines designed to attract attention and overcome inertia
<b>Application</b>	To discover optimal email subject lines to increase engagement with helpful emails for firms

### Problem

In April 2014, the FCA took over responsibility for consumer credit from the Office of Fair Trading (OFT). This meant that nearly 50 000 firms previously licensed by the OFT were required to apply for FCA authorisation if they wanted to continue with their consumer credit activities. Between 1 April 2014 and 31 March 2016, the FCA received nearly 37 000 applications for authorisation from consumer credit firms.

Each firm was allocated a three-month window in which to apply and the FCA sent out a series of emails both before and during this to help firms with their application. One difficulty with providing information by email is engagement; many firms simply did not open the emails and so could not benefit from the information.

The FCA carried out a series of simple randomised trials aimed to increase engagement with one of the emails that gave firms a link to videos where they could learn more about the application process.

### Intervention

For each email sent, the FCA divided the recipients into two random groups using email distribution software. Each group received a different email subject line designed to attract attention and overcome inertia. The FCA then measured email open rates for each group.

This was repeated over four cohorts of different firms in iterative A/B tests (i.e. the best performing message is then pitted against a new message). A/B testing is the simplest form of randomised controlled trial, pitting one control against one alternative and measuring the outcome. It can be a quick and inexpensive way to test and adapt communications over time, and is especially used in digital media such as websites and emails.

In our A/B tests, the FCA used the following messages:

- Your FCA application: help is here to complete your section
- Watch our new step-by-step guide videos: helping you apply for authorisation
- Video: new FCA guides to help you complete your application
- New: step-by-step video guides to help you complete your application, and
- [Firm Name] help is here to complete your application.

The FCA chose messages for which there was anecdotal evidence from practitioners in previous contexts, as well as messages which relied on behavioural evidence such as **personalisation** (“[Firm name], help is here...”), **salience** (“Your FCA application...”) and **novelty** (“Watch our new...”; “Video: new FCA guides...”; “New: step by step...”).

## Results and impact

The FCA presented results for the subject “*Your FCA application: help is here to complete your section*” against six other treatments. Trials 1 and 3 produced statistically significant results, showing that the email subject line led to more firms opening the message than “*Watch our new step-by-step guide videos: helping you apply for authorisation*” or “*Video: new FCA guides to help you complete your application*”.

Many of the trials showing non-significant results are low-powered, due to constraints on cohort sizes. Due to the relative homogeneity across the cohorts, where possible we repeated experiments with the same subject lines (trials 2 and 3, 5 and 6) in order to increase the sample size. Trial 3 produced a statistically significant result both alone and combined with trial 2, while combining trials 5 and 6 did not result in significance. In total, this round of A/B testing included 1 686 emails.

Overall, the FCA found that the most successful subject line was the original “*Your FCA application: help is here to complete your application*”, along with “[Firm name] help is here to complete your application”. It is possible that the mention of the FCA (salience) and personalisation in the above messages were effective in encouraging engagement, though this is difficult to measure precisely as the subject lines varied on more than one attribute. In future experiments, it may be worth varying subject lines more systematically, so that we are able to separate any effects that we see and attribute them to specific behavioural theories. For example, we could test the effects of personalisation by pitting “Help is here...” against “[Firm name]: help is here...” or the effects of reciprocity by testing “We’ve made you a video; please click here” against “Video: please click here”.

Whilst we found limited effects here, the use of A/B testing can be a cheap and effective way for organisations to improve their communications, especially where technology already exists to vary information, where outcomes are already measured routinely and where an iterative approach can make marginal small improvements.

## Institution

The UK Financial Conduct Authority (FCA) is an independent financial regulatory body in the United Kingdom, which is financed by charging fees to members of the financial services industry. The FCA has three statutory objectives: to enhance market integrity; to secure an appropriate level of protection for consumers; and to promote

competition. It actively utilises behavioural science alongside other regulatory tools in research and policy making to achieve its operational objectives.

The FCA has a specialised Behavioural Economics and Data Science Unit (BDU), made up of economists, computer scientists and psychologists. The BDU carries out original research and helps the FCA to apply behavioural insights. Many others in the organisation, including the Chief Economist's department and members of the Policy arm of the FCA also apply behavioural economics in their routine work. All trials and research conducted by the FCA go through a robust review process, in which ethical and other risks are assessed and where appropriate, mitigated.

*Source:* Smart, L. (2016), “Full Disclosure: a round-up of FCA experimental research into giving information”, Financial Conduct Authority (FCA), *Occasional Paper 23*, <https://www.fca.org.uk/publication/occasional-papers/op16-23.pdf> (accessed 12 January 2017).

## Increasing trust in government service

Country	United States
Sector	Department of Public Works, City of Boston
Institution	Boston Mayor's Office of New Urban Mechanics (MONUM), City of Boston, Massachusetts, USA
Start of intervention	September 2014
End of intervention	September 2015
Objective	Increasing trust, support and engagement in government
Method	Natural Experiment tested on residents in Boston using the mobile phone application Citizens Connect
Application	Conveying images of public works to citizens to increase operational transparency

### Problem

Boston is Massachusetts' capital and largest city. The Boston Mayor's Office of New Urban Mechanics (MONUM) is the civic innovation office of the city's government, which has the aim of exploring how new technology, designs and policies can strengthen the partnership between residents and government and significantly improve opportunity and experiences for all.

One of the department's major concerns is to improve civic engagement amongst constituents. In order to do so, the Office recognised that it must first improve citizens' trust in government, so that they are more willing to participate in civic affairs. It set out to test a way to do so.

### Intervention

The Mayor's Office of New Urban Mechanics trialled the effects of **operational transparency** on increasing citizens' trust, support and engagement in engagement. Using the medium of a mobile application called Citizens Connect, through which residents can submit public service requests to the city government, the Office provided residents of the City of Boston with images of work being performed on public service requests that they made, for example requests to have potholes filled, graffiti cleaned and streetlights fixed, amongst others. This research drew on prior research on the effects of operational transparency on customer value perceptions and behaviours.

The impact of the treatment was measured by recording the number of public service requests and the number of service request categories submitted per resident per month following observation of the images. Residents who did not observe an image of work being performed served as a control.

## Results and impact

In the months following receipt of the treatment, residents submitted **19.6%** more service requests to the government, and did so in **9.3%** more categories. This shows that **operational transparency** through the use of public works images had a positive effect on Boston residents' trust in and engagement with the City's Administration.

## Institution

Boston's Mayor's Office of New Urban Mechanics (MONUM) is the City government's in-house research and development group. The City-funded agency was formed in 2010 and serves as the government's civic innovation group. It is part of a network of civic innovation offices which includes Philadelphia and Utah Valley University also.

The agency pilots experiments that offer the potential to significantly improve the quality of City services. The team includes researchers from Harvard Business School and University of Chicago, who have collectively published numerous articles about behavioural insights in management, psychology, and political science journals.

Boston's MONUM focuses on four major issue areas: Education, Engagement, the Streetscape, and Economic Development. To design, conduct and evaluate pilot projects in these areas, MONUM builds partnerships between constituents, academics, entrepreneurs, non-profits and City staff.



## Chapter 12

### Behavioural insights case studies: Tax

*This chapter provides a series of case studies detailing how behavioural insights have been applied in OECD member and partner countries as a tool for increasing compliance with the tax code and repaying tax debt. Case studies presented utilise a breadth of experimental methods, ranging from resource-intensive randomised controlled trials to relatively less resource-intensive literature reviews. The open and transparent sharing of what works, and what does not, is vital to ensuring that good quality research and findings are shared widely.*

## Increasing compliance with tax-free savings account limits

Country	Canada
Sector	Tax
Institution	Canada Revenue Agency (CRA)
Start of intervention	May 2014
End of intervention	July 2015
Objective	Promoting compliance with Tax-Free Savings Accounts (TFSA) rules by reducing contributions to TFSAs in excess of the legal limit
Method	Randomised Controlled Trial applied to 14 822 non-compliant TFSA holders
Application	Redesigning communications sent by the Canadian Revenue Agency to Tax Free Savings Accounts holders who have exceeded the legal limit of contributions to their Account

### Problem

The Tax-Free Savings Account (TFSA) programme began in 2009 as a way for individuals in Canada to set money aside tax-free throughout their lifetime. Contributions to a TFSA are not deductible for income tax purposes. However, there is a limit on the amount which can be contributed into the account each year.

The Canadian Revenue Agency (CRA) found that some Account holders were exceeding this limit when paying into their Account. In 2013 around 0.2% of the 10 million total TSFA holders in Canada made contributions into their Account which exceeded the legal limit by between CAD 75 and CAD 149.99. The CRA needed to find a way to stop TFSA holders from making these excess contributions by ensuring their compliance with TFSA rules.

### Intervention

The Agency designed an experiment to find out if using behavioural “nudges” in the communications sent to the account owners would be effective in reducing the number of excess contributions made. It split 14 822 non-compliant TFSA holders into four groups, which were sent communications from the Agency as follows:

1. **Group 1** received a letter which included messaging highlighting that the majority of TFSA holders comply with their contribution room, testing the principle of **social norms** messaging in increasing compliance
2. **Group 2** received a letter which contained simplified information, testing the principle of **simplification** in increasing compliance
3. **Group 3** received a **compliance** letter



4. **Group 4** (the control group) received the standard letter which was being used by the Agency at the time, which provided the letter recipient with a pre-filled return form to pay back the tax owed on their over contribution.

Results were assessed against the following indicators for each group and compared with the control:

- **Uptake in compliance:** the number of voluntary removals of excess contributions
- **Response rate:** the number of phone calls to the CRA call centre, response letters mailed to the CRA, relief requests, TFSA returns filed and payments received for tax liabilities on excess contributions
- **“Over-correction”:** represented by the number of unnecessary withdrawals from TFSA accounts.

Increasing compliance is one of the key policy focuses of the CRA. However, the Agency has been particularly mindful in its approach when conducting interventions in this area which could be seen as being too forceful. In these situations, the Agency carefully weighs the risks and benefits of using behavioural insights before proceeding, as well as setting out clear objectives for the projects it conducts and using rigorous methodologies, in order to avoid any potential sensitivity regarding the use of behavioural insights in its policy making. Approaches such as the trial in question, represent a fairly non-interventionist way of using behavioural science to achieve successful compliance results.

## Results and impact

The trial found that the **social norms** and **simplified letter** sent to Groups 1 and 2 were both significantly more effective than the compliance letter in facilitating the removal of excess contributions from TFSA accounts.

All three letters were effective in reducing responses to the CRA. Only between 14 and 16% of those account holders who received one of the three behaviourally informed letters contacted the CRA, as opposed to 51% of those who received only the proposed return. Following the trial, the majority of TFSA holders did not over-contribute in 2014, despite having done so the year before, and therefore ‘self-corrected’ prior to another intervention.

Amongst the 4 000 individuals who had excess contributions to remove between September and December 2014, 47% of those who had received the **social norms** or **simplified information** letters voluntarily removed the money, whereas only 41% of those receiving the **compliance** letter and 38% of those receiving the proposed return alone did so. This showed that the use of **nudges**, in both cases, were significantly more effective than sending the return alone, but compliance letter was not.

The CRA was able to conclude from the experiments that using letters that include **nudge messaging**, specifically regarding **social norms** and **simplification**, may be an effective means of improving compliance among TFSA holders. A nudge-based letter has been implemented to replace the standard proposed return package cover letter<sup>1</sup> which the Agency sends to TSFA holders with excess contributions on their Account.

## Institution

The Canada Revenue Agency (CRA) is a Canadian federal agency which administers tax laws for the Government of Canada and for most provinces and territories, and administers various social and economic benefit and incentive programmes delivered through the tax system. The Agency has been undertaking a number of behavioural insights-based projects to support its objectives of increasing compliance and improving services to Canadians, as part of the overall Government of Canada's focus on evidence-based policy.

In January 2015, the CRA launched its Accelerated Business Solutions Lab, which focuses innovation throughout the Agency, including through the use of behavioural insights. The Lab, comprising of experts in Psychology and Economics, works with the Agency's branches and regions in the development of various behavioural insights projects and is also responsible for disseminating behavioural insights-related information throughout the Agency.

As well as inviting guest speakers to the CRA to present on behavioural insights-related topics in order to increase knowledge of behavioural science within the CRA, the Lab organised its own behavioural insights workshop in the spring of 2015.

The CRA is co-chair of the interdepartmental Behavioural Economics Community of Practice within the Canadian Government, which focuses on sharing information, research methodologies and project updates in the area of behavioural insights. The Community organised a behavioural insights-related conference in collaboration with the Privy Council Office's Innovation Hub in March 2016.

In addition, other branches and regions within the CRA, including the Collections and Verification Branch and the Atlantic Region, have also undertaken their own behavioural science-informed projects, several of which have already been completed and implemented across the Agency.

1. Given the small number of individuals with a tax liability between CAD 75 and CAD 149.99 on 2013 excess contributions (0.2% of all TFSA holders), the project team concluded that the practical relevance of the letters' impact did not warrant limiting or discontinuing the proposed return. Rather, the decision was made that a nudge-based letter, instead of the standard proposed return package cover letter, be issued in subsequent years.

## Completing online registrations

Country	Canada
Sector	Service
Institution	Canada Revenue Agency (CRA)
Start of intervention	July 2014
End of intervention	September 2015
Objective	To encourage taxpayers who had started to register for an electronic tax and benefit service to complete the process by inputting a security code
Method	Randomised Controlled Trial applied to the 200 000 individuals who had requested a code between February and July 2014 but had not used it
Application	Communicating with My Account users who have started to register with the service, but have not completed their registration process

### Problem

The Canadian Revenue Agency (CRA) offers a free electronic tax and benefit information service to Canadian citizens. My Account allows taxpayers to access and use features such as viewing or change their tax returns, tracking refunds, checking benefit and credit payments and setting up direct deposits online.

In order to register for the service, citizens require an Access code, which is sent by post within five to ten days of starting the registration for My Account online. Users must input the code in order to complete the registration process and access the service. The CRA noticed that not everyone who requested the code, however, would in fact then go on to input it and complete the registration process.

### Intervention

The CRA designed an experiment to investigate whether sending additional communications to those users who had started to sign up for My Account, but had not completed the registration, would motivate them to complete the process. It created three different types of communications to send to the users who had not completed the process:

1. A **nudge** postcard which highlighted the **ease** of completing registration
2. A **colourful incentive** letter
3. A generic letter from the CRA.

The letters were based on principles ascertained from behavioural science, including the use of **simplified language** and **eye-catching** graphics and **highlighting ease**. 200 000 individuals had requested a code between February and July 2014 but have not used it. These individuals were randomly split into four groups – three of which were sent

one each of the respective communications, whilst the fourth, control group, was not contacted at all.

The effectiveness of each type of communication was measured by comparing the uptake in completed My Account registration for each of the three groups contacted against the group of users who received no further Agency communication.

## Results and impact

The trial found that those users who received a generic CRA letter or **incentive** letter were more likely to register for My Account than those who received no communication at all. The postcard, however, did not increase registration any more than no contact. The **incentive** letter resulted in a 9% increase in registration and the generic letter resulted in a 6% increase, compared to only 3% following receipt of the postcard. The letters had more of an immediate effect after the mail-out, which is by being sent out in January or February, than was observed amongst postcard recipients or those who received nothing at all.

The CRA was therefore able to conclude that sending timely, simple reminders to users successfully increased My Account registration activity. If similar nudge letters were to be used to communicate with a broader population, this could translate into a significant increase in My Account security code entry.

## Institution

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## Collecting overdue tax debt

Country	Canada
Sector	Tax administration
Institution	Ontario government
Start of intervention	April 2014 / April 2015
End of intervention	March 2015 / March 2016
Objective	Collecting overdue tax debt from employers
Method	Randomised Controlled Trial including all overdue employers in Ontario and repeated the following year
Application	Redesigning the collection letter sent out to employers in Ontario who are overdue in filing their Employers Health Tax Return

### Problem

How can employers be encouraged to pay their outstanding tax debts to the government on time? Employer Health Tax (EHT) is a payroll tax on remuneration paid to employees and former employees in the Canadian State of Ontario. Employers in Ontario are required to file an annual EHT return for each tax year by 15 March of the following calendar year.

In 2014, 7 021 employers in Ontario filed their tax returns late. In 2015, the number was 6 800. The Government of Ontario decided to test whether it could enhance the effectiveness of its tax collection by using principles taken from behavioural science in its communications with the employers.

### Intervention

The Ontario Government conducted a Randomised Controlled Trial which was designed to test how effective informing its communications with the indebted employers with **implementation intentions** would be in motivating the employers to act and pay the tax they were due.

The trial was conducted twice: once in 2014 and once in 2015. Both times, all late filing employers were included in the study. The employers with overdue accounts were sent a collection letter which was modified with the inclusion of concrete details of where, how, and when to file one's overdue annual return. By incorporating a direct and detailed plan of where – website, service centre locations, mailing address –; how – specific instructions; and when – the deadline – they were to file the return, the aim was to encourage **implementation intentions** amongst the employers, which would motivate them to act.

The effect of this modification was measured by the number of employers receiving the modified letter who filed their annual return and paid the outstanding debt within a month of receiving the collection letter, in comparison to the number who did so out of the control groups who had received the same collection letter that had been sent out in the past years.

## Results and impact

The outcome of the intervention was a 4.2 and 6.1 percentage point increase in tax filing relative to the unmodified letter in 2014 and 2015 respectively. The number of employers filing their return within one month of receiving the letter increased from 45.7 to 49.9% in 2014 and from 46.9 to 53.0% in 2015 when **implementation intentions** were included in the collection letter they received from the Ontario Ministry of Finance.

The trial concluded that providing employers with a clear plan of how, where, and when to file their taxes increases the rate with which they file their overdue returns. The evidence from the trial was used by the Ontario Government to make the decision to implement the intervention collection letter in 2016 for 2015 tax year returns. It is calculated that, when fully implemented, this behaviourally-informed intervention will avoid approximately CAD 12 000 annually in costs to the jurisdiction.

## Institution

Ontario is the second-largest province in Canada. The Government of Ontario applies behavioural science insights to make its public services more effective, as part of overall strategy of evidence-based public policy and service design. Most notably, the Government has used behavioural insights to inform its Poverty Reduction Strategy, regulatory reduction as part of its Open for Business Initiative and modernisation of ServiceOntario.

The Government retains a small central Behavioural Insights Unit, consisting of experts in behavioural sciences, in particular Organisational Behaviour, who conducted the study on collection of Employer Health Tax. In addition, the institution benefits from a formal network of behavioural insights practitioners and support from academic partners.

## Increasing compliance amongst SMEs

Country	Ireland
Sector	Small and medium sized enterprises (SMEs)/tax
Institution	The Office of the Revenue Commissioners
Start of intervention	November 2012
End of intervention	March 2013
Objective	Increasing business survey response rate amongst SMEs.
Method	Randomised Controlled Experiment applied to sample of SMEs who were sent business survey
Application	Sending personalised letters with future surveys conducted by Revenue and to influence taxpayers in other situations

### Problem

The SME sector makes an important contribution to economic activity and employment in the Irish economy. The most recent CSO Business in Ireland survey (2011) reports that SMEs account for 99.8% of active enterprises, 62.0% of employment and 50.1% of turnover.

The sector faces a range of challenges including competition, access to finance, regulation and overall tax burden. Revenue supports the SME sector by aiming to make it as easy as possible for taxpayers to be compliant, by simplifying Revenue procedures, reducing the costs associated with meeting tax and duty obligations and also providing quality customer service.

Revenue conducted a survey to try to quantify a number of issues relating to small and medium-sized businesses in Ireland, assessing their satisfaction with Revenue's customer service, the administrative burden faced by SMEs and factors that influenced compliance, amongst others. Revenue decided to use the survey itself as one way of testing the factors that influence SME compliance. It wanted to see what effect **personalisation** could play on survey response rates amongst SMEs.

### Intervention

In line with its objective of improving understanding of compliance behaviour amongst businesses, Irish Revenue undertook a randomised controlled experiment to test the role of **personalisation** on survey responses.

Although most of Revenue's correspondence with the public is mass-mailed and generic, it found that new research had shown that more personalised correspondence may have certain benefits. Based on evidence from international behavioural research literature, therefore, it designed an experiment to test the effect of including a personalised handwritten post-it note requesting completion with the survey it sent to its customers.



Out of the sample of 2 000 business customers who were sent the business survey to complete, 15% were randomly assigned to a treatment group which received the personalised note along with the survey, while the remaining 85% were assigned to a control group, who received surveys only. Those who did not respond to the first letter out of the treatment group were also sent reminders. Three different batches of letters were used, to test both personalisation and social norms with a control letter as the third.

## Results and impact

The main finding from the experiment was that response rates to survey questionnaires are significantly higher if a personalised note is attached, and that responses were also received more quickly. After the first 15 days, the response rate was 36.0% in the treatment group compared with 19.2% in the control group, representing an increase in response rates of 88%. The inclusion of a personalised note therefore caused responses rates to almost double.

The results also show that timing mattered – the effectiveness of the personalised note on response rates was higher in the days immediately following the letters being sent out and declined gradually thereafter. By the end of the first week, the treatment group had responded at more than twice the rate of the control group (an increase of 103%). However, by the time Revenue had sent out reminders, the effect of personalisation had declined dramatically.

The reminders themselves produced no statistically significant differences in rate of response. Over the full period, **59.7%** of those businesses who received a personalised note along with the survey sent a response, whilst the response rate was only 43.5% for those who did not.

The results of the experiment have policy implications for conducting future surveys in Revenue. While personalising every outgoing letter is impractical, it may be useful in achieving higher responses in targeted cases. In addition, these findings may also have more general application. Since personalisation appears to have a substantial influence on taxpayer behaviour, this could be extended to influence taxpayers in different situations as well.

## Institution

The Office of the Revenue Commissioners is responsible for the assessment and collection of taxes and duties and for implementing customs controls in Ireland.

The Irish Revenue has been using behavioural insights to influence its work. It has conducted several evidence-based Randomised Controlled Trials, which have been promising in contributing to voluntary compliance and the efficiency of tax administration in recent years.

## Tax collection interaction

<b>Country</b>	New Zealand
<b>Sector</b>	Tax
<b>Institution</b>	Inland Revenue (IR)
<b>Start of intervention</b>	2012
<b>End of intervention</b>	2014
<b>Objective</b>	Improving the quality of Collections interactions with defaulting tax and student loan debtors
<b>Method</b>	Randomised Controlled Trials using randomised samples taken from debtor summaries identified as part of routine Collections debt cycles
<b>Application</b>	Developing frontline staff training for all Collections teams. Behavioural training was applied across Collections teams nationally in 2013-14

### Problem

The primary responsibility of New Zealand's Inland Revenue (IR) is Tax Collection. The Agency employs a number of Tax Collections teams, who are charged with contacting tax and student loan debtors in order to reclaim the tax they owe to the government of New Zealand.

The Inland Revenue, and the New Zealand government as a whole, has been working towards a more customer-centred approach in its interactions with citizens. It has been using behavioural insights to understand citizens' behaviour, as well as the behaviour of government agencies when dealing with customers, and, as a result improve engagement with government departments overall.

As part of this effort, IR decided to change the way in which Tax Collections teams interacted with debtors, to see if this could improve how efficiently and effectively it was able to recover the overdue tax and loans they owed.

### Intervention

Between 2012 and 2013, Inland Revenue undertook a series of Randomised Controlled Trials with its Collections Customer Contact teams. The aim was to identify behavioural cues and apply these to improve the quality of Collections interactions with defaulting tax and student loan debtors.

The trials were founded in cognitive behavioural approaches, which were framed into a debt resolution context, along with an applied behavioural model to help focus the debt conversation with customers. The approach was taken from standard cognitive behavioural examples but modified to the Collections context around debt resolution.

A treatment group of campaign teams were given behavioural training based on this approach before contacting debtors to ask them for outstanding payments. The outcome of their calls to the debtors was compared against a control – the Collections teams who

had not received the training and the debtors they contacted, who were subject to their standard Collections campaigns. IR used randomised samples taken from debtor summaries identified as part of routine Collections debt cycles.

Results were measured using the following indicators:

1. Average time of debtor contact to achieve debt solution
2. Amount of debt recovered.

## Results and impact

The trials yielded an overall **7-10% improvement** in debt outcome for those teams who received the training against the control groups who did not. As a result of the behavioural training, there was a **1 minute and 27 second decrease** in the time of average phone conversations taken to achieve debt resolution.

The study demonstrated that a better understanding of behavioural drivers as factors that influence debtor actions could be used to effectively improve compliance outcomes for New Zealand's Inland Revenue, and that acknowledging poor customer understanding can be a significant factor in achieving compliance.

Levels of improved and effective engagement with customers by the teams were recognised by Inland Revenue's Collections Managers as significant. The benefits in terms of reduction in customer contact time and debt resolution were sufficient for Managers to request a wider training initiative across Business Units. This resulted in a Collections-wide training programme to apply behavioural understanding to improve customer interactions following the trials, which was applied nationally in 2013-14.

## Institution

New Zealand's Inland Revenue (IR) is the government agency responsible for tax collection in the country and also administers a number of social support programmes. The Inland Revenue has been using behavioural insights as part of an organisational move towards a customer-centric approach towards citizens' interactions and engagement with the agency and government as a whole.

The Inland Revenue employs a range of behavioural experts across multiple teams including: research and evaluation, design, marketing and communications, and customer insight and strategy. Since 2010, New Zealand's IR has had a small team of six experts tasked with applying BI to help develop a greater customer engagement focus and to improve interactions between customers and IR across its taxation and social policy interfaces. The team works with other business areas to advise on and support behavioural insights' focused work across IR business units, and in collaboration with other Government Departments and Agencies. It aims to develop both formal and informal networks through the organisation.

IR hopes to use the insights it is taking from behavioural science to improve the nature and quality of customer interactions across IR's taxation and social policy areas of responsibility. This includes better behavioural understanding of drivers of customer compliance and non-compliance, and behavioural factors that influence IR's responsiveness to its customers.

As part of its Business Transformation programme, there is a Customer Centric & Intelligence Led work stream which looks at how behavioural science is combined as part of the infrastructure of IR's approach as well as to generate insights through its application. A new compliance model, which forms part of this organisationally applied Customer Strategy, was designed using a combination of OECD tax and behavioural principles.

As well as IR's direct services, the team's wider goal is to understand how it can better meet the needs of customers from a whole of Government perspective. As a result, it actively engages with other New Zealand Agencies who are working in behavioural domains, including through an active inter-agency Community of Practice.

New Zealand's Inland Revenue has ongoing contacts with Australian, UK, and European tax agencies on areas of mutual interest around behavioural applications. There has been some research that generates behavioural insights as well as a number of interventions applying behavioural insights and evaluated through Randomised Controlled Trials.

## Uptake of flu vaccination programmes

Country	New Zealand
Sector	Tax
Institution	Inland Revenue (IR)
Start of intervention	March 2014
End of intervention	August 2014
Objective	Increasing uptake of flu vaccinations amongst Inland Revenue employees
Method	Randomised Controlled Trial administered in Inland Revenue regional offices around New Zealand
Application	Sending a targeted personalised email to Inland Revenue employees regarding their flu vaccine

### Problem

In 2012 New Zealand's Inland Revenue (IR) had the second highest average sick leave usage amongst government departments, at 11.2 days. Flu vaccinations are a method to reduce flu-related absence. For the past 7 years, IR has offered an offsite flu vaccine programme. However, participating in the programme had several potential obstacles, such as obtaining a voucher, booking time with a GP offsite, and taking time off from work to go and get the vaccine.

In 2013, 1 700 IR staff members obtained the flu vaccine voucher, yet only 1 250 vouchers were redeemed, representing an intention gap of 30%. This gap had a financial impact as well, as each voucher obtained incurred an admin fee, regardless of whether it was redeemed. Inland Revenue set out to close the intention gap by using insights acquired from behavioural science to motivate employees to get vaccinated.

### Intervention

IR designed a personalised email to be sent to employees of the Agency who were eligible for the flu vaccine, encouraging them to have them vaccination administered through the government programme. The language used in the email was based on insights taken from behavioural science, intended to nudge the employees into action. The behavioural techniques used were as follows:

- Personalisation
- Active choice
- Reward.

The location of the flu vaccinations was also changed from an offsite location to being administered at the place of work, in order to **make it easy** for employees to access the vaccine. The effectiveness of the interventions was judged by the resulting uptake in flu vaccinations amongst employees of the Agency. The intervention was tested in Inland Revenue's regional office sites around New Zealand.

## Results and impact

In the offices where the behaviourally-informed changes were made, the vaccination uptake increased by **75%**, from 1 250 in 2013 to 2 100 in 2014. The intention gap between those who obtained the vouchers to receive their flu vaccine and those who actually redeemed them decreased by 60%, from 30% in 2013 to 7% in 2014.

Combined, this resulted in **33% of eligible IR employees getting the flu vaccine** in 2014, compared with only 19% in 2013. The team running the trials were able to conclude, therefore, that an easy and simplified process for getting the vaccine was the key factor in driving a higher uptake of flu vaccinations.

## Institution

New Zealand's Inland Revenue (IR) is the government agency responsible for tax collection in the country and also administers a number of social support programmes. The Inland Revenue has been using behavioural insights as part of an organisational move towards a customer-centric approach towards citizens' interactions and engagement with the agency and government as a whole.

The Inland Revenue employs a range of behavioural experts across multiple teams including: research and evaluation, design, marketing and communications, and customer insight and strategy. Since 2010, New Zealand's IR has had a small team of six experts tasked with applying BI to help develop a greater customer engagement focus and to improve interactions between customers and IR across its taxation and social policy interfaces. The team works with other business areas to advise on and support behavioural insights' focused work across IR business units, and in collaboration with other Government Departments and Agencies. It aims to develop both formal and informal networks through the organisation.

IR hopes to use the insights it is taking from behavioural science to improve the nature and quality of customer interactions across IR's taxation and social policy areas of responsibility. This includes better behavioural understanding of drivers of customer compliance and non-compliance, and behavioural factors that influence IR's responsiveness to its customers.

As part of its Business Transformation programme, there is a Customer Centric & Intelligence Led work stream which looks at how behavioural science is combined as part of the infrastructure of IR's approach as well as to generate insights through its application. A new compliance model, which forms part of this organisationally applied Customer Strategy, was designed using a combination of OECD tax and behavioural principles.

As well as IR's direct services, the team's wider goal is to understand how it can better meet the needs of customers from a whole of Government perspective. As a result, it actively engages with other New Zealand Agencies who are working in behavioural domains, including through an active inter-agency Community of Practice.

New Zealand's Inland Revenue has ongoing contacts with Australian, UK, and European tax agencies on areas of mutual interest around behavioural applications. There has been some research that generates behavioural insights as well as a number of interventions applying behavioural insights and evaluated through Randomised Controlled Trials.

## Using social norms to encourage prompt tax repayment

Country	United Kingdom
Sector	Tax Compliance
Institution	Behavioural Insights Team (BIT)
Start of intervention	2012
End of intervention	2012
Objective	Increasing the proportion of late self-assessment tax debtors paying their tax
Method	Randomised Controlled Trial conducted on a sample of 200 000 late self-assessment tax debtors
Application	Incorporating social norms framing into the tax reminder letter sent by HMRC to self-assessment taxpayers who are late paying their tax

### Problem

The UK Government loses billions in tax revenue each year simply because prospective taxpayers are late in making their payments. The two main reasons for failing to pay taxes on time appear to be a lack of ready cash and mere procrastination. In the United Kingdom, taxpayers who are late in making their repayment are sent letters from Her Majesty's Revenue and Customs (HMRC) office reminding them of their obligations.

The UK Behavioural Insights Team (BIT), which conducts a number of trials aimed at enhancing the potential of government policy initiatives, set out to investigate whether the use of behavioural nudges could improve the effectiveness of these letters and motivate more taxpayers to make their tax payment.

### Intervention

BIT, in collaboration with the HMRC Debt Management and Banking Team, conducted a randomised controlled trial in which 200 000 self-assessment tax debtors, who had declared their taxable income but had not yet paid what they owed, were sent one of five different reminder letters. The letters included either **social norms**, framed at different levels of specificity, or **public-good** nudges.

These invoked one of the following:

- **Basic norm:** “Nine out of ten people pay their tax on time”
- **Country norm:** “Nine out of ten people in the United Kingdom pay their tax on time”
- **Minority norm:** “Nine out of ten people in the United Kingdom pay their tax on time. You are currently in the very small minority of people who have not paid us yet”

- **Public gain:** “Paying tax means we all gain from vital public services like the National Health Service (NHS), roads, and schools”
- **Public loss:** “Not paying tax means we all lose out on vital public services like the NHS, roads, and schools”.

A sixth, control group, was sent a business as usual letter reminding them to make their repayment.

The Team also tested the effects of using messaging based on **descriptive norms**, that described what should be done, as compared to **injunctive norms**, describing what others thought should be done:

- **Descriptive norms:** stating that paying taxes is the right thing to do
- **Injunctive norms:** stating that most people think that paying taxes is the right thing to do.

Results were measured as the rate of tax repayments made by those taxpayers sent the letters modified with behavioural insights interventions, relative to the rate of repayment made by those who received the business as usual letter from HMRC.

Because the Behavioural Insights Team faced some initial scepticism in the early days of its establishment, smaller interventions like this one, based on modifying letters and emails have allowed it to manage potential sensitivities regarding its work before moving on to larger interventions, for example JobCentre trials. As a result, BIT has gained significant support for its work as compared to the early days of its inception.

The Team maintains a robust project qualification and quality assurance process as well as an ethical approvals process for its work, with a number of its trials going through external ethics committees.

## Results and impact

BIT found that both norm-based and public-good messages increased the likelihood of individuals paying their taxes due, with large differences observed within the various norm-based messages.

- The **basic-norm** statement raised the tax payment rate by **1.3%** and the **country-norm** statement by **2.1%**, within 23 days of communication
- The **minority-norm** statement had an even larger effect, raising the number of taxpayers making payments by **5.1%**
- Both **public-good** messages, which relied on **gain and loss framing**, raised tax payments by **1.6%**
- **Descriptive norms** had a significantly larger effect on payments than injunctive norms.

It was estimated that, as a result of their experimental intervention, HMRC collected GBP 9 million more over a 23-day period than they would have otherwise. BIT was therefore able to conclude that social norms can an effective way of encouraging tax compliance.



Following the trial, the application of behavioural insights-based messaging was implemented by HMRC in their tax collection letter. Further tests were also subsequently rolled out to compare the best performing arm in this trial to other types of messaging. In the entire suite of tax trials run by BIT at the time, it was estimated that GBP 210 million was brought forward in the 2012/13 financial year.

## Institution

The United Kingdom's Behavioural Insights Team (BIT) is a social purpose company, jointly owned by the UK Cabinet Office, employees and the innovation charity Nesta. It was set up within the UK Government as the world's first government institution dedicated to the study and application of behavioural sciences. Its purpose is to apply behavioural insights to government policy in the United Kingdom, and to evaluate what works through the use of rigorous research methods.

The BIT is made up of experts from a mixture of disciplines, with expertise in behavioural science and economics a common qualification. It also retains an Academic Advisory Panel, made up of other Academic Experts who collaborate on trials and provide peer-reviews. In addition, BIT engages a number of PhD students who work with the team as Research Fellows.

The Behavioural Insights Team works across entire policy spectrum and collaborates with other government departments and agencies to undertake projects with a specific policy agenda, such as in the case detailed above.



## Chapter 13

### Behavioural insights case studies: Telecommunications

*This chapter provides a series of case studies detailing how behavioural insights have been applied in OECD member and partner countries as a tool for improving consumer protection and choice in the telecommunications market, as well as improving compliance amongst regulated entities. Case studies presented utilise a breadth of experimental methods, ranging from resource-intensive randomised controlled trials to relatively less resource-intensive literature reviews. The open and transparent sharing of what works, and what does not, is vital to ensuring that good quality research and findings are shared widely.*

## Consumer protection in Colombia

<b>Country</b>	Colombia
<b>Sector</b>	Telecommunications
<b>Institution</b>	Comision de Regulacion de Comunicaciones (CRC)
<b>Start of intervention</b>	2013
<b>End of intervention</b>	Ongoing
<b>Objective</b>	Redesigning the consumer protection regime to better meet the needs of consumers
<b>Method</b>	Interviews, surveys and experiments conducted in conjunction with the OECD, followed by analysis and recommendations for reform
<b>Application</b>	The CRC has developed revised regulation for the telecommunications consumer protection regime

### Problem

Comision de Regulacion de Comunicaciones (CRC), or the Commission for the Regulation of Communications, is the governmental telecom authority of Colombia. Its responsibility lies in protecting consumers of telecommunications through effective regulation of mobile, telephony and internet and television services.

The CRC, in co-ordination with the OECD, has recently taken steps to overhaul and reform its framework for consumer protection. In redesigning its consumer protection regime, the CRC aims to refocus its regulatory strategy from “protecting rights” towards making the market function best with a strong attention for users. This involves encouraging the telecommunications providers to improve the quality of their services and rates offered in the market; and fostering a better understanding by all but mostly by users, of what is being offered and how. The purpose is to enable users to meet their needs and avoid biases in their choices.

In order to meet this purpose, behavioural insights have played a key role in identifying the perceptions, understandings, difficulties and real needs of service users utilising telephone, internet and television services. In order to address the complaints from users and the difficulty presented them in the effective exercise of their rights, the CRC needed to first to analyse the heuristic processes of users and cognitive limitations that influenced their relationship with operators and the existing regulatory framework, so that these could be appropriately reconciled in the new protection regime.

### Intervention

As a first step, CRC conducted surveys and interviews and worked with the School of Psychology at the Konrad Lorenz University Foundation (KLUF) in Colombia to conduct a variety of consumer psychology exercises that explored the decision making processes of users in a number of scenarios specific to the cultural and contextual characteristics of Colombia across different regions.

The experiments developed by the CRC up through the University Konrad Lorenz were designed to:

- Identify the characteristics of decision-making processes of users of telecommunications services
- Describe the different influences that have disclosure mechanisms of rights and duties of users of communications services, their processes decision and the use of available resources for protection
- Identify specific relationships present among the different information components developed for the user by the CRC and its decision-making processes, evaluation and intended use of the various resources available for consumer protection
- Differentiate the characteristics of the decision process of users in relation to their socio-demographic profile and the type of exchange conditions in which it is located.

Twenty studies were conducted in eight municipalities of Colombia – Pasto, Barranquilla, Bucaramanga, Bogota, San Andres, Granada Meta, Quibdo, Mocoa (four major capital cities and four towns sparsely addressed in studies of service). The online qualitative stage involved focus sessions in each of the cities with users of telephony, internet and television services, and in-depth interviews, in order to further enquire about the points raised by the investigative exercises. The descriptive-correlational quantitative line of the study acquired national research data through a survey developed specifically for the study. Further experiments were conducted in Bogota only, the objective of which was to answer those questions which could not be answered in questionnaires or focus sessions. In total 25 exercises were carried out between 2013 and 2014 across 17 regions of Colombia, which resulted in over 3 700 responses.

In a second stage, the CRC approach to consumer protection was analysed based on the findings of these exercises, as well as additional experiments and input of OECD experts in regulatory policy, behavioural economics, digital government and data analytics. The analysis drew up a number of recommendations on possible directions for the development of a new consumer protection regime in the Colombian communications market in the areas of information provision to users, customer service mechanisms, consumer consumption control mechanisms, and bundling of services.

## Results and impact

The following cognitive biases were identified in the behaviour of users of communications services:

- Choice overload
- Heuristics
- Endowment effect
- Defaults
- Loss aversion, and
- Hyperbolic discount.

Based on the interaction of these biases with socio-demographic factors and specific relationships present in the Colombian telecommunications market, the OECD's analysis found that CRC can use a mix of regulation and non-regulatory tools to shape the incentives that could change both provider and user behaviour, with a view to improving consumer welfare in the communications market. The OECD's report identified those instances where appropriate regulatory interventions are necessary to realise the desired outcome and made specific recommendations on possible follow-up experiments to test some of the possible solutions to help communications services consumers better understand the information provided by service providers.

Based on this analysis, the CRC has developed a revised regulation for the telecommunications consumer protection regime. The new Integral Regime for the Protection of the Rights of Users of Communications Services User Protection (proposed in 2016) was built against the background of the results of the exercises of behavioural economics conducted, which support the modification of structure and content to form a convergent regime, in order to address the particularities and needs of the market for telephony services, internet and television. This is being implemented through a simplification of language and procedures, and the content of the provisions, designed to strengthen the free choice of users between the available services, plans and operators and the enforceability of their rights and guarantees. The measure is currently in the process of adoption.

The CRC engaged with stakeholders on the revised draft regulation on the consumer protection regime through on-line consultation and working group meetings with consumers and operators between May and August 2016. During the consultation process, the CRC also organised an international forum to present the key elements of the draft regulation to stakeholders, share international practices and identify areas for follow-up and refinement. The project is being further tested through consumer psychology exercises conducted by a private company specialised in such analysis (Yanhaas S.A.S.).

In its efforts to better understand the consumer and be sure that total-economic value is positive for society as a whole. The CRC has begun the final phase of the project "New Consumer Protection Regime of Communications", for which CRC is undertaking new exercises in consumer psychology. The phase is being conducted with the objective of knowing the perception of users against the stages proposed by the CRC (which were validated with the OECD) and those presented by the operators, thus determining a cost-benefit analysis, looking for the most appropriate measure to be issued.

## Institution

Comision de Regulacion de Comunicaciones (CRC), or the Commission for the Regulation of Communications, is the governmental telecom authority of Columbia. The CRC has been focussing on market regulation, user protection and the simplification of regulations through its work with behavioural insights.

The tools of behavioural economics are being used by the CRC to study the economic behaviour and consumption decisions of agents, especially users of communications services. Behavioural insights allows the CRC to better target resources to satisfy the real needs of users, so that the user can make decisions according to their needs, and properly exercise their rights.

By adopting regulatory measures based on behavioural insights, the CRC is better able to ensure that quality services are available to the consumer, with effective tools to understand, consult and exercise their rights and obligations so that they can make an informed and free choice between those services. The CRC ensures compliance by setting out the obligations of operators (suppliers and users) through documents and rules that are simplified and therefore easy to understand and recall, building an environment of mutual benefit and mutual trust.

The regulatory agenda of the Commission for Communications Regulation 2016 was planned to issue various measures that are being built based on insights taken from behavioural sciences, among which are the New Regime for the Protection of the Rights of Users Communications services, the definition of the model contract for the provision of fixed services, the establishment of measures on clauses regarding minimum time in fixed contacts and the definition of conditions in bundled services.

The CRC has conducted 55 000 annual telephone surveys conducted throughout the country to better understand the perceptions of users for the provision of fixed and mobile telephony, internet and subscription television. In 2014, the CRC also advanced a process of deregulation through the Regulatory Simplification project, based on the consultation of the sector.

In addition, the CRC is undertaking activities such as the design and implementation of a Portal for Users, which will empower them with information about their rights, the quality of services, tariffs and plans on the current market and which will present the user with the procedure for performing various procedures such as approval of terminal equipment, filing petitions and complaints and other resources.

The CRC has had the support and advice from experts in behavioural economics in conducting its research and interventions, including specialised interdisciplinary groups of psychologists, economists, statisticians and experts in market research consultancy. These advisers are from academia, as in the case of the University Foundation Konrad Lorenz, as well as research and market analysis firms, such as Yanhaas SA, who are able to evaluate measures taken through the telecommunications operators. The OECD has advised and accompanied the CRC in identifying the main problems in the communications services in Colombia regarding the relationship between operator and user, and helped in the formulation of regulatory proposals that should govern each such issue.

## Simplification of telephone and internet contracts

<b>Country</b>	Colombia
<b>Sector</b>	Telecommunications
<b>Institution</b>	Comision de Regulacion de Comunicaciones (CRC)
<b>Start of intervention</b>	2015
<b>End of intervention</b>	2016
<b>Objective</b>	Improving the reading, understanding and remembrance by users of Internet and telephony services of the conditions of service delivery
<b>Method</b>	Behavioural diagnosis, followed by streamlining of contracts
<b>Application</b>	Simplifying mobile telephony and internet services contracts

### Problem

Comision de Regulacion de Comunicaciones (CRC), or the Commission for the Regulation of Communications, is the governmental telecom authority of Colombia. Its responsibility lies in protecting consumers of telecommunications through effective regulation of mobile, telephony and internet services.

The CRC found that users of mobile telephony and Internet services in Colombia have generally very poor information about their consumer rights and obligations. They do not clearly remember the conditions of the plan and therefore the contract they are under with mobile telephone and internet providers. Many of those users who enter into post-paid contracts, sign documents with no knowledge, even superficial, of the legal terms of trade into which they are entering. This forms a huge risk factor in the decisions they make, with little to no understanding of their options or the ensuing consequences of entering into such contracts.

CRC wanted to diagnose the reasons behind the poor understanding of consumers with regards to their telecommunications contracts, and see if a simplification and streamlining of the contracts themselves could improve the situation to better protect the parties involved. By simplifying the contract, the CRC aimed to create a document that forms a real tool for exercising the rights of users of Internet services and mobile telephony, strengthening decision making regarding supplier and service plan. Since this document governs the supplier-user relationship, a simplified contract could be the starting point to significantly improve that relationship also.

### Intervention

Using theory of behaviour as a starting point to research the understanding, beliefs, expectations and perception users have regarding regulations, services, rights and obligations for mobile services (telephony and Internet), the CRC worked with Konrad Lorentz University to approach its intervention in four stages:



1. Identifying the level of understanding and analysis that have users about the regulatory framework that exists to exchange with mobile providers
2. Establishing the relationship between the understanding of the regulatory framework and beliefs, perceptions and expectations of service users have
3. Identifying the most common problems that arise in the exchange between providers and mobile phone users
4. Streamlining the design of contracts for better understanding and remembrance.

At the diagnostic stage, a number of experiments were conducted on a sample of 851 mobile phone users, located in different socioeconomic strata (from 2 to 5), of both genders, aged between 18 and 65 years, with prepaid and post-paid plans from different operators. Altogether 10 group sessions were conducted, which allowed researchers to identify the characteristics of exchange between users and providers of these services and their relationship to the decision-making process in hiring communications services.

Principles of **bounded rationality**, associated with a **lack of disposition or information** suitable for making decisions were applied to the diagnosis. The diagnosis also took into account **education level** of the consumer, since the understanding of the contract may be related to the years of education of the individual and **social stratum**, as income level could be related to preconceived beliefs about the relationship operator contracts and user.

In order to achieve the simplification of contracts, which was implemented on 1 June 2015, the Siegel-Etskorn simplification method was used, from which the CRC designed a type of mobile telephone contract in a sheet containing all information relevant to the user in a clear and organised manner logically, and which could be read in approximately twelve (12) minutes.

The effects of the simplified contract were evaluated by market research firm in 2016, by conducting household surveys on 850 men and women aged 18 or more who were current mobile phone users, and had changed their contract in the last year. The participants were stratified (multi-stage sampling) by conglomerates, and the maximum duration of each survey was 15 minutes. Twenty in-depth interviews were also conducted with three moderators.

Further, exercises were conducted in which users were shown a contract which they read using eye tracking which combined two methodologies: i) Technical Neurophysiological (Eye Tracking), and ii) Technical Projective (marking colours) in order to explore the perceptions that arise in users to the process of signing the contract.

## Results and impact

Researchers found the following:

- Reading time and importance of the contract relates to the level of involvement (perceived risk – invested money), so socio-demographic aspects do not affect perception
- It was recognised that the formats tested used a clear and familiar language and a font size that allows for easy reading
- Using introductory titles allowed easy contextualisation of the topic, thus helping the understanding and selection of reading

- Level of education did not represent a large influencing factor in understanding contracts, since the language used generally allowed understanding
- Researchers found a loss of interest amongst consistent users in learning about the conditions under which their service was purchased. They expressed "confidence" in what they acquired with the operator because it was normally given in the service as agreed in quantity (minutes data)
- However, it was evident that there is some learned helplessness regarding the perception of users, where they believed the possibility to change something about their contracts did not lie in their hands, but that they only must accept the conditions as had been arranged by operators
- Users were not used to reading and prefer oral communication (explanation advisor) so give little relevance to the action of taking the time to read and understand the document.

Overall, the CRC was able to conclude that the success of the measure of simplifying contracts for telecommunications users would depend on the combination of multiple variables, such as consumer psychology, behavioural economics and visual communication techniques.

## Institution

Comision de Regulacion de Comunicaciones (CRC) is the governmental telecom authority of Columbia. The CRC has been focussing on market regulation, user protection and the simplification of regulations through its work with behavioural insights.

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By adopting regulatory measures based on behavioural insights, the CRC is better able to ensure that quality services are available to the consumer, with effective tools to understand, consult and exercise their rights and obligations so that they can make an informed and free choice between those services. The CRC ensures compliance by setting out the obligations of operators (suppliers and users) through documents and rules that are simplified and therefore easy to understand and recall, building an environment of mutual benefit and mutual trust.

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In addition, the CRC is undertaking activities such as the design and implementation of a Portal for Users, which will empower them with information about their rights, the quality of services, tariffs and plans on the current market and which will present the user with the procedure for performing various procedures such as approval of terminal equipment, filing petitions and complaints and other resources.

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## Telephone number billing: Paying regulation fees on time

Country	The Netherlands
Sector	Telecommunications
Institution	The Netherlands Authority for Consumers and Markets (ACM)
Objective	Getting companies to pay the fee for regulation of service phone numbers on time
Method	Policy intervention: changing the accompanying information sent with the invoice to the companies
Application	Modifying communications with the companies who use service phone numbers

### Problem

The Netherlands Authority for Consumers and Markets (ACM) is a regulator which ensures fair competition between businesses, and protects consumer interests. By doing so, it aims to create more opportunities and options for both businesses and consumers.

ACM deals with the regulation of a number of markets, including the telecommunications market in the Netherlands. Each year, people with a specific set of phone numbers pay ACM a small fee for its regulation of these phone numbers. The sets of phone numbers are mostly service numbers ACM gives out to companies. ACM is responsible for both giving out these numbers and registering who owns them, as well as regulating the use of these numbers. ACM makes sure that everyone who uses such a phone number is compliant with the rules, for instance abiding by the maximum amount a consumer may be charged with for calling a particular line.

ACM wanted to improve the rate of companies paying their fee for regulation on time to the Authority. It tested the use of behavioural nudges in its communications with the companies to do so.

### Intervention

Using insights taken from tax trials conducted by the UK Behavioural Insights Team (BIT), as well as from the Dutch tax agency, ACM modified the letter that accompanied the invoice sent to the companies for payment of their annual fee.

It made the following changes:

- Highlighting the most **important information** for the actual payment of the fee
- **Preventing reactance** by telling them how they could pay rather than how they should pay ACM
- Using **social norms** to communicate that in ACM's experience most people pay this fee on time
- **Shortening** the accompanying letter by deleting unnecessary information and moving the less vital information to the attachment

- Turning the accompanying information into an actual letter, adding a salutation and signature (**Personalisation**)
- Added a blue box at the top right-hand side of the letter summarising the request (**Salience**)
- Making it clear that ACM had manned phone lines especially for questions from the companies.

Payment rates following these modifications were compared to data on the rates of payment from the year before, when the invoice was sent with non-behaviourally modified information accompanying it.

## Results and impact

The behavioural intervention did not appear to have a positive effect on payment rates compared to the previous year. ACM did, however, receive less (formal) complaints.

Overall, the Authority missed a lot of data whilst conducting the intervention, and so the comparison made with the year before could not be done reliably. The researchers were unable to draw any statistically significant conclusions because of lack of data and because the invoices were sent at a different time under different circumstances.

ACM is planning to conduct a Randomised Controlled Trial with the next set of invoices sent to the companies, to see what elements can improve rates of payment of the regulation fee.

## Institution

The Netherlands Authority for Consumers and Markets (ACM) is the Dutch competition and market regulator. It works to protect consumers and promote fair competition between businesses. ACM has been actively using behavioural insights in order to achieve more effective market oversight.

The Authority is particularly interested in using behavioural insights to make consumers more aware and active, to increase compliance amongst businesses, and to obtain information from regulated companies, especially in the energy, telecom and postal sectors.

ACM has a Behavioural Insights Team consisting of 10 people. It organises workshops open to all employees and information meetings for managers. In order to increase the organisational knowledge of behavioural insights, ACM also participates in international conferences and networks with universities and other regulators and government bodies that apply behavioural science.

Although there was some initial scepticism, questions and concerns about ethics across all layers of the organisation regarding the use of behavioural insights by ACM, as the use of behavioural insights became increasingly visible, this has decreased over time.

## Price framing for consumers in the telecom sector

Country	United Kingdom
Sector	Telecommunications
Institution	Ofcom
Start of intervention	March 2009
End of intervention	October 2009
Objective	To assist Ofcom in understanding the role experiments can have in understanding consumer behaviour and to provide an example experiment that tested consumer behaviour in five different settings or treatments, representing different policy interventions aimed at improving price transparency
Method	Introductory overview of the use of experiments in consumer research together with a controlled laboratory-based experiment on the framing of call price information
Application	The research was used to inform Ofcom of the application of experimental techniques in the development of policy

### Problem

Prior to the release of this report, Ofcom had been doing some work on behavioural economics and its implications for regulations. A key insight from that work was that evidence on actual consumer behaviour could be helpful in understanding how consumers react to different market features, and what type of remedies were likely to be successful. As part of this work, Ofcom was considering the use of experiments in developing policy for markets that they regulated. Ofcom commissioned a report from London Economics and University College London (UCL) to investigate the potential uses of experiments in understanding consumer behaviour, and to develop a better understanding of the potential benefits of experiments in Ofcom's work.

As part of this report, an example controlled laboratory-based experiment on the **framing** of call **price** information was conducted. This specific experiment was designed to consider a number of options for improving the understanding of consumers when choosing services funded through call charges. Consumers are able to find out the costs of calls in many different ways, and cost is important as it is one way in which information is transferred to customers.

In the United Kingdom, the “General Conditions” require all phone companies to be transparent about the costs of calls and, where applicable, publish details about call prices. However, consumers in general do not always know the exact cost of a call before they make a call, and Ofcom identified this as an uncertainty that can lead to consumer detriment. If price information was not adequately transferred and understood, consumers could fail to make the choices that best meet their needs.

Ofcom had, in the past, looked at developing policies to address this potential uncertainty. However, the policies under consideration often left the consumer without the ability to know the exact tariff of a call before making that call, unless they actively looked up the communication's provider prices. Ofcom was considering options to

address the consumer concerns around **price transparency** in this area that had been identified. The experiment sought to understand how different interventions could influence callers to make better decisions when making a call.

## Intervention

The controlled laboratory experiment conducted for Ofcom sought to study how **price framing** affected the provision of telephone number price information to consumers. The experiment was designed to capture the essence of what it meant to make phone calls in an environment where prices were not readily available and lengths of calls were stochastic in nature. This reflected the situation faced by consumers when making non-geographic phone calls in practice.

Researchers provided participants with different presentations of call costs in both the mobile phone environment and the landline environment. This was done because the two environments mainly differed in how costly it was to search for price information and the risk involved due to different degrees of price dispersion. It was three times as costly to search in the mobile phone environment as it was in the landline environment, capturing the real world features of “being on the move” with a mobile phone and therefore facing more difficulty (more costs) to undertake a price search using the mobile as compared to, say, the internet at home. The different call cost presentations were:

- A baseline treatment that studied consumer behaviour in an environment where there was little price information about call prices and price search was not easy
- Pre-call announcements with the exact price of the call announced to the caller
- Pre-call announcements with the maximum price the call might cost announced
- Price information on the monthly bill in form of a list detailing all call charges for all telephone numbers such that, in principle, consumers had easy access to all relevant price information
- Telephone short-codes such that consumers could learn the costs of different calls easily at greatly reduced costs.

The experiment utilised a 2x4 design, for a total of eight treatments. In all scenarios, participant first completed a full baseline cycle and then the interventions were applied. In both environments, subjects had to complete different “tasks” by making telephone calls. While these tasks were framed in an abstract manner, the idea was that they resembled real-life tasks like finding out something from your bank or ordering a pizza from a delivery service.

In total, 211 university students were recruited to participate in the experiment. They were asked to complete the above nine tasks (baseline plus treatments), each of which was compensated with a premium paid upon completion. The reward was designed to resemble the reward of receiving the desired information from the bank or eating the pizza that was ordered. All nine tasks together formed one task cycle and each of the two parts or phases of the experiment consisted of 14 such cycles.

## Results and impact

A key conclusion from the report was that Ofcom considered that experimental-style techniques were likely to act as a useful complement to the substantial consumer research that it already carried out. However, as with other research methodologies, there were

advantages and disadvantages of experiments, and their appropriateness would vary depending on the context. It was unlikely that carrying out experiments would be helpful in all cases. As a result, the experiment provided Ofcom with some helpful indications of the type of interventions that are most likely to be effective in this situation, although it did not test the full range of possible interventions.

The results from the experiment on price framing found that:

- As compared to the baseline in which price information was not readily available, all interventions tested in the experiment increased consumer welfare significantly
- Comparing across the different interventions, pre-call announcements with the exact price of the call and the possibility to opt out (turn off the announcement) was the best performing intervention in both the landline and mobile phone environments. Consumers learned prices effectively and then typically switched announcements off
- The second best performing intervention was short-codes
- Both price lists on the monthly bill and pre-call announcements where the maximum possible call cost was announced performed less well
- Pre-call announcements with maximum price information were the worst performing intervention in terms of consumer welfare measures – a result according with expectations.

The experiment also showed that participants actively sought out price information. Furthermore, participants used the price information they found to make better choices when making calls, namely if they searched more, they called cheaper numbers. However, the positive effects of search activity did diminish, and therefore there were costs of excessive search.

Furthermore, participants did learn over the course of the experiment and “bill shock” (unexpectedly large bills) played an important role. Learning from bill shock was not simply driven by the price of a call as measured by the charge per minute, but was a function of the total costs. If the total costs were large, this attracted participants’ attention and led to a change in behaviour. In other words, bill shock mattered and was driven by the total size of the bill.

Ofcom said that it intended to take these findings into account when they reviewed its approach to regulating non- geographic call services to ensure that the regulatory framework delivered optimal consumer outcomes in terms of range of services and clarity and appropriateness in costs and charges.

## **Institution**

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Ofcom has used behavioural insights to inform the development of policy in a number of areas relating to telecoms markets. Ofcom employs economists across a number of levels, including senior levels: a number are familiar with behavioural economics and theories of behavioural bias.

*Source:* Duke, C., S. Huck and B. Wallace (2010), “Experimental Economics Research: Final Report”, Ofcom, [https://www.ofcom.org.uk/\\_data/assets/pdf\\_file/0023/31865/experiments.pdf](https://www.ofcom.org.uk/_data/assets/pdf_file/0023/31865/experiments.pdf) (accessed 12 January 2017).

## Consumer switching in telecommunications markets

Country	United Kingdom
Sector	Telecommunications
Institution	Ofcom
Start of intervention	
End of intervention	2010 – Final report
Objective	To inform the policy debate as to whether Gaining Provider Led (GPL) switching processes resulted in better outcomes for consumers than the existing Losing Provider Led (LPL) processes
Method	Controlled laboratory experiment to investigate the efficacy of different processes in the market for communications services
Application	The results of the experiment were among a number of different pieces of analysis which contributed to the formulation of Ofcom's long term, strategic view that GPL processes were preferable to LPL processes in terms of both consumer and competition outcomes

### Problem

This study, completed for Ofcom by London Economics, reported the results of an economic experiment that investigated different features of switching processes for consumers in the market for communication services. The economic experiment tested the impact of two main forms of switching process, Gaining Provider Led Processes (GPLPs) and Losing Provider Led Processes (LPLPs) on consumer welfare and percentage of consumers that settled on a contract best suited to their needs. The experiment was designed to test the effect of **limited attention** and **choice overload**, since consumers needed to process substantial quantities of information to select the best contract for them.

The main difference between GPLPs and LPLPs are the number of different contact points that consumers wishing to switch must make. Under GPLPs, consumers need only contact the new provider which they want to switch. Therefore, GPLPs are more straightforward for the consumer, and the consumer avoids pressures from the losing provider to stay. On the other hand, LPLPs require consumers to make up to three contacts during the switching process. This provides the losing provider with the opportunity to make a counter offer and exert sales pressure on the consumer to keep them.

The objective of this study was to inform Ofcom's consumer switching project and to complement other methods such as quantitative surveys and qualitative research that Ofcom was also using to understand consumer experiences under different GPLPs and LPLPs.

## Intervention

The controlled laboratory experiment, involving 119 student subjects from University College London, examined how consumers may want to switch to competing providers with contracts that were more suitable to their own demand. Initially, consumers did not know how many phone calls they were likely to make each month (their demand) and they were signed on to an expensive contract that was not suited to their needs to induce a switch to occur. Each ‘month,’ subjects observed the number of calls they actually made and realise their own demand according to one of three different distributions (high demand, medium demand and low demand). Specifically, the experiment tested six switching processes:

1. GPLP without verification such that there was the possibility of slamming<sup>1</sup> and there were no early termination charge (ETC) warnings
2. GPLP with verification such that there was no slamming, but again no ETC warnings
3. GPLP with verification (and therefore no slamming), and a simple ETC warning where the consumer was told by the gaining provider that she might incur an ETC if her contract was still within the minimum contract period
4. GPLP with verification, and precise (or full) ETC warnings where the consumer was told the exact amount of the ETC she would incur
5. LPLP where the losing provider informed the consumer of the precise ETC and made a retention offer that was similar to the new contract the consumer planned to sign-up to with a different provider, and
6. LPLP as (5) but with several time delays that could frustrate the consumer (e.g. similar to when the consumer was kept on hold by the losing provider when trying to make the switch).

The experiment proceeded through six cycles where a cycle represented a 48 month period. In each cycle, the demand type of a consumer was fixed (high, medium or low), which was then randomly reset at the beginning of the next cycle. During a month in the experiment, consumers could take two actions: First, they could search the tariffs of the other providers. Each search of one provider costs the subject 100 units in experimental currency units. This represented the real life cost of searching for tariff information (either attending a shop, browsing the internet or absorbing direct marketing literature).

Consumers could switch at any point in time during the experiment. However, if they switched before the minimum duration of their current contract had expired they would have to pay an ETC. The parameters of the experiment were set in a way such that a perfectly rational consumer would never switch before the minimum contract duration had expired because the ETC was “large” and it would cost the consumer less to continue with their current contract.

1. Slamming involves switching a consumer to another service provider without their knowledge or consent.

## Results and impact

The findings from this experiment suggested that GPLPs, except when slamming was possible, generated higher welfare for consumers as compared to the LPLPs, and this difference was large with consumer subjects losing, on average, 20% of welfare under the LPLPs as compared to the GPLPs. Furthermore, under GPLPs, consumers made better switching choices, that is, conditional on switching they were more likely to switch to the provider that offered the contract most suitable for them. As the report noted, this was surprising, especially from the view point of standard economics, since there was no relevant information differences between the GPLP and LPLP treatments, which would assist consumers to select the most suitable contract, that could explain this effect. Further, there were no differences in (voluntary) switching across these treatments.

Similarly, the researchers also found that the GPLP without verification led to worse switching choices. Once slammed, subjects who switched were less likely to switch to the best provider, that is, they were more likely to make inferior decisions about which contract to pick. Again, this could not be explained through standard economic arguments as subjects in the slamming treatment had access to the same information about their own demand as subjects in all other treatments

The researchers also found that ETC warnings did not help consumers in the GPL processes nor the LPL processes. As well, they found that consumers with higher IQ performed much better than subjects with lower IQ and that consumers performed better with more experience. While this might not be surprising from a common-sense point of view, it did violate the predictions of standard economics where cognitive limitations are assumed away.

Counter to standard economic theory, the researchers concluded that **limited attention** stemming from the substantial quantity of information present rendered optimal decision making difficult. Consequently, the potentially beneficial effect of additional information from ETC warnings or additional tariff choice from save activity was wiped out through the additional complexity that these features induced. Similarly, slamming appeared to cause, beyond its direct negative effect on consumers, substantial confusion which explained the lower quality of contract choices. In a post-experimental questionnaire, the findings on IQ and experience were confirmed as subjects reported that they found the switching process confusing in the presence of ETC warnings and retention offers made it more difficult to select the best contract.

The results were among a number of different pieces of analysis which led Ofcom to the strategic view that GPL processes were preferable to LPL processes in terms of both consumer and competition outcomes.

## Institution

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*Source:* Huck, S. and B. Wallace (2010), “Consumer switching: Experimental economics research”, London Economics, [https://www.ofcom.org.uk/\\_data/assets/pdf\\_file/0021/68043/economics-research.pdf](https://www.ofcom.org.uk/_data/assets/pdf_file/0021/68043/economics-research.pdf) (accessed 12 January 2017).

## Automatically Renewable Contracts (ARCs)

Country	United Kingdom
Sector	Telecommunications
Institution	Ofcom
Start of intervention	31 December 2008
End of intervention	31 March 2010
Objective	To examine the concern that ARCs were damaging to consumers and to competition in communications markets
Method	Econometric analysis of the impact of ARCs on consumers' decisions to switch to another supplier of fixed telephony services in the United Kingdom
Application	The econometric analysis formed a key part of the analysis that informed Ofcom's decision to prohibit ARCs

### Problem

Many telecommunications firms offer “fixed-term contracts” (or just “term contracts”) that require customers to maintain service for a minimum contract period (MCP) in return for a price discount relative to that charged on a flexible contract that can be cancelled with short notice. In February 2008, BT (formerly “British Telecom”) introduced “rollover contracts,” or “automatically renewable contracts” (ARCs), that not only included such a 12-month MCP, but also automatically renewed the MCP for an additional 12 months unless the household elected to opt out during the course of the original MCP. In exchange, households received a promotional benefit (that also “rolled over”).

There were mixed views about the impact of fixed-term contracts on the functioning of economic markets. Service providers claimed that they allowed them to spread any fixed costs of providing service over the length of the MCP, reducing up-front costs to consumers and enhancing take-up. MCPs also included early termination charges (ETCs), however, increasing the costs of switching providers. Such switching costs could reduce social welfare, particularly if consumers were myopic or they influenced the costs of product or market entry by making it harder to attract customers to new service offerings. Rollover contracts would appear to increase market-wide switching costs by increasing the share of a company’s customers that are under MCPs at a given point of time.

The purpose of this study was to estimate the causal effect of BT’s rollover contracts on its customers’ decisions to switch to another provider of fixed voice telephone service. While the study focused on an econometric analysis of observational data, the study noted that consumers might also respond differently to rollover contracts due to behavioural effects. For example, an opt-out contracting environment changed the **default option** for rollover customers, possibly leading to “**status quo bias**” and more customers on MCPs than might otherwise occur. Furthermore, opting out had to be done in a timely manner (i.e. before an additional MCP began). BT prompted customers that this was necessary with a letter in the 11th month of the MCP, but **myopia**, **forgetfulness**, and/or the

**pressing demands of modern life** could cause customers to miss the deadline, again leading to more customers on MCPs than otherwise.

## Intervention

ESMT Competition Analysis (ESMT CA) prepared an econometric model for Ofcom that addressed two concerns in studying in measuring the causal effects of BT's rollover contracts on its customer's decisions to switch to another provider of fixed voice telephone service:

1. It required detailed disaggregate data on the switching behaviour of individual households. This data was not typically available to external analysts
2. It required accurately accounting for determinants of household switching behaviour other than that due to the rollover contracts themselves. The most important of these was likely to be tenure (i.e., how long a customer had been with BT), whether the customer purchased other services from BT (e.g. broadband access), the effect of any price discounts, and "self-selection" (or just "selection"), unobserved differences in households' likelihood of switching that might be correlated with their decision to select a rollover contract.

Working with Ofcom staff, ESMT CA obtained detailed customer-level billing data from BT for a random sample of almost 180 000 of its fixed-line voice customers as of 31 December 2008. After data cleaning, the sample was reduced to 144 861 customers, which included 1 984 406 monthly observations on these customers. This data included detailed information about each household's history with BT as well as their voice plan, contract, price paid (including any discounts), and minimum contract period(s) on the sampling date and for 15 subsequent months (through 31 March 2010). ESMT CA augmented this with aggregate market-wide information measuring macroeconomic trends and prices offered by rival providers for similar services. The result was a comprehensive dataset that provided the best information available to analyse switching behaviour at the level of the individual household.

The model was designed to address the above-mentioned measurement challenges by utilising a large sample size, which provided ESMT CA sufficient data to effectively estimate the impact of rollover contracts on switching behaviour while controlling for a host of other factors that might influence switching, including tenure.

## Results and impact

The study found that BT customers on rollover contracts switched after their first MCP 34.8% less than comparable customers on standard contracts and by 54.8% less than comparable customers on fixed-term contracts that did not automatically roll over.

The study further found that this qualitative finding was robust to the inclusion of: controls for tenure; whether or not the household purchased other services from BT; the price discount offered by rollover contracts; as well as accommodating self-selection by households into such contracts. The study found that tenure, price effects, and the purchase of broadband service were all economically important (doubling a household's tenure with BT, offering a 21% discount like that offered on the most popular rollover contract, and purchasing broadband service from BT reduces switching by an estimated 62.3%, 21.9%, and 52.8%, respectively) and that there was statistically significant evidence of self-selection. However, even after controlling for the effects of tenure, price

discounts, broadband purchase, and self-selection, they found that households on BT's rollover contracts switch after their first MCP 34.8% less than comparable customers on standard contracts and by 54.8% less than comparable customers on BT's fixed-term contracts.

This evidence was consistent with the view that BT's rollover contracts significantly increased switching and/or entry costs in fixed voice telephony markets.

## Institution

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*Source:* Crawford, C. and EMST Competition Analysis (2010), "Empirical analysis of BT's automatically renewable contracts", EMST Competition Analysis, [https://www.ofcom.org.uk/data/assets/pdf\\_file/0023/31865/experiments.pdf](https://www.ofcom.org.uk/data/assets/pdf_file/0023/31865/experiments.pdf) (accessed 12 January 2017).



## Consumer information on broadband speeds and net neutrality

Country	United Kingdom
Sector	Telecommunications
Institution	Ofcom
Start of intervention	N/A
End of intervention	May 2011 – Final report
Objective	To assess the ability of consumers to purchase the right broadband package when presented with different types of comparable information
Method	Controlled laboratory experiment to allow the direct comparison of information and its presentation on consumers' choices of broadband packages
Application	The results were used to improve the understanding of the challenges in presenting information to consumers and inform Ofcom's monitoring of this information. Ofcom also retained the possibility of intervening more formally to ensure that there was sufficient transparency in respect of the use of traffic management by network operators

### Problem

Conducted by London Economics, a consultancy, on behalf of Ofcom, the objective of this study was to inform Ofcom about the relative effect of different ways to present information on broadband features.

At the time of the report, there was not a standardised method for presenting information to consumers about the package of broadband choices in the United Kingdom – some provided more information than others, and often in different ways. This meant that offers by different providers were often not easily comparable and the information provided was often complex and technical.

As a result, the experiment aimed to study the effects of **information overload** and **complexity**, which made it difficult for consumers to translate this information on technical inputs into the quality of the services consumers receive. Specifically, the experiment examined the way technical information was presented to consumers – i.e. speed, service prioritization and usage caps – which consumers had to interpret to understand what it meant for the quality of the services they wanted to access – i.e. the quality of the videos they could watch.

### Intervention

The controlled laboratory experiment used in this study was designed to test the impact on choice of how information about packages was presented to consumers, and whether the presentation of superfluous information (which is not important for choice) impacted upon consumer choice. The experiment examined four different treatments in a two-by-two design. The two principle treatment variables were:

- *Coding*: the way that the packages were presented, either in detailed numerical terms or through colour coding of key variables such as download speeds.
- *Information*: the presence (or absence) of superfluous information in the package description, that is, information that should not affect the consumer's choice.

This controlled laboratory experiment sought to compare colour and numerical coding of packages and to compare treatments with and without superfluous information. Participants in the experiment were given the user requirements of a hypothetical internet user and were offered two alternative broadband packages. Participants had to choose the package that was more appropriate for them, given their internet use. They also had to choose whether to search for more information about the packages before making their package choice. This type of design enabled the researchers to pin down the causes of differences in broadband package choice behaviour and potentially identify any interaction effects – the effect of the combination of coding and information changes.

One hundred and fifty six subjects were selected from the University College London student subject pool. Each subject encountered one combination of coding and information and made 50 broadband package choices. Two packages were generated for each treatment, based on three levels of usage which varied according to advertised “up to” download speeds and broadly correspond to what was on offer in the market at the time of this experiment. For each level of package, there was a distribution on the “average download speed,” “upload speed,” “monthly usage allowance,” “price,” and “traffic management”. Half way through the experiment, subjects were given feedback about the number of incorrect choices they had made.

The researchers expected that, for subjects that were able to process the information, numerical coding would be superior as the information provided by colour coding is coarser. They also expected that superfluous information would not make the decision better and potentially could make it worse. However, if consumers suffered from cognitive limitations or information overload, colour coding of essential variables could help them to process available data more efficiently.

## Results and impact

As an important frame of reference, the research found that subjects chose the incorrect package for their usage profile in a large proportion of cases, irrespective of the type of and how the information was provided to them. That said, the research also found that the provision of information in numerical terms helps consumers to make, on average, better choices than under colour coding. The frequency of optimal choice increased by approximately six percentage points.

The results on colour coding were mixed. On the one hand, colour coding tended to result in consumers searching too much. On the other hand, consumers did benefit from this extra searching as the research found that consumers who should make a decision based on freely available headline information but did continue to search were more likely to choose the best package when the key information was colour coded. This demonstrated the potentially beneficial effects of colour coding in environments where consumers are rather uncertain about which information they really need to make a good choice.

As expected, superfluous information tended to make things worse, specifically when the key variables were presented in numerical fashion.

Another important finding was that subjects tended to gravitate towards the more expensive broadband package, when a cheaper package might be as good or better given their requirements. Such consumer behaviour could lead to excessive prices even in the presence of intense competition, simply because the incentive to offer lower prices was considerably reduced.

Finally, it was observed that the quality of choices improved significantly and substantially over time. Driven by the feedback provided half way through the experiment, the frequency of optimal choices increased by 8% from the first to the second half of the experiment. When consumers realised they were not choosing the best package given their requirements, they appeared to try harder in the future.

Overall the research confirmed that the appropriate presentation of information could improve consumers' ability to select the best broadband package, and that tailoring information to the consumer supported better decision making. Results suggested that an environment where all key information was colour coded, but where at the same time the precise numerical information could be easily accessed and where superfluous information was suppressed, would maximise the quality of consumer choice in broadband markets. However, it also showed that presenting information effectively was a significant challenge.

As a result, Ofcom decided to monitor how information was being provided to consumers while retaining the possibility of intervening more formally to ensure that there was sufficient transparency in respect of the use of traffic management by network operators.

## Institution

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*Source:* Huck, S. and B. Wallace (2011), "Consumer information on Broadband Speed and Net Neutrality Experiment: Final Report", London Economics, [https://www.ofcom.org.uk/\\_data/assets/pdf\\_file/0027/68841/consumer\\_information1.pdf](https://www.ofcom.org.uk/_data/assets/pdf_file/0027/68841/consumer_information1.pdf) (accessed 12 January 2017).

## How best to present call price information to consumers

Country	United Kingdom
Sector	Telecommunications
Institution	Ofcom
Start of intervention	
End of intervention	August 2011 – Final report
Objective	To examine potential interventions in relation to non-geographic calls for customers
Method	Controlled laboratory experiment to test two forms of intervention: i) setting maximum prices for calls to non-geographic numbers and ii) unbundling call charges into an access charge and a service charge
Application	The outcome of the research formed part of the evidence base that led Ofcom to require communications providers to unbundle their charges for calls to non-geographic numbers

### Problem

In 2011, Ofcom was considering possible regulatory interventions which, among other things, aimed to help consumers make better choices about calls to non-geographic numbers. Non-geographic numbers include prefixes 03, 08, 09 and 118. They are used for services including customer support, television voting lines, directory enquiries, horoscope lines and chat lines. To address this problem, Ofcom developed two forms of intervention, which they sought to test empirically:

- Setting maximum prices for calls to non-geographic numbers. This would allow service providers to inform consumers that calls cost “up to X pence per minute”. However, to know exactly what a call costs, consumers may need to search using, for example, the provider’s website and price list
- Unbundling service charges and access charges. Each originating communications provider (OCP) would set an access charge and each service provider would set a service charge. The total call cost would be the sum of the access charge (AC) and the service charge (SC). In this intervention, consumers would need to remember their provider’s AC. Advertisements for the service could take the form of “calls cost Z pence per minute plus your network’s access charge”. Where the SC is not specified in the information (technically referred to as “literature”) that consumers have at the point of call, consumers would need to search to know exactly what the SC is for a given service.

Ofcom enlisted London Economics, a consultancy, to operate an experiment to test these two interventions. The interventions tested the effects of **increasing information** and reducing the need for customers to search for information, **reducing complexity**. This should ensure that consumers received the right information, at the right time and in the right format as research had shown that informational qualities such as style, complexity and framing played a central role in shaping decision making.

## Intervention

To test how the interventions under consideration might influence consumers' behaviour, an experiment was designed to explore the following features:

- The information that consumers had at the time of choosing to make a call. This information was varied in three ways:
  - Consumers had no information about the per minute call charge(s) at the time of deciding to make a call, but they could search for the precise call charge (e.g. by looking it up on their OCP's website)
  - Consumers were told the maximum per minute call charge that they could incur but not the precise charge. If they wanted to know the precise charge, they needed to search for it (e.g. by looking it up on their OCP's website)
  - Consumers were informed about the precise per minute call charge at the time of making the call in, for example, an advertisement provided at the point of call. In the unbundled scenarios, particular elements of the charge that participants were told were varied.
- Whether ACs and SCs were bundled or unbundled:
  - Scenarios that were similar to current market practices in which consumers were given a single bundled AC and SC charge, so that they saw one total charge
  - Alternative unbundled scenarios in which consumers were given their tariff specific AC, and the SC for the individual call was provided separately. They thus saw two call charges.

In total, 181 university students enrolled at University College London took part in the experiment. Set up at a computer, subjects would decide if they wanted to make phone calls based on the “pay-offs” they would derive from the call (which they were told prior to having to make the decision) and the available information on the price of the call. When participants searched for call charge information, they incurred monetary search costs that reflected the time spent searching websites or other advertising material.

Participants also needed to decide which tariff to subscribe to. There were five tariffs, each offered by a different communications provider. Hence, the choice of tariff mimicked the consumers' choice of OCP. Each tariff featured a different monthly subscription charge and a different AC (or mark-up). Participants were told the monthly subscription charge. In the unbundled scenarios, they were also told the AC.

They would repeat this process for six total scenarios, varying according to the above conditions. Each subject played eight tasks for 24 rounds in one of the six treatments.

## Results and impact

Overall, the strongest finding from this experiment was that any intervention which improved consumers' price information available at the time the consumer decided to make a call, and as such, reduced the need to search for price information, would help consumers in the field as it did in this experiment. The study also confirmed that such price information did not have to be complete (i.e. the total charge) for it to be useful.

In terms of call choice, there were three main findings:

1. Providing call charge information at the point when participants decided whether or not to make a call helped them make significantly better decisions
2. Informing participants of the maximum call price at the point at which they decided whether to make a call helped them make better decisions compared to scenarios where no information was provided (but the participants could search)
3. Where participants were provided with call charge information, they did slightly worse where prices were unbundled.

In terms of how often participants selected the correct tariffs, three findings were made:

1. Providing bundled call charge information at the point of call resulted in participants making worse tariff choices
2. There are some indications that unbundling call charge information helped participants make better tariff choices
3. When considering the impact on participants' choice of tariff it was important not to over emphasise the differences in the experiment's outcomes for the various scenarios.

Finally, with respect to the combined results, the outcome in terms of ranking of options was similar to the evaluation of call choice above. This was not particularly surprising since making correct call choices had a strong impact on the participant's payoffs. The only difference with the scenario ranking under call choices was that there was no longer a statistically significant difference between scenario 3 (maximum prices) and scenarios 1 and 6 (either bundled or unbundled prices with no price information at the point of call).

The results of the research formed part of the evidence base that led Ofcom to require communications providers to unbundle their charges for calls to non-geographic numbers. The final decision was implemented in June 2015, after a transition period for communications providers. Ofcom is currently monitoring the impact of the changes. Ofcom has published their final policy position on simplifying non-geographic numbers at: <https://www.ofcom.org.uk/consultations-and-statements/category-2/simplifying-non-geo-no>

## Institution

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*Source:* Huck, S. and B. Wallace (2011), "Experimental work on potential interventions in relation to non-geographic calls: Final Report", London Economics, [https://www.ofcom.org.uk/\\_data/assets/pdf\\_file/0031/56983/interventions-non-geographic.pdf](https://www.ofcom.org.uk/_data/assets/pdf_file/0031/56983/interventions-non-geographic.pdf) (accessed 12 January 2017).

## Chapter 14

### Additional behavioural insights case studies

*This chapter provides a series of case studies detailing how behavioural insights have been applied in OECD member and partner countries as a tool for improving consumer outcomes and changing organisational behaviour in various policy fields. Case studies presented utilise a breadth of experimental methods, ranging from resource-intensive randomised controlled trials to relatively less resource-intensive literature reviews. The open and transparent sharing of what works, and what does not, is vital to ensuring that good quality research and findings are shared widely.*

## Reporting arrangements for government programmes

Country	Australia
Sector	Intellectual property
Institution	Department for Industry, Innovation and Science
Start of intervention	N/A – trial has not yet started
End of intervention	N/A
Objective	Increasing the rate and improving the quality of post-programme reporting by Commercialisation Australia participants
Method	Field Trial (pending)
Application	Modifying the email sent to Commercialisation Australia participants asking them to complete the post-programme reporting form

### Problem

Commercialisation Australia (now replaced by Accelerating Commercialisation) was a programme designed to support the commercialisation of innovative intellectual property in Australia. “Start-up” small to medium business and researchers in Australia were able to apply for grants and assistance to help them commercialise on “novel products, processes and services”.

Participants of the programme were required to complete a post-completion data collection form. However, data from the programme showed a declining response rate to post-project reporting after the first year of reporting, giving an overall response rate of less than 44%. Further, previous evaluations noted that the data collected was of poor quality.

### Intervention

The Australian Government Department for Industry, Innovation and Science (DIIS) decided to develop a project to improve quality and quantity of post-programme reporting. It began by trying to understand how Commercialisation Australia participants interact with the department through the post-completion reporting process through discussions with departmental staff, reviews of previous evaluations and interviews with 22 selected participants. It then used this information to consider decisions made by participants through a behavioural insights lens, in order to understand how to reduce the burden they experience. The final stage of the project involved developing a field trial design to test some of the suggested interventions.

The trial itself is pending and would be a randomised clinical trial to test selected interventions, based on well-known heuristics and biases drawn from Behavioural Insights Theory, including salience, principles of **salience**, **reducing complexity and frictions**, and **deadline effects**.



A test group of participants on the Commercialisation Australia Programmes will receive a revised email that is **shorter, emphasise the expected completion date and clearly describe the steps needed to comply with the request**. A control group will receive the original email. DIIS has chosen this as the most effective and efficient intervention to make as the e-mail is readily changed and more easily managed by the department. Results will be assessed on the basis of response rate and quality from that group which receives the revised email, as compared to that of the group receiving the original.

## Results and impact

The trial itself is still pending, however application of behavioural insights theories has provided DIIS with new methods to reduce the regulatory burden on businesses receiving grants, increase compliance with regulatory requirements by making it easier to comply and investigate whether a decrease in departmental administration of grants, or reporting, may be possible if increased compliance occurs. The insights and recommendations learned from the project are also being applied to the Department's related programmes, Accelerating Commercialisation. The project has provided increased knowledge to programme officers which will help them design future engagement with businesses.

## Institution

The Australian Government Department for Industry, Innovation and Science supports science and commercialisation in Australia, alongside growing business investment and improving business capability. It has been using behavioural insights as part of its agenda to streamline regulation, by finding ways of improving regulation design and delivery.

Behavioural insights are assisting DIIS in identifying areas where it can reduce administrative burden and improve compliance with reporting requirements. Although the scope of BI projects has so far been relatively narrow, senior management within the department have been supportive about incorporating behavioural insights into their work, primarily driven by the regulation reform agenda.

So far, DIIS has used external behavioural experts to conduct client interviews and provide advice on behavioural insights, but is also developing capacity for institutional applications of behavioural insights within the department itself. DIIS is also involved in intergovernmental groups and bilateral knowledge sharing on the subject.

## Reapplying for student loan repayment assistance

Country	Canada
Sector	Government-Sponsored Student Financial Assistance
Institution	Canada Student Loans Programme (CLSP)
Start of intervention	2013
End of intervention	2014
Objective	Helping borrowers who are having difficulty managing the repayment of their student loan, and who are receiving repayment assistance, to manage their repayment more effectively
Method	Randomised Control Trial pilots tested on students approaching the end of their six-month repayment assistance period
Application	Sending student loan borrowers receiving repayment assistance reminders to re-apply for repayment assistance, in order to help them manage their loan repayments more effectively

### Problem

The Canada Student Loans Programme (CLSP) provides financial assistance in the form of loans and grants to post-secondary students who demonstrate financial need. It is delivered by Employment and Social Development Canada (ESDC).

A portion of the student loan borrower population in Canada experiences some difficulty managing the repayment of their student loans. The CLSP wanted to explore ways in which they could improve the standard practice of contacting various groups of borrowers as they approach their loan repayment phase to explain obligations and options with behavioural **nudges** that could make borrowers more likely to make the first repayment of their loan on time.

The pilot in question was part of a larger effort to reduce the rate at which student loan borrowers defaulted on their loans, and focussed on those students receiving assistance in the repayment of their loans to the Government. Students receiving repayment assistance need to reapply for the assistance every six months. The CLSP wanted to find out if sending reminders to these borrowers before their six-month assistance period ended would make them more likely to reapply and make their loan repayment on time.

### Intervention

The CLSP sent borrowers who were receiving repayment assistance, and who were approaching the end of their six-month assistance period, a reminder to re-apply or to be mindful of their upcoming payment due date. The trial applied the principles of **making information attractive** and of using a “**call to action**” in the reminders to attract individuals’ attention and make borrowers more likely to perform the desired action. The approach was replicated from nudging trials conducted by the Behavioural Insights Team in the United Kingdom.

## Results and impact

The trial yielded positive results. The fact that the treatment was not resource-intensive but used lightweight, electronic communications to draw student loan borrowers' attention to the task at hand, in this case re-applying for assistance, meant that the benefits of the treatment very likely outweighed the costs. Sending a reminder to student loan borrowers receiving repayment assistance has now been incorporated into standard practice by the CLSP to help student loan borrowers manage their loan repayments.

## Institution

The Canada Student Loans Programme (CLSP) is delivered by Employment and Social Development Canada (ESDC). The CLSP uses behavioural insights in the design of research projects that help to determine how best to positively influence student loan borrowers' decision-making. Results of such research projects are used to change policy in such a way that behavioural insights principles are used to help student loan borrowers make informed and positive decisions about the repayment of their loans.

The CLSP's use of behavioural insights is part of ESDC's overall commitment to provide a modern and efficient way for Canadians to interact with the Government of Canada. As a consequence, behavioural insights have been used by the ESDC to provide accurate and timely service, to increase client awareness and knowledge of benefits and how they are entitled to get them, and to reduce costs by moving clients to a more efficient and cost-effective channel.

The ESDC has established an Innovation Lab that formally supports branches of the organisation in the development and use of behavioural insights. The Lab has also established an informal network of practitioners, training and guidance networks to provide further support.

## Making student loan repayments on time

Country	Canada
Sector	Government-sponsored student financial assistance
Institution	Canada Student Loans Programme (CLSP)
Start of intervention	July 2014
End of intervention	January 2015
Objective	Finding the most effective approach in helping borrowers who are having difficulty to manage the repayment of their student loan to do so on time
Method	Randomised Control Trial pilots tested on four different types of student borrowers
Application	Modifying communications sent to student loan borrowers to help them manage their loan repayments more effectively

### Problem

What is the most effective method of ensuring that students make their loan repayments on time? The Canada Student Loans Programme (CLSP) provides financial assistance in the form of loans and grants to post-secondary students who demonstrate financial need. It is delivered by Employment and Social Development Canada (ESDC).

A portion of the student loan borrower population in Canada experiences some difficulty managing the repayment of their student loans. The CLSP wanted to explore ways in which they could improve the standard practice of contacting various groups of borrowers as they approach their loan repayment phase to explain obligations and options with behavioural **nudges** that could make borrowers more likely to make the first repayment of their loan on time.

### Intervention

The CLSP, in conjunction with the third-party private sector service provider that manages student loan accounts, designed four pilot trials which reached student loan borrowers across Canada. For each pilot, there was a control group, contacted using the standard practice method, and a treatment group, who received communications altered with a specific behavioural nudge. The nudges tested were as follows:

- Providing timely information to increase the ease with which individuals could take the desired action
- Having the individuals make a public promise to take action, which made the action social
- Issuing a “call to action” to motivate individuals to act.

Results were measured using rates of First Payment Delinquency (FPD), (the rate at which borrowers miss the first payment they are due to make as they begin the repayment

phase of their student loan) as an indicator of how effective the use of a particular nudge was in helping students manage their repayments.

The pilots conducted were as follows:

- Pilot 1: Borrowers who had attended private career colleges or public colleges and who had been assessed as potentially higher risk borrowers were contacted two weeks earlier than they would be in standard practice, to test the effectiveness of **providing timely information** which would **make it easier** for borrowers to take the desired action
- Pilot 2: College and university borrowers who had been assessed as potentially low risk borrowers, and who would not normally be contacted in the campaign, were contacted, to test the effectiveness of **providing timely information** which would **make it easier** for borrowers to take the desired action
- Pilot 3: Borrowers who had attended private career or public colleges and who had made a **promise** to customer service agents that they would apply for repayment assistance, but had not taken action, were contacted, to test the effectiveness of making the action **social**
- Pilot 4: Student loan borrowers who were due to begin repaying their loan in July 2014 were offered an automated monthly payment reminder sent by SMS/text, to test the effectiveness of issuing a “**call to action**” to borrowers.

Sample populations for each of the trials were randomly selected out of the targeted borrower type, and randomly assigned to either control or treatment group.

## Results and impact

Overall, it was found that contacting student borrowers and sending them reminders of the action they are required to take was successful in decreasing the rates of First Payment Delinquency (FPD).

Pilots 1, 2 and 4 issued positive results, demonstrating that issuing **timely information** and a “**call to action**” are effective in helping student borrowers manage their loan repayments. Pilot 3 however, delivered a higher FPD rate for those students who had made a **public promise** and who were contacted, suggesting that incorporating a **social** element into a desired action does not necessarily prompt the individual to act.

The nudges adopted in Pilots 1, 2 and 4 which yielded positive results, that is contacting high risk borrowers two weeks earlier, contacting borrowers who would not normally be contacted and sending out SMS reminders, have been incorporated into standard practice by the CSLP in helping student loan borrowers manage their loan repayment.

A further pilot is being conducted in 2015-16 relating to late stage delinquency, in which CLSP is testing the impact of different messaging on student loan borrowers who are significantly (four months or more) behind in their monthly payments. The pilot aims to test the effectiveness of **making information attractive**, **issuing a call to action** and the effect of different **language** and **tone**. In the first component of the pilot, borrowers are sent an arrears letter by registered mail. In the second component, borrowers are sent one of two variations of an email; one takes a helpful tone while the other emphasises consequences of non-payment. The results of this trial are currently pending.

## Institution

The Canada Student Loans Programme (CLSP) is delivered by Employment and Social Development Canada (ESDC). The CLSP uses behavioural insights in the design of research projects that help to determine how best to positively influence student loan borrowers' decision-making. Results of such research projects are used to change policy in such a way that behavioural insights principles are used to help student loan borrowers make informed and positive decisions about the repayment of their loans.

The CLSP's use of behavioural insights is part of ESDC's overall commitment to provide a modern and efficient way for Canadians to interact with the Government of Canada. As a consequence, behavioural insights have been used by the ESDC to provide accurate and timely service, to increase client awareness and knowledge of benefits and how they are entitled to get them, and to reduce costs by moving clients to a more efficient and cost-effective channel.

The ESDC has established an Innovation Lab that formally supports branches of the organisation in the development and use of behavioural insights. The Lab has also established an informal network of practitioners, training and guidance networks to provide further support.

## A popup to secure up-to-date business data

Country	Denmark
Sector	Business
Institution	Danish Business Authority, with The Danish Nudging Network & iNudgeyou
Start of intervention	-
End of intervention	Report published in 2014
Objective	Helping businesses keeping their registration data up to date, to secure the data foundation under the Danish Business Register
Method	Establishing a pop-up prompt to get business owners to confirm or correct their central registry data. The pop-up was shown 14 377 times, and resulted in more than 7 000 confirmations and over 3 500 updates
Application	Could be implemented on a yearly schedule, to keep the registry as up to date as possible

### Problem

Danish businesses have an obligation to register basic company data and keep it up to date in the Danish Business Register, controlled and maintained by the Danish Business Authority. This data covers address, VAT number, contact information, company type and sector. However, if businesses fail to keep their address and contact information up-to-date, how do you contact them to get them to rectify this problem? This has been a problem demanding resources from other tasks, and a solution would free up important personal to handle more central tasks. The data in the register is also publicly available and used by many businesses in their day to day dealings with each other, and it is therefore very important that the data is trustworthy and of high quality.

It is highly difficult to estimate how accurate the data in the register is, because of the nature of the register, so a **nudge intervention** to help businesses keep an eye on their own data was created to keep the register as correct as possible.

### Intervention

To increase the effectiveness of any intervention, an appropriate touch point must be identified. In this case the touch point chosen was a homepage by the Danish Business Authorities called [virk.dk](http://virk.dk), where businesses go to submit forms to get subsidies from the government and files for VAT returns amongst other things. Most businesses go to the website several times every year, and are ready to handle data requests when they work on the website.

With the help of iNudgeyou and the Danish Nudging Network, the problem was analysed and two diagnoses was found. The diagnoses where two separate behavioural barriers that was keeping business owners from keeping their company data up-to-date.

- **Lack of attention:** businesses needed to update their data after moving or changing contact person

- **Lack of understanding:** about the procedure of updating business data. Some business owners may have assumed that changing the address in one public system would change it in all the public registries.

These two diagnoses combined with a relatively complex and confusing procedure for changing the business information was thought to be the leading problems with keeping the data up-to-date.

The proposed solution was a pop-up that prompted the business owners to accept or change the current information about their company in the database, as soon as they logged in at *virk.dk*. This pop-up contained the business data, a button to confirm it as right, one to change it and one that lets the system know that the person is not responsible.

If the person presses *Confirm*, then the system knows that the data has been verified and will not ask again upon login with the same business ID. If the person pressed *Change*, then they are guided on to correct the data. If the person press “I’m not responsible for business data” then this person will no longer receive the prompt, but other people logging in with the business ID will.

This intervention took both diagnoses into account and resolved both the problem of attention, and understanding.

## Results and impact

The Pop-up prompt was shown 14 377 times during the 20-day testing period. 52.5% of the exposed users confirmed their current company data, 41.6% pressed “Correction” and only about 6% said that they were not responsible. Most of the corrections made during the intervention period were focussed on email addresses and phone numbers. In fact, twice as many corrections of these kinds of information was seen during the intervention, compared to the baseline.

However, 42% of the people that pressed “Correction” did not make corrections, but fell out of the flow before finishing the corrections of their company data. Two theories present themselves to explain this. Either the business owners pressed “correction” to remove the pop-up and move on with their purpose, or they found the process of correcting their company data counter-intuitive and gave up. The latter had previously been confirmed in a user-experience study and if the business owners just wanted to move on, they could have just as well pressed, “I’m not responsible for company data”. In this context, the second explanation seems most likely.

The results show that the prompt had the intended consequences. It shows that a prompt – with an easy solution to a problem that may not be the primary focus of a busy business owner – can result in immediate action, and bring better quality data to public registers. For prompts to have their fully intended effects, it is, however, important to ensure an effective flow of the action that is being prompted.

## Institution

The Danish Business Authority is responsible for regulation pertaining to businesses in Denmark, and for creating effective conditions for growth in the country.



The Authority has been using behavioural insights consistently in its work to help create a system of legislation and services that allows interaction between Danish businesses and the Authority in the easiest and most cost-effective way. The Authority's work has centred on designing behaviourally informed interventions and testing these, using behavioural insights to research problems, design solutions and implement new interventions.

The Danish Business Authority's efforts have been anchored in a central project team that has overseen the development of various initiatives and the development of tools that support the application of behavioural insights within the organisation. In addition to individual projects, the Authority has been running a training programme for relevant employees pertaining to behavioural insights.

The organisation has faced some internal concerns relating to whether or not the businesses that would be exposed to a "new" form of communication or process through behavioural testing would accept it, or whether this could cause unforeseen problems. Criticism has also revolved around whether or not certain initiatives or experiments would create additional work for the Authority's employees. However, in general, the overall introduction of initiatives based on behavioural insights have been met with a positive attitude.

To counteract any potential concerns, the Authority has sought to devise initiatives that balance the needs of the businesses with the needs of the Authority, working primarily on compliance and on making it easy and simple to comply with the current legislation. It has not performed experiments on highly politically sensitive areas, instead focusing on smaller initiatives that create measurable changes when combined. All initiatives carried out have been of a kind that fall within the boundaries of government to business communication.

The Authority has maintained a strong focus on effect and on data in its behavioural science-related work, so that it has been able to change things if unintended consequences or side-effects were detected during experimentation. The project group spends time preparing and explaining the process and the outcomes of each initiative and has listened to and incorporated any concerns. Through the focus on data and feedback, it has managed to ensure that no unexpected problems have occurred.

The Danish Business Authority has been working in collaboration with The Danish Nudging Network, and is also engaged in a Ph.D. partnership with Roskilde University to develop a policy model for behavioural insights until September 2017.

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iNudgeyou started in 2010 as a blog. Quickly gathering a crowd of interested readers it soon developed into an active research team practicing real world research aimed at creating nudge-interventions with pro-social impacts.

Common to their work is a strong social profile, scientific responsibility and the close integration of insights from applied behavioural science. In fact, a goal of all of their experiments is to produce knowledge according academic standards and get it published.

## A floor mark up for optimal utilisation of exit options

<b>Country</b>	Denmark
<b>Sector</b>	Business
<b>Institution</b>	Copenhagen Airports & iNudgeyou
<b>Start of intervention</b>	Intervention experiment in 2015
<b>End of intervention</b>	Report published in 2016
<b>Objective</b>	To get passengers to utilise the exit from the customs area most effectively
<b>Method</b>	Making two clearly marked lanes that leads to both exit options, in order to keep people from clustering to the right side
<b>Application</b>	The intervention showed that a very simple insight – that people tend to stay in their lanes – works, which may be effective in other contexts and is easy to implement and test

### Problem

Facing a global trend where cities grow rapidly and gain in importance, commuting also becomes more important. Whether people have to shuttle between different cities or within the city – whether they are commuting to work, shopping or leisure – which tends to be annoying. Even worse, using public transportation consumes an additional amount of time, since one often has to wait in queues to buy tickets, get serviced, check-in and so forth. Flow problems can sometimes be reduced easily by means that are simple but effective.

With 26.6 million passengers a year and a plan to be able to handle 40 million passengers a year within the next 25 years, Copenhagen (CPH) Airports has its eyes set on optimising flow throughout the airport. Improving flow is a key element in making the expansion possible, since congestion and queuing promotes an overhasty mood and prevents people from enjoying a coffee, shopping around in the airport's boutiques or reaching their flight on time. Hence, congestion and queuing affects customer satisfaction and is expensive for the airport. Improving flow generally means reducing or eliminating congestion occurring at bottlenecks.

One of the potential bottlenecks in CPH Airports is the exit located at the customs area. This is the one location where all arriving passengers need to pass through before they rush to their connecting trains, buses and cabs. Although, this particular bottleneck affects the airport only indirectly, since people were about to exit the area, it is still a great place to test new interventions to improve passenger flow.

### Intervention

iNudgeyou and CPH Airports collaborated to identify the problem: The exit consists of two doors. However, most passengers only used one of them. More specifically, approximately 90% of the passengers used the right door.

There were three likely explanations:

1. Entering customs with nothing to declare, a majority of the passengers are forced to the right to avoid the declaration desk. Being forced to the right at the entry of customs may lead more to prefer the right exit since it becomes the direct route to the exit
2. Some passengers need to take a cab. The cab drivers are waiting at a parking lot, which is placed to the right of the exit
3. Since most passengers use the right exit, some passengers may think that the left exit is closed and that the right exit is the only possible way out. This may lead them to exit through the right exit. The problem then escalated through social validation: If there is a majority choosing to exit through a certain door, people tend to imitate this behaviour and also choose that door. The bad news of this insight was that the problem was self-reinforcing.

To counter the problem, people needed to see that the left door is as good as the right door. They do not realise that they might avoid a bottleneck if they sway a bit from the straight path.

To solve the problem, **two lanes** were designed (simulating driving lanes) that led people to each of the doors. It was expected that people would prefer to stick to a lane once they found themselves on it simply because the duct tape signalled a wanted behaviour on behalf of CPH Airports. In addition, both lanes were labelled, prompting people to use the door at the end of their respective lanes. Doing so, it was signalled that both doors were equally suitable to leave the area. Finally, the left lane was made wider compared to the right lane, so that more people would enter the left lane by default.

To summarise, the architecture was changed by creating two lanes, which were similarly attractive and intuitively recognisable to passengers simply by deploying some duct tape as well as two labels on the floor.

On top of that, it was tested whether the colour of the lanes might make a difference. The team had received feedback for the neon green dust bins in Copenhagen, as well as the neon green footsteps implemented in front of them that helped to reduce littering in downtown Copenhagen. It was decided to check the old colour of dustbins in Copenhagen against their new colours relative to salience. Therefore the lanes were tested in two different colours: dark green and neon green. It was expected that the neon green duct tape was more salient and hence, more effective.

To test whether the intervention gave a more balanced passenger flow through both doors, a quasi-experimental pre-post-design was implemented. The number of people using each door was counted during three conditions [3] in order to find the distribution of people exiting the left door versus the right door.

1. Control period: No intervention was deployed
2. Dark green period: The intervention with the dark green lanes was deployed
3. Neon green period: The intervention with the neon green lanes was deployed.

This design enabled the researchers to compare the frequency of each door during each treatment period with the frequency during the control period. Moreover, it was possible to compare both treatment periods with each other. In other words, it was tested whether the share of people using the left door was higher or lower during one of the interventions compared to the control period.

## Results and impact

In total, the team counted 10 895 passengers leaving CPH Airports through the exit. Passengers were counted either as ‘exiting through left door’ or ‘exiting through right door’ which resulted in a dichotomous variable. 10.75% of the passengers used the left door (n=2 949) during the control period. During the dark green period, 16.55% used the left door (n=3 419) and during the neon green period 24.50% of passengers used the left door (n=4 527). This amounts to an increase of 53.95% from the control condition to the dark green condition. An even bigger increase of 127.91% was seen from the control condition to the neon green condition.

Since the goal was to achieve a balanced frequency – 50% using the left door – the increase from 10.75% in the control condition to 24.50% in the neon green condition is considered a good start, especially if one considers that it was achieved just by putting some duct tape on the floor.

Another and more demonstrative way to interpret the results is to assign real-world variables to these percentage points: If the increase of 13.75 percentage points is applied to the control period and it is calculated how big this increase is in terms of people, we get an increase of 405 (additional) passengers who would have chosen the left door. If one takes into account that this increase was accomplished by spending very few resources, the intervention looks even better.

More broadly, this case study illustrates nicely that one can improve existing approaches if one acknowledges human behaviour. Following this approach, one can observe people’s behaviour and develop solutions that are – most of the time – easy (in terms of resources) to implement.

## Institution

Copenhagen Airports has a vision of expanding their capacity to 40 million passengers a year without building new terminals. This means that CPH Airports has to be innovative, and utilise their current infrastructure in the most optimal way. Therefore CPH Airports have collaborated with iNudgeyou and The Danish Nudging Network in order to apply behavioural insights to the way they handle passenger flow and behaviour in the most comfortable way for everyone, while delivering on high demand from a host of different stakeholders.

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## Nudging cigarette buds into ashtrays

Country	Denmark
Sector	Public
Institution	Copenhagen municipality & iNudgeyou
Start of intervention	-
End of intervention	Report published in 2015
Objective	Reducing the amount of cigarette buds thrown in the streets during nightlife activities in central Copenhagen
Method	Experiment: Testing the visual salience and placement of ashtrays in 8 bars to assess their effects on thrown cigarette buds
Application	By knowing what kinds of ashtrays are most effective and how to place them near bars, this can significantly reduce the amount of trash needed to be picked up in the morning

### Problem

It is costly for street cleaners to pick up cigarette buds in the streets, especially on the cobbled roads that are normal in many streets in central Copenhagen. The more difficult it is to pick them up, the more costly the procedure becomes.

The nightlife is home to many breaches of conventional social norms including noisy behaviour and the reckless throwing of cigarette buds. This can cause a strain on the relationship with the neighbours as the combination of loud noises in the night and less than clean sidewalks are often rubbing people the wrong way. To take some of the burden off the street cleaners and neighbours, Copenhagen Municipality and iNudgeyou set out to get more people to put their cigarettes out in designated ashtrays and not on the sidewalk or in the streets.

### Intervention

Two types of ashtrays were tested, one that was brightly yellow and one that had a bright green sticker on it. It was hypothesised that both kinds of ashtrays would reduce the amount of buds thrown in the streets, but the experimenters also wanted to test how the looks of the ashtray influenced people. It was also hypothesised that the yellow ashtrays would be more effective because of their **higher salience** in the environment.

An experiment design based on a “within-subjects” design was created, so all bars in the experiment were part of the control group and the intervention groups at some point during the intervention. This made it possible to get solid results even with a small group of test subjects (bars).

All bars tested both kinds of ashtrays in a random order during weekend nights over a period of six weeks. The researchers counted all cigarette buds thrown on the ground within a fixed parameter and all buds in the ashtrays after every instance of the intervention and the ground was cleaned of buds before the intervention period started.

This means that it was both possible to test the effectiveness of the ashtrays relative to the amount of cigarettes smoked, and their salience.

## Results and impact

The ashtrays showed a significant effect on the amount of buds thrown on the ground. The average reduction between all the bars was 27.9 %. There was however no statistically significant effect of the colour of the trashcan.

## Institution

Copenhagen Municipality has an ambitious strategy of being one of the greenest, clean and liveable cities in the world. The municipality has seen the advantage of behavioural science to achieve these goals without resorting to fines or other punishment, from a very early stage. In combination with both The Danish Nudging Network and iNudgeyou, Copenhagen municipality has been a frontrunner in the development of nudge interventions in Denmark.

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## Encouraging on-time payment of levies

Country	Singapore
Sector	Employment and labour
Institution	Ministry of Manpower (MOM)
Start of intervention	February 2014
End of intervention	April 2014
Objective	Increasing on-time payments by employers of levies on foreign domestic workers
Method	Randomised Controlled Trial applied to a sample of 1 000 employers of foreign domestic workers
Application	Redesign of the reminder letter sent to employers of foreign domestic workers

### Problem

About 96% of Foreign Domestic Worker employers in Singapore pay their levies on time, via automated bank account deductions. Every month, the Ministry of Manpower sends reminder letters to about 8 000 Foreign Domestic Worker employers. Can the compliance rate be further increased? The Ministry of Manpower wanted to test whether a “nudge” could make more employers pay their levy promptly, avoid penalties for late payment, and reduce the resources spent to follow-up on the late payments.

### Intervention

A two-arm trial was designed to test “nudges” in reminder letters sent to employers who had defaulted on their previous month’s levy payment. A sample of 1000 Foreign Domestic Worker employers who had not paid their previous month’s levy were chosen on a purely random basis. A control group was utilised to whom the existing reminder letters were sent unchanged as a point of comparison. The tested “nudges” included:

- **Salience:** the use of boxes in a new letter template to draw attention to key action steps and indicating “Your foreign worker levy is overdue” in the letter header
- **Social norms:** “96% of Foreign Domestic Worker employers pay their levies on time”
- **Priming:** printing reminder letter on pink paper
- **Personalisation:** including the Foreign Domestic Worker’s details in the letter.

### Results and impact

The trial found that the payment rate for levy defaulters was higher for the treatment group:

- 76% of employers who were sent letters which included the Behavioural Insights interventions made a full payment and 85% made a partial payment, compared to 71% and 82% respectively for the control group.
- The use of salient messaging and social norms appeared effective in encouraging levy payments from recalcitrant Foreign Domestic Worker employers.

The Ministry of Manpower estimated that the application of “nudges” to reminder letters would translate into an annual increase of 3 800 employers making prompt levy payments of about SGD 1.5 million.

Interestingly, however, not all “nudges” worked and for which purpose they are use matters. Following this trial, a separate department in the Ministry of Manpower sent out pink reminder letters to encourage a particularly recalcitrant group to respond to a mandatory household survey. Although the response rate increased for this group, it also attracted a number of complaints from respondents who felt that the use of pink reminder letters was unnecessarily alarming. The use of pink paper was effective in nudging the recipients into action, but it also implied some drawbacks.

A reminder letter with salience and social norm nudges has been rolled out by the Ministry of Manpower for all 8 000 overdue Foreign Domestic Worker reminder letters. This has led to a 3% increase in the compliance rate, which was sustained over a 6 month period.

## Institution

The Ministry of Manpower (MOM) is a ministry of the Government of Singapore which is responsible for the formulation and implementation of labour policies related to the workforce in Singapore. It oversees matters related to immigration, issuing of Employment Passes to foreign workers, student passes, passport, visa and granting of residency/citizenship amongst others.

The Ministry of Manpower has been using behavioural insights as tool of evidence-based policy design, which helps it to design and implement policies and services that better meet user needs based on a deeper understanding of customers’ behaviours and decision making environment. The practice of testing to discover what works in behavioural insights also helps the Ministry ensure efficient use of its resources.

The Ministry possesses a central unit called Behavioural Insights and Design Unit, through which behavioural insights are applied across the institution. The unit consists of experts from diverse disciplines including design, accounting, economics, business, sociology and psychology and was established with guidance from the UK Behavioural Insights Team. The Ministry also partners with private consultancies and academic institutions for more efficient use of resources and in order to tap into different expertise in behavioural insights.



## Increasing the rate of completions for Statistical Survey on Industry

<b>Country</b>	Spain
<b>Sector</b>	Other
<b>Institution</b>	Ministry for Industry, Energy and Tourism (MINETUR)
<b>Start of intervention</b>	2013
<b>End of intervention</b>	Ongoing
<b>Objective</b>	To increase the response rate for the Statistical Survey on Industry, particularly online
<b>Method</b>	Impose a system of “soft incentives” and nudging, including changing the monthly email communications
<b>Application</b>	The intervention was successful at increasing the response rate and decreasing administrative burden

### Problem

The Statistical Survey on Industry is a monthly qualitative survey aiming to obtain an aggregated industrial confidence indicator. It is included in the Spanish National Statistical Plans 2013-16 and 2017-2020, and is in line with the Joint Harmonised EU Programme of Business and Consumer Surveys which produces a monthly Economic Sentiment Indicator. The survey is conducted by the sub-Directorate General for Studies, Analysis and Action Plans of the former Ministry for Industry, Energy and Tourism (MINETUR), which included responsibilities for industry and SMEs.

This national survey collects data from industrial businesses in Spain regarding levels and trends of the three main variables included in the aggregated indicator – orders, stock of finished products and production expectations- and two additional variables – employment and prices. The survey currently contains a sample of 2 251 businesses, obtained through stratified sampling using two variables: the industrial sector of activity (according to the National Classification of Economic Activities and including manufacturing and energy) and the average size of the business by number of employees. The sample is updated every four years.

The information was historically gathered by postal mail, telephone, fax, e-mail and, more recently, online.

The challenge for MINETUR was to increase the rate of businesses that complete the survey, especially online. This increase in the number of online surveys was desirable for two reasons. First, increasing the relative size of the survey improves its quality in terms of statistical significance and unbiased. Second, online completion is easier for both the businesses completing the survey and the public service, which helps reduce administrative burdens on both sides.

As a result, the Ministry sought to apply behavioural insights to improve the completion rate of the survey, particularly online. Specifically, the Ministry sought to examine the relevance of **soft versus hard incentives**, such as reinforcement versus punishment, and whether **nudging** techniques could be applied.

## Intervention

To reach this goal, MINETUR decided to improve the design and implementation of the survey. This was part of a series of measures to improve rate of responses from businesses taking part in the study, and the reduction of administrative burdens connected to it.

As part of the Spanish National Statistical Plan, and Law on the Public Statistical Function, sanctions are available and can be imposed on entities who fail to comply with their obligations in regards to the completion of these surveys. However, the Ministry viewed these as “high powered negative incentives” and sought the creation of an alternative system of “soft positive incentives”. These incentives are based on rewarding businesses who answer the survey online by providing them with a tailored report that benchmarks their personal answers with the global results of the survey for their economic sector and for the overall industry.

Furthermore, since 2013, to save resources and foster the use online channels, MINETUR ceased sending out the monthly questionnaire via traditional post for businesses with a valid email address and who fill the questionnaire online on a regular basis. By removing this option for returning the survey, coupled with the incentives to return the survey online, the Ministry tried to nudge businesses to complete the survey online. This change in policy was communicated to businesses as part of a monthly e-mail sent to inform them of the deadline to answers the questionnaire.

The methodology to evaluate this initiative was based on the difference between the rate of answers online before and after the intervention.

## Results and impact

The rate of online response for the survey increased from 30% before intervention to nearly 50% after intervention. Even though there could be other causes contributing to this increase, such as general digitalization trends, a reasonable share of it can be attributed to the intervention. The fact that providing positive personalised “feedback” to businesses increased the rate of response showed that the system of “soft positive incentives” provided an incentive for businesses to fill in the questionnaire as they benefitted from the information they received, thus reducing the costs associated with returning the survey.

Furthermore, relative to the costs of imposing sanctions on businesses for non-compliance or processing paper copies of the survey, this intervention had a low implementation cost for the public administration. This measure only required the public administration to produce personalised reports. Qualitatively, the Ministry also tracked the positive impact of the intervention based on the substantial number of expressions of gratitude from businesses for the information they received in the tailored reports and their requests for information when they stopped to receive the information.

## Institution

The former Ministry of Industry, Energy and Tourism (MINETUR) was responsible for the design and implementation of government policy on industry and SMEs, energy, tourism, telecommunications and information society. The sub-Directorate General for Studies, Analysis and Action Plans was its policy research and analysis division.

## Facilitating business starts ups

<b>Country</b>	Spain
<b>Sector</b>	Other
<b>Institution</b>	Ministry for Industry, Energy and Tourism (MINETUR)
<b>Objective</b>	Foster digital handling of administrative procedures between business information offices and the Ministry of Energy, Tourism and the Digital Agenda (MINETUR)
<b>Method</b>	Applying soft incentives and benchmarking to improve the number of administrative procedures initiated digitally by each office
<b>Application</b>	Improve the efficiency of administrative procedures

### Problem

The sub-Directorate General for the Support of SMEs, which is part of Ministry for Industry, Energy and Tourism (MINETUR), created Entrepreneur Information Points (PAE) to aid entrepreneurs and SMEs as they begin their business activity. Specifically, PAEs seek to:

- Provide entrepreneurs with information and advice in the definition of their business initiatives during their first years of their business activities, and
- Begin the handling of administrative procedures to start a business through the Digital Single Document.

Therefore, the PAEs help to facilitate the setup of new businesses, help businesses to become successful as they start business activity, and aid their development through different information services, handling of administrative procedures, advice, training, and support.

The PAE functions as both an online portal for entrepreneurs to obtain information about starting a business, as well as a collection of regional Business Information Offices, which can be publically or privately operated. These offices are intended to support the work of the sub-Directorate General in the given region by providing administrative support businesses. An important part of the work of these regional offices is to initiate and process administrative procedures, which are then communicated to MINETUR. To improve efficiency, the Ministry is keen to increase the administrative procedures that are completed digitally.

The key question was how to increase the motivation of these offices to improve their support of local business start-ups, particularly in regards to the number of administrative procedures initiated digitally in each office?

## Intervention

To achieve this goal, MINETUR sought to apply behavioural insights in for the form of **soft incentives** to increase the motivation for Businesses Information Offices to process administrative procedures digitally.

This was accomplished by applying the concepts of **group incentives** and **benchmarking** to increase competition between offices through the creation of an online performance indicator (CIRCE) system that connected the PAE goals with the aim of enhancing business activities. On this portal, the Ministry publishes weekly updates showing how many administrative processes were completed digitally per office during that week, allowing for a comparison between businesses. The portal can be found at: [www.circe.es/Circe.Publico.Web/Estadisticas/TramitacionPait.aspx](http://www.circe.es/Circe.Publico.Web/Estadisticas/TramitacionPait.aspx).

Therefore, the key indicator for success is the number of administrative procedures completed each week by each Business Information Office of the PAE network.

## Results and impact

As a result of this intervention, in 2016 MINETUR created more functionality on the CIRCE system to help promote the use of the online system. First, MINETUR made it possible to create communities of property (*comunidades de bienes*), civil companies (*sociedades civiles*), limited liability entrepreneurs (*emprendedor de responsabilidad limitada*) and limited liability labour companies. In 2017, MINETUR will add the ability to process co-operative companies through the CIRCE system.

Second, the CIRCE system can now process the termination of the activity of sole traders. By the end of 2017, it will also be possible to process the termination of the activity of limited liability companies.

Through both of these results, MINETUR have created easier pathways for Business Information Offices to utilise the CIRCE system and process administrative procedures digitally.

## Institution

The former Ministry of Industry, Energy and Tourism (MINETUR) was responsible for the design and implementation of government policy on industry and SMEs, energy, tourism, telecommunications and information society. MINETUR was also responsible for policy related to industry and SMEs through the sub-Directorate General for the Support of SMEs.

## Increasing charitable giving

Country	United Kingdom
Sector	Charitable giving
Institution	Behavioural Insights Team (BIT)
Objective	Increasing charitable giving
Method	Randomised Controlled Trial using a sample of 6 175 employees of an investment bank
Application	Altering the ways in which requests to donate to charity are presented to potential donors using methods extracted from behavioural science

### Problem

What is it that motivates people to give? Are people with money inherently unwilling to donate a portion of their money to charity, or is it that they simply need a little “nudge” in the right direction to do so? The UK Behavioural Insights Team (BIT) set out to discover whether charitable giving could be boosted simply by making a few small changes to the way the opportunity to donate is presented to potential givers.

### Intervention

In partnership with the Charities Aid Foundation and a large investment bank in the United Kingdom, BIT conducted a randomised controlled trial amongst 6 175 investment bankers to test the effective of a number of different methods of approaching donors based on principles taken from behavioural science. It tested the use of **reciprocity**, **personalisation** and **celebrity endorsement** in affecting the likelihood that the bankers would donate to a charity. The bankers were encouraged to donate a day’s salary using a variety of different methods based on these principles, which were measured against a control.

The methods employed were as follows:

1. Impersonal email from CEO of the bank (Control)
2. Flyers: Fundraisers handed out flyers to staff and encouraged them to donate
3. Celebrity: A local celebrity came into the office and encouraged staff to donate. (**Celebrity endorsement**)
4. Sweets: Fundraisers handed out sweets to staff and encouraged them to donate. (**Reciprocity**)
5. Personal email: The CEO sent personalised emails to staff asking them to donate. (**Personalisation**)
6. Sweets and personal email: This combined the 3rd and 4th trial arms. (**Celebrity endorsement + Personalisation**).

The bankers were clustered by business unit, and randomly assigned to receive one of the six treatments when asked to give. The results were assessed as the number of bankers receiving each type of nudge who decided to donate one day's salary to charity.

## Results and impact

The trial found that the personalised email and the packet of sweets, that is the combination of **personalisation and reciprocity**, was the most powerful intervention, boosting the proportion of participants donating from 5% to **17%**. The personalised email alone and the sweets alone resulted in 12 and 11% of bankers donating respectively, whilst celebrity endorsement had less impact, increasing donations by only 2% compared to the control group.

The intervention itself raised GBP 750 000 in one day for charity. The sweets intervention alone was found to contribute GBP 14.50 for every GBP 1.50 spent on the sweets. However, a rerun of the trial one year later, which tested the effect of repeatedly using the same interventions on people, found that although the sweets intervention was just as successful for entirely new recipients, the effect fell by roughly a half for participants who had received them before. This shows that the effect of a nudge may be less pronounced once individuals have come to expect the treatment they are receiving.

Overall, the study demonstrated that employing principles taken from behavioural science by inducing reciprocity, personalising communication, and making it easy to enact the target behaviour (i.e. donating) is a powerful way of increasing charitable giving.

## Institution

The United Kingdom's Behavioural Insights Team (BIT) is a social purpose company, jointly owned by the UK Cabinet Office, employees and the innovation charity Nesta. It was set up within the UK Government as the world's first government institution dedicated to the study and application of behavioural sciences. Its purpose is to apply behavioural insights to government policy in the United Kingdom, and to evaluate what works through the use of rigorous research methods.

The BIT is made up of experts from a mixture of disciplines, with expertise in behavioural science and economics a common qualification. It also retains an Academic Advisory Panel, made up of other Academic Experts who collaborate on trials and provide peer-reviews. In addition, BIT engages a number of PhD students who work with the team as Research Fellows.

The Behavioural Insights Team works across entire policy spectrum and also collaborates with other government departments and agencies to undertake projects with a specific policy agenda.

## Affordable college loan repayment

<b>Country</b>	United States of America (USA)
<b>Sector</b>	Education/college loan repayment
<b>Institution</b>	Department of Education (ED) / Social and Behavioural Sciences Team (SBST)
<b>Start of intervention</b>	2016
<b>End of intervention</b>	2016
<b>Objective</b>	Simplify and expand uptake of income-driven repayment (IRD) plans
<b>Method</b>	Email trial involving three million borrowers not already in an IRD plan, split into four groups
<b>Application</b>	Promote access to the Revised Pay As You Earn (REPAYE) and other IRD plans

### Problem

In the United States, over 41 million student loan borrowers carry a total of more than USD 1.26 trillion in outstanding Federal student loan debt. The Federal Government offers loan borrowers the choice of different repayment plans, including income-driven repayment plans (IDR) which link student loan payments to borrowers' monthly incomes, to help them manage their payments.

IDR plans can help borrowers manage this debt by limiting their monthly payments to a percentage of their discretionary income and providing for potential loan forgiveness. Despite recent increases in the number of IDR enrolments, fewer than 15% of borrowers are enrolled in IDR plans.

### Intervention

ED and SBST are expanding on a previous trial in 2015, which successfully increased IRD application rates. The most recent trial involved a large-scale email campaign, which notified over 3 million borrowers about the availability and benefits of REPAYE and other IRD plans.

This email campaign tested the effectiveness of sending emails in general and also of tailoring email content to borrowers' circumstances. The campaign sent emails to four groups of borrowers not already in an IDR plan:

1. Borrowers who indicated interest in IDR either from a previous application or during loan counselling
2. Borrowers in economic forbearance or deferment
3. Borrowers in delinquency, and
4. Borrowers with Federal Family Education Loans (FFEL) who needed to consolidate loans before entering an IDR plan.



The email tailored to those who had expressed interest in IDR **emphasised action** and **decreased recipient uncertainty** by stating “You are guaranteed to qualify.” The email was also personalised, noting that the recipient had “shown interest” in IDR. The email designed for those in forbearance and deferment used a **loss frame** and highlighted how borrowers’ monthly payments could remain at USD 0.50. The email to delinquent borrowers prompted them to either “Act Now” to sign up for IDR or “Do Nothing” and **potentially face negative impacts** to their credit rating. These targeted emails were tested against two generic emails sent to all groups.

### *Results and impact*

Overall, emails were an effective means for prompting IDR enrolment. 5.1% of those receiving the email applied for IDR, compared to 4.7% for the control over the three-month time frame of the trial. This means that a single email led approximately 6 000 more borrowers, with approximately USD 300 million in outstanding debt, to sign up for IDR.

The effectiveness of targeting messages to each group was less clear. The targeted email was most effective for borrowers in deferment; but different messages’ effects could not be distinguished from one another in the other borrower cohorts. SBST and ED plan to continue examining the benefits of tailoring messages based on the characteristics of recipients.

## **Institution**

The Social and Behavioural Sciences Team (SBST) is a cross-agency group of applied behavioural scientists, programme officials, and policymakers—with providing policy guidance and advice to Federal agencies. SBST is a unit located in the Executive Offices of the President under the National Science and Technology Council.

SBST was created in accordance with Executive Order 13707, “Using Behavioural Science Insights to Better Serve the American People”, issued by President Obama on 15 September 2015. The Order directs Federal Government agencies to integrate behavioural science insights into the design of their policies and programmes.

The Order calls for the Assistant to the President for Science and Technology, on behalf of SBST, to provide agencies with advice and policy guidance in pursuit of the Order. This guidance helps agencies identify promising opportunities to apply behavioural science insights to Federal policies and programmes. It is organised around four key aspects of Federal policy where research and practice show that behavioural factors may play an especially strong role in programme outcomes: determining access to programmes, presenting information to the public, structuring choices within programmes, and designing incentives.

The Department of Education was created in 1980 and seeks to promote student achievement and preparation for global competitiveness by fostering education excellence and ensuring equal access. The Department is dedicated to:

- Establishing policies on federal financial aid for education, and distributing as well as monitoring those funds
- Collecting data on America's schools and disseminating research
- Focusing national attention on key educational issues
- Prohibiting discrimination and ensuring equal access to education.



## *Glossary*

- **Behavioural economics:** a study that looks at the relationship between cognitive, emotional, social, and psychological factors and the economic decision making and activity of individuals and institutions. It incorporates methodologies used in psychology, including theories and findings referred to as inductive scientific approaches, derived from repeated observation of behaviour to explain the decisions made by individuals and firms. Over the years, behavioural economics has been used as a tool for policymakers to help them regulate better based on actual, and not assumed, behaviour.
- **Behavioural insights** refers to the application of behavioural economics or the “nudge theory”. There is a growing trend among countries around the world on the use of Behavioural Insights. The United States and United Kingdom have pioneered some of the work related to this and they have recently been followed by Australia, Canada, Columbia, Denmark, Germany, Israel, Netherlands, New Zealand, Norway, Singapore, South Africa, Turkey, and the European Union.
- **Behaviourally-informed approaches** are approaches or interventions that have been designed, developed, and implemented from behavioural insights. These approaches, normally in the form of policies or regulations, are aimed towards improving the overall welfare of citizens and consumers through empirically informed concepts of decision-making.
- **Boost:** are behaviourally-informed interventions that foster people’s capacity to make their own choices and thus exercise their own agency. Boosts use behavioral insights with the goal of informing, educating and empowering people. Boosts aim, for instance, to make decision-relevant information more easily available, transparent and easy to understand. Examples for boosts are the use of natural frequencies in patient information brochures and fact boxes. Boost can also foster decision making competences by equipping people with simple rules for, for instance, better financial decisions, better medical decisions or healthier dietary decisions. Due to their fostering of generalizable competences boosts have the potential for long-term habitual change..
- **Choice architecture:** is the environment within which decisions are made on choices. The term was coined by Richard Thaler and Cass Sunstein to refer to the careful design of choices to help improve consumer decision-making. Choice architecture revolves around three key elements: defaults, expecting error, and giving feedback. For example, Thaler in his book *Misbehaving* (2015) refer to the use of lightbulbs that glow a darker shade of red to indicate the high use of energy in households in Southern California.
- **Culture of independence** describes the right balance between appropriate and undue influence among regulators and their interactions with different actors such as end-users, ministries, and industries.

- **Inductive scientific method** is a method that starts with general or many observations of nature to obtain few factual statements on how nature works or operates. More specifically, inductive scientific method refers to the use of repeated observations in order to prove the validity of a statement or claim. Inductive scientific approaches have recently been applied to economics to provide an empirical basis as well as a behavioural solution to the everyday problems faced by citizens and consumers.
- **Knowledge diffusion** is the dispersion or flow of knowledge to potential adopters at the individual and institutional level.
- **Laboratory experiments** are experiments that are conducted in controlled environments to test theories and assumptions. A controlled environment permits the investigator to precisely measure the cause and effect relationship and, hence, make predictions of its future behaviour.
- **Mystery shopping** is also referred to as secret shopper or mystery consumer. Mystery shopping is a method used by institutions or establishments to measure a company or institution's compliance with regulations in relation to the quality of their products or services, which are evaluated based on the information collected by the mystery shopper whose identity is unknown to the organisation, firm, or enterprise being assessed.
- **Natural experiments** are experiments that have, in contrast to laboratory experiments, control conditions that are under a natural setting or external to the influence of investigators. This is often used in situations where there is a clearly defined subpopulation exposed to a condition such that the effects can be ascribed to the condition. These are often used in issues related to public health and education.
- **Non-regulatory measures** emerged from the assumption that some regulations may be useful but insufficient to achieve important objectives. Non-regulatory measures are often used in the context of environmental protection and are classified into indirect, participatory, and authoritative approaches to achieve an end-goal.
- **Nudge:** an approach that uses positive reinforcement to subtly influence or guide individuals or institutions in their decision-making process. The nudge theory assumes that individuals often make mental shortcuts that do not necessarily have beneficial outcomes. Nudging therefore presents choices in a way that it influences individuals to make better decisions without inhibiting their freedom of choice.
- **OECD's Observatory on Public Sector and Innovation (OPSI)** is an online platform that collects, analyses, and shares examples and experiences of public sector innovation in different countries and find solutions that work. It allows users to (1) access information on innovations (2) share their own experience and (3) collaborate with other users.
- **Policy cycle** is the system in which policies operate. This refers to the design, implementation, and monitoring of policies in a given institutional setting.
- **Randomised Control Trials** are experiments that randomly assign a group of individuals to a control group. This eliminates selection bias, which happens when the sample used in the experiment is not representative of the population being analysed. RCTs are considered as the gold-standard method in the medical field since they are commonly used for clinical trials to test the effects of specific medical interventions.
- **Regulatory capture** happens when the regulator or regulatory agency advances the interests of the industry or sector being regulated instead of the public. Regulatory

capture is considered as a government failure and agencies subjected to regulatory capture are referred to as “captured agencies”.

- **Regulatory design:** the systematic construction of reforming regulatory frameworks, such as those referring to institutions, contractual arrangements, incentives, costs, as well as taxes and duties.
- **Regulatory Impact Assessment (RIA)** is a systematic process of identification and quantification of benefits and costs likely to flow from regulatory or non-regulatory options for a policy under consideration. May be based on benefit-cost analysis, cost effectiveness analysis, business impact analysis etc. Regulatory Impact Assessment is also referred to as Regulatory Impact Analysis, sometimes interchangeably (*Recommendation of the Council on Regulatory Policy and Governance*, OECD, 2012, p.25)
- **Regulatory policy** refers to the set of rules, procedures and institutions introduced by government for the express purpose of developing, administering and reviewing regulation.



## **ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT**

The OECD is a unique forum where governments work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies.

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OECD Publishing disseminates widely the results of the Organisation's statistics gathering and research on economic, social and environmental issues, as well as the conventions, guidelines and standards agreed by its members.

# Behavioural Insights and Public Policy

## LESSONS FROM AROUND THE WORLD

“Behavioural insights”, or insights derived from the behavioural and social sciences, including decision making, psychology, cognitive science, neuroscience, organisational and group behaviour, are being applied by governments with the aim of making public policies work better. As their use has become more widespread, however, questions are being raised about their effectiveness as well as their philosophical underpinnings. This report discusses the use and reach of behavioural insights, drawing on a comprehensive collection of over 100 applications across the world and policy sectors, including consumer protection, education, energy, environment, finance, health and safety, labour market policies, public service delivery, taxes and telecommunications. It suggests ways to ensure that this experimental approach can be successfully and sustainably used as a public policy tool.

Consult this publication on line at <http://dx.doi.org/10.1787/9789264270480-en>.

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