

Applying behavioural insights to reduce fraud, error and debt

Public sector fraud, error and debt cost the UK government billions of pounds each year, costs which are borne by law-abiding taxpayers and firms. Insights from behavioural science can form an integral part of the government strategy to reduce this cost and the tax gap.

This document is intended to help those who administer systems to tackle fraud, error and debt to identify practical interventions, while making it easier for citizens and firms to comply.



CabinetOffice

Behavioural Insights Team

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Executive summary

Fraud, error and debt cost the UK economy billions of pounds each year – £21 billion is lost to fraud in the public sector, a further £9.6 billion is lost to errors, while £7–8 billion is lost in uncollected debt.¹ These significant sums of money are ultimately borne by UK taxpayers, so any measures that reduce fraud, error and debt in a cost-effective way are to be welcomed.

Traditional attempts to combat fraud, error and debt have made a number of assumptions about human behaviour. They have tended to assume, for example, that individuals rationally weigh up the personal costs and benefits of committing fraud before acting. While this approach has many merits, new insights from behavioural science are increasingly revealing the limits of several of its key underlying assumptions. The vast majority of people in the UK do not commit fraud or avoid paying debts because they have a strong sense of moral obligation, justice and fairness, which is shared by those around them. In other words, there is a strong social norm against committing acts of fraud and avoiding paying debts.

By understanding better how people respond to different contexts and incentives, we can develop a more nuanced understanding of human behaviour that can ultimately help us to design more effective interventions to tackle fraud, error and debt. Many of these interventions are relatively simple and cheap, and can be introduced alongside some of the more traditional methods employed by public bodies.

This document does two things. Part 1 sets out seven of the most important insights that can be used by public bodies to reduce fraud, error and debt (listed in Box 1 on the next page). Part 2 describes eight trials which the Behavioural Insights Team has launched with a range of different government departments, agencies and local authorities to test these insights in practice (see Box 2 on the next page).

These trials are now up and running and preliminary results are very positive. For example, Trial 1 advanced £160 million of tax debts to the Exchequer over the six-week period of the trial, the two behavioural letters in Trial 2 brought in over £1 million from doctors in additional yield to HM Revenue and Customs, while Trial 6 saved Manchester City Council up to £240,000 in council tax discounts.

Each of these trials underlines the benefit of the ‘test, learn, adapt’ approach adopted by the Behavioural Insights Team, which recognises that the effectiveness of different interventions and insights depends heavily on the context and setting. So we recommend that anyone applying these insights: tests them in a new context, *learns* which aspect is working (or not), and then *adapts* their approach to yield even better results next time.

Overall, these trials showed effect sizes of up to 30 percentage points, underlining the key role that behavioural insights can play in tackling fraud, error and debt. They demonstrate that even relatively minor changes to processes, forms and language can have a significant, positive impact on behaviour, and can often save the public time and money too. We are confident that results like these could be achieved across a range of areas by applying the insights set out in this document. Indeed, if trialled on a national scale, we expect that these interventions will save hundreds of millions of pounds.

Box 1: Lessons from behavioural science – seven steps to reduce fraud, error and debt

The seven insights below are all based on evidence from behavioural science. They show that, by going with the grain of how people behave, we can reduce the prevalence of fraud, error and debt.

Insight 1. Make it easy: Make it as straightforward as possible for people to pay tax or debts, for example by pre-populating a form with information already held.

Insight 2. Highlight key messages: Draw people's attention to important information or actions required of them, for example by highlighting them upfront in a letter.

Insight 3. Use personal language: Personalise language so that people understand why a message or process is relevant to them.

Insight 4. Prompt honesty at key moments: Ensure that people are prompted to be honest at key moments when filling in a form or answering questions.

Insight 5. Tell people what others are doing: Highlight the positive behaviour of others, for instance that '9 out of 10 people pay their tax on time'.

Insight 6. Reward desired behaviour: Actively incentivise or reward behaviour that saves time or money.

Insight 7. Highlight the risk and impact of dishonesty: Emphasise the impact of fraud or late payment on public services, as well as the risk of audit and the consequences for those caught.

Box 2: Test, learn, adapt – eight trials to reduce fraud, error and debt

Trial 1. Using social norms: investigates whether informing people that the vast majority of those in their area have already paid their tax can significantly boost payment rates.

Trial 2. Highlighting key messages and norms: examines whether we can increase tax compliance among doctors by simplifying the principal messages and actions required, as well as using social levers and norms.

Trial 3. Using salient images: investigates whether using images captured by the Driver and Vehicle Licensing Agency can help to reduce unnecessary repeat correspondence and encourage prompt payment of fines.

Trial 4. Better presentation of information: explores different ways of presenting information to discover which is most effective at encouraging the payment of debts.

Trial 5. Personalising text messages: tests the impact of sending more personalised text messages on people's propensity to pay court-ordered fines.

Trial 6. Prompting honesty: examines whether simplifying key messages, emphasising the consequences of fraud and getting people to sign forms upfront results in more honest declarations.

Trial 7. Varying the tone of letters: explores the effectiveness of different types of communication in encouraging plumbers to get their tax affairs up to date.

Trial 8. Using beliefs about tax: tests the effectiveness of different messages – related to the fact that most people think that paying tax is the right thing to do – on payment of tax debts by companies.

Introduction

Fraud, error and debt cost the UK economy billions of pounds each year – £21 billion is lost to fraud in the public sector, a further £9.6 billion is lost to errors, while £7–8 billion is lost on overdue debt. These significant sums of money – which could be spent on schools, hospitals and front-line staff – are ultimately borne by UK taxpayers, so any measures that can reduce fraud, error and debt in a cost-effective way are to be welcomed.

Traditional attempts to combat fraud, error and debt have made a number of assumptions about human behaviour. They have tended to assume that individuals rationally weigh up the personal costs and benefits of committing fraud by calculating the amount that they expect to gain, the probability of being caught and the magnitude of the punishment.

While this traditional approach has many merits, new insights from behavioural science show the limits of several of its key underlying assumptions.² The vast majority of people in the UK do not commit fraud or avoid paying debts because they have a strong sense of moral obligation, justice and fairness, which is shared by those around them. There is, in other words, a strong social norm against committing acts of fraud and avoiding paying debts.

Tax authorities are beginning to recognise this and are increasingly complementing traditional methods of interventions and sanctions with approaches based on influence and cooperation.³ This is supported by a growing literature that draws from behavioural economics and psychology, where a range of studies are increasingly showing how people respond to different situations, incentives

and cues. For example, the ultimatum game demonstrates that in some contexts people care much more about fairness than they do about maximising their own financial gain (see Box 3 below).

Box 3: The ultimatum game

The ultimatum game has been studied in a number of papers.⁴ In the experiment two people split a specified amount of money through a one-time only, anonymous interaction (for example £100). One of the two players, the proposer, makes an offer about how to divide the money, while the second player, the receiver, must choose whether to accept or reject this proposition. If the receiver rejects the offer, both players get nothing. If the receiver accepts the offer, they both receive the amounts proposed. Standard economic theory predicts that the proposer will offer a highly unequal split (because it is an anonymous, one-time game) and the receiver will always accept the offer, since whatever the proposed split they will be better off than if they reject it (when they get nothing). Interestingly, however, the majority of offers are for a roughly equal split and many unequal offers are rejected. This suggests that people care about more than maximising their own financial gain and are influenced by social norms and concepts of fairness.

Other studies show that people can be encouraged to do the right thing by making the process easy, highlighting key messages or emphasising what most people are already doing.

Research also indicates that it is important to look at the system as a whole from an end user's perspective in order to identify key points where people may be tempted to be dishonest. It is then possible to tailor interventions to that specific context in order to encourage honesty and compliance.

This document shows how we might learn from this growing body of evidence by applying some of the lessons from behavioural science to help to reduce fraud, error and debt in the UK. Many of these interventions are relatively simple and cheap, and can be introduced alongside some of the more traditional methods employed by public bodies. Indeed, as this document shows, some of the strongest effects are to be found by making it as simple and clear as possible for citizens to respond and comply with sometimes complex processes.

This document is split into two parts.

The first half sets out seven of the most important lessons from behavioural science that relate to fraud, error and debt. Many of these insights are intuitive but are rarely systematically adhered to, such as the importance of highlighting relevant information upfront in letters. These insights are particularly applicable for public bodies that routinely use forms, letters, phone calls or text messages to contact customers.

The second half shows how the Behavioural Insights Team, working alongside a wide range of public bodies in the UK, is already applying these lessons in practice through the launch of eight trials. This section acknowledges that, while the evidence base is robust, it is important to understand what the effectiveness of the interventions is in different contexts. Many of these trials are already running and are showing very promising early results. Others may not be as effective as we had hoped. This is why we are introducing a 'test, learn, adapt' approach to our work – which involves *testing* an insight in a new context, *learning* which aspect of it is working (or not), and then *adapting* our approach to yield even better results next time.

Part 1 – Lessons from behavioural science: seven insights to reduce fraud, error and debt

Part 1 draws from the increasing body of behavioural research which examines how individuals respond to different situations. We have distilled this rich literature into seven key insights which the evidence suggests can help to reduce fraud, error and debt.

Many of these insights are relatively intuitive. We instinctively know, for example, that if you make it easier for someone to fill in an important form or respond to a request, they are more likely to do it.

However, what is less obvious is how we can use these insights to practical ends. It is not obvious, for example, that getting someone to sign a form or write out an honesty declaration before they enter key information could be an effective way of encouraging honest behaviour.

We should also recognise that, although some of the lessons may seem intuitive, public (and private) sector bodies rarely think about their systematic application. We routinely complicate processes unnecessarily, use unclear terms and phrases, and bury important information in the middle of long letters.

These seven insights, described in more detail in the sections that follow, are:

Insight 1. Make it easy: Make it as straightforward as possible for people to pay tax or debts, for example by pre-populating a form with information already held.

Insight 2. Highlight key messages: Draw people's attention to important information or actions required of them, for example by highlighting them upfront in a letter.

Insight 3. Use personal language: Personalise language so that people understand why a message or process is relevant to them.

Insight 4. Prompt honesty at key moments: Ensure that people are prompted to be honest at key moments when filling in a form or answering questions.

Insight 5. Tell people what others are doing: Highlight the positive behaviour of others, for instance that '9 out of 10 people pay their tax on time'.

Insight 6. Reward desired behaviour: Actively incentivise or reward behaviour that saves time or money.

Insight 7. Highlight the risk and impact of dishonesty: Emphasise the impact of fraud or late payment on public services, as well as the risk of audit and the consequences for those caught.

It is important to remember that the effectiveness of the application of these insights will heavily depend on the context in which they are applied. Part 2 looks at ways in which we can test these approaches in practice, so that we can continually learn from what works in different situations.

Insight 1: Make it easy

One of the central findings from behavioural science is that if you want somebody to do something you should start by making it easy for them to do it. If you want to get people to recycle their household waste, provide them with recycling bins and arrange regular collections. If you want people to pay their tax or fines on time, make it easy for them to do so.

There is a growing amount of evidence that demonstrates how individuals can be encouraged to change their behaviour by making – often small – interventions. For example, simply including the explicit steps that people need to take in order to perform a behaviour makes that behaviour more likely: these small ‘channel factors’ have a significant effect on whether people act or not. One famous study showed that a major factor affecting students’ take-up of a tetanus injection (quite apart from the reasons they were given for doing so) was whether they were given a map with the route to the clinic highlighted.⁵

Studies have shown that pre-populating forms with known information about an individual has helped to reduce the error rates in tax submissions in a variety of countries. This reinforces wider evidence, for example that providing assistance and streamlining processes have helped to increase enrolment rates to colleges in the United States (see Box 4).

As services increasingly shift to online channels, it will become easier for public bodies to help people to comply with often complex processes by pre-populating forms with known information.

Box 4: Making it easier to complete forms

A 2009 benchmarking study of tax administrations in 13 countries found that “most high performers tend to pre-populate all the fields for individuals’ tax forms... thereby helping tax payers improve the accuracy of their submissions by ensuring that the forms are correct from the beginning”.⁶

A US study compared the effect of providing assistance alongside a more streamlined process to complete the Free Application for Federal Student Aid (including pre-populating the form with information already held and help with completing the rest of the form) against simply providing information about the application process.⁷ The additional assistance and streamlined process substantially increased submissions and ultimately the likelihood of college attendance, persistence and aid receipt. College enrolment rates for high school seniors rose by eight percentage points (from 34% to 42%) in the year following the experiment. In contrast, the group that was only given information showed no significant difference from the control group (who received no information or support).

HM Revenue and Customs (HMRC) is currently consulting on the idea of pre-filling tax returns for self assessment, as is the case in many other countries such as Denmark.⁸ There, the Danish tax authority pre-fills information it already holds on an individual's tax return, including third party information, before sending the return to the individual to be completed. This aims to reduce both error and the amount of time it takes taxpayers to complete their self assessment returns.

Other channels also present new opportunities for public bodies to make it simpler for people to respond and comply. Mobile phone technology is now being used to enable direct payment of fines and parking fees, as well as to remind people of upcoming doctors' appointments or court appearances (see also Trial 5). Text messages can also make it easier for people to respond – with a simple 'yes', rather than a separate phone call.

Smart phones have the potential to open up new ways of simplifying processes. Smart phone applications have been developed in the United States and Australia that enable taxpayers to keep up to date with their tax affairs (see Box 5 below). Similarly, HMRC is building an online personal tax calculator, which will be available as a mobile phone app by April 2012. This will enable UK taxpayers to calculate both the annual tax and national insurance contributions they can expect to pay.

Box 5: Smart phone apps to keep up with your tax affairs

The Inland Revenue Service in the United States has recently created a free smart phone app that allows taxpayers to check the status of their tax refund and obtain tax tips.⁹ Similarly, the Australian Tax Office has developed an easy-to-use tax calculator app that helps people to better understand how much personal tax they will pay on their earnings, as well as a 'Tax Receipt Log' app.¹⁰ This app makes it easier to keep up to date on expenses and tax receipts by using the phone camera to take a photo of a receipt, which is then processed and stored. When it comes to the end of the financial year, the information can be simply emailed through, reducing the need to hunt for bits of paper, search through credit card statements and manually calculate figures.

The ultimate way of making it simple and easy for people to change their behaviour is to make processes automatic. The classic example from the behavioural economics literature is automatic enrolment into pension schemes (which an individual can then 'opt out' from). These schemes see dramatic increases in the numbers of people saving for their pensions.

Insight 2: Highlight key messages

It is important to emphasise key messages and make clear what you want people to do. Drawing people's attention to the most relevant information – and in particular any action required – may seem obvious. But we must also recognise that the forms, letters and processes used by public bodies are often not as good as they could be at being clear about what is expected of an individual.

This is partly a reflection of the fact that, in official documents, there is sometimes a tendency to include information that covers the full range of eventualities. The result is often that important messages or instructions are buried in the middle of communications or in documents that sit within a large pack of papers.

Even where several pieces of information are required, there are a number of things that can be done to reduce errors and increase people's propensity to respond. One important insight is that people commonly focus on information given at the start of a letter or email. This is demonstrated most vividly by eye-tracking studies, which show that individuals will very often disregard information in the body of a letter – concentrating largely on headline information or highlighted boxes (see Box 6 opposite). Several of the trials set out in Part 2 test the impact of this simple intervention by making it very clear in the opening sentences of letters what is required of the recipient.

Box 6: Eye-tracking research



As the graphic above highlights, eye-tracking research conducted for Royal Mail in 2010 (by EyeTracker) suggests that people generally focus on headings, boxes and images, while detailed text is often ignored. This research also indicated that the front pages of letters receive far more attention than back pages (nearly two and a half times as much), and that people are more likely to notice actions required if they are placed to the right of the page, above or in line with the headline, and if they are in a different colour.

There are numerous other lessons which are being used across the private and public sectors that seek to help to ensure that people engage with and understand the messages being conveyed. Daniel Kahneman, the psychologist who won the Nobel prize for economics, demonstrates that there are a number of ways of making messages more persuasive. These include:

- not using complex language where simple language will do;
- highlighting key information **in bold text**;
- using colour: **bright red** or **blue** is more likely to be believed than middling shades of **green**, **yellow** or **pale blue** (while using too many colours can confuse the audience).¹¹

All of these lessons help to induce what Kahneman calls 'cognitive ease' – they help to make it simpler for individuals to process and understand information. Many of these lessons are now being put into practice through a piece of work sponsored by the Behavioural Insights Team and being trialled in a number of NHS trusts. This involves redesigning prescription charts – simplifying the forms so that they are easier to use, and using colours and boxes to draw attention to key information requirements (see Box 7).

Evidence also suggests that the use of visual imagery in written communications can not only capture the reader's attention, particularly if the image is self-relevant, but also aid their comprehension and memory.¹²

However, images should only be used where appropriate, as they can distract the reader away from the text. Indeed, in recognising the importance of some of these insights from behavioural science, we must also accept their limitations. They will only help to encourage this sense of 'cognitive ease' if the underlying messages make sense.

Perhaps most obviously of all, such messages and images will only be effective if individuals have already begun to fill in a form or opened a letter. Some local authorities – such as Elmbridge District Council – are therefore trialling putting key messages on the outside of envelopes.

Insight 3: Use personal language

A great deal of the communications that public bodies send out to individuals, particularly those relating to tax and benefits, are mass-mailed and fairly generic in their form. There is a good reason for this: mass-mailed, generic communications can be significantly cheaper than a more tailored product.

However, new technologies are making it easier to personalise messages at lower cost, which may result in overall savings – given that individuals are more likely to act on a message which seems to be relevant and salient to them.

One of the simplest ways of making a message feel more personal is to address it specifically to an individual – something which is not routinely done. For example, generic text messages are being used by HM Courts and Tribunals Service (HMCTS) as a low-cost way of encouraging people to pay their fines. The Behavioural Insights Team is working with HMCTS to test the impact of using the recipient's name. It is hoped that this will help to reduce administrative expenditure in chasing fines and might ultimately result in more fines being collected (see Trial 5 for more information).

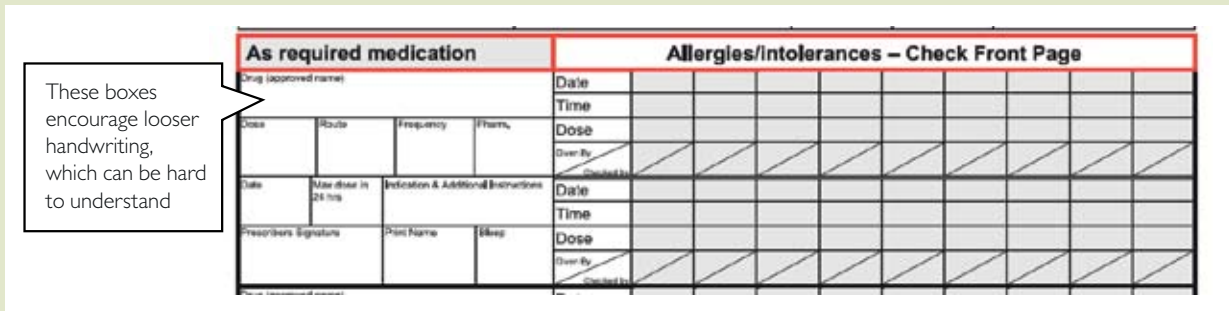
In addition to personalising messages to individuals, we believe that there is merit in looking at whether people are more likely to respond to messages from public bodies when they are written from a named individual, rather than directly from an organisation. Highlighting contact information that the customer can use to call you or a member of your team may well be more likely to elicit a response than signposting them to a general helpline.

Language can be made more personal and salient in a number of other ways. A US study shows, for example, that people are more likely to respond to messages indicating extra effort and a personal touch, for example through handwriting an individual's name or using Post-it notes to summarise the request (see Box 8).

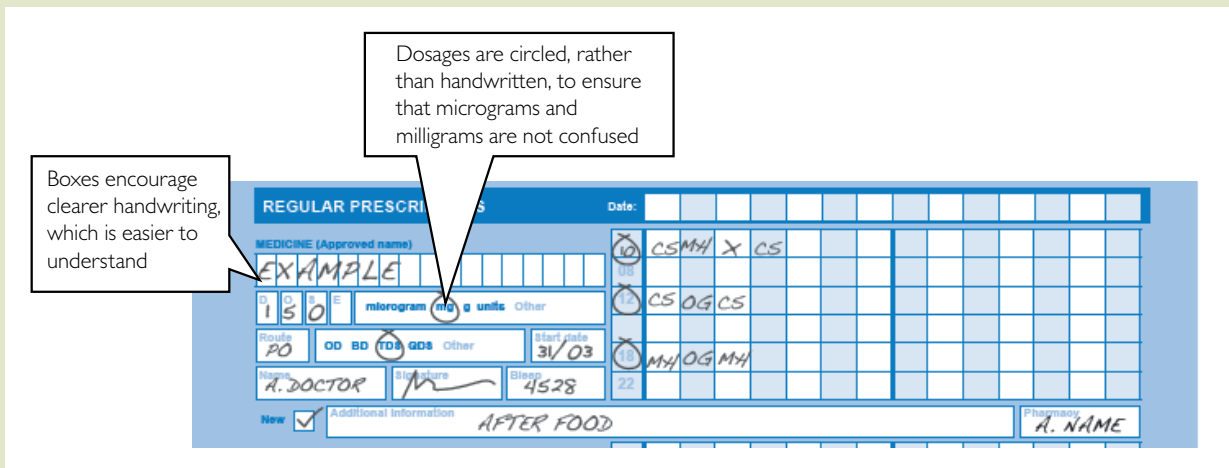
Box 7: Reducing errors by redesigning prescription charts

The majority of hospitals in the NHS still use paper prescription charts that contain details of all the medications patients are to take while in hospital. Analysis shows that many such charts are incompletely filled in (e.g. pre-existing allergic reactions are not recorded); are hard to read (e.g. confusion between micrograms and milligrams and indecipherable signatures); and are not updated (e.g. whether or not a course of antibiotics should continue). Approximately 7% of all medication orders have some form of error in their prescription or administration. Such errors can contribute to increased costs and the potential for significant patient harm. The Behavioural Insights Team is funding a trial of a new type of hospital prescription chart, which draws attention to key information requirements and helps to make it easier for prescribers to fill in information accurately. This should help to reduce errors in the process.

Below is an extract from a standard prescription chart – which is prone to errors, partly because the layout and boxes are difficult to understand and allow those prescribing to use handwriting rather than block capitals.



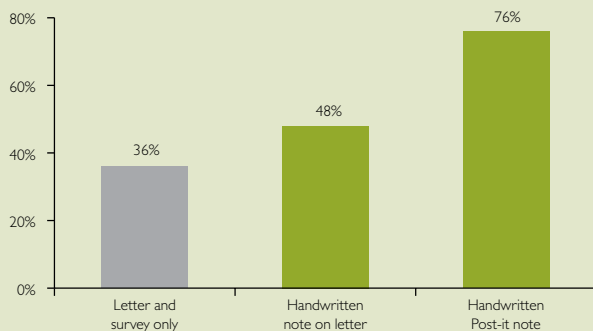
The new prescription charts – among other things – encourage prescribers to use block capitals through the use of boxes, and to circle the unit of dosage. Both of these measures help prescribers completing the form to make the information they enter much clearer.



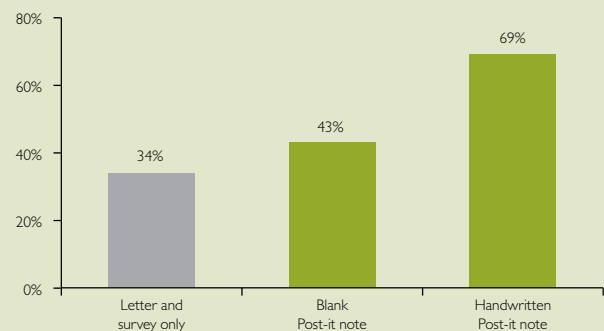
Box 8: The personal touch

An experiment from the US tested the impact of Post-it notes and handwriting on people's likelihood of completing a survey.¹³ The survey which was accompanied by a handwritten Post-it note requesting completion received a 76% completion rate, compared with 48% where the handwritten message was on the cover page (which contained instructions about how to complete the survey) and 36% for those who received the survey and cover page only. In order to test whether it was the Post-it note itself that had the biggest impact, the researchers ran a similar experiment, where a Post-it note with a handwritten note attracted a 69% response rate, compared with 43% with a blank Post-it note and 34% with no Post-it note. In addition, those who responded to the handwritten Post-it note returned the survey more promptly and with more detailed answers. When the experimenter added his initials and a 'thank you', response rates increased even further.¹⁴

Study 1: Response rate to survey when testing a handwritten message



Study 2: Response rate to survey when testing Post-it notes



Given the scale of many government communications, it may not be feasible to use Post-it notes or handwrite names on a routine basis, but there are likely to be areas where a similar approach could be used or tested, for example trialling the impact of writing the names of the recipient and the sender in handwritten fonts. It is also our expectation that using personal pronouns such as 'I' and 'we' may be more effective than more generic organisational references.

In addition to personalising messages, studies show that giving an individual a unique opportunity that they know is not available to all or only available for a limited period can motivate them to act. One study found that 50% more people showed up to an appointment when they were asked a series of demographic questions and then told "great, you're exactly the kind of person we are looking for".¹⁵ There may be opportunities to apply this to work on fraud, error and debt, for example by giving particular groups a time-limited opportunity to receive a specialised service or disclose information about tax liabilities.

Box 9: Time-limited disclosure opportunities for specific groups

The Risk and Intelligence Service (RIS) Campaigns Team in HMRC currently draws on this 'unique opportunity' effect. RIS campaigns target large, defined populations (over 250,000 people) where there is a significant risk of non-compliance. They have so far run a number of campaigns with disclosure opportunities targeted at medics, plumbers and private tutors. RIS campaigns collate specific information and intelligence (from internal and third party data) about the individuals within the target population, which they use to encourage people to voluntarily put their tax affairs in order on the best possible terms. Non-compliant individuals who do not come forward are followed up and are likely to face additional penalties and even prosecution. To date, the team has brought in over £500 million in disclosures and a further £100 million from follow-up work. See Trials 2 and 7 for examples of RIS campaign trials with doctors and plumbers who do not take advantage of the disclosure opportunity.

Insight 4: Prompt honesty at key moments

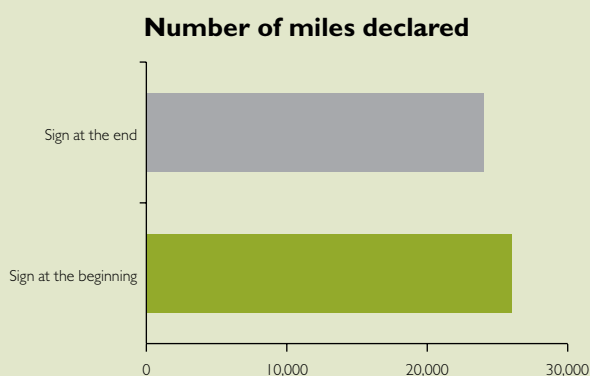
Most people are honest most of the time. And most people, rightly, think of themselves as honest individuals. This is important because individuals have an inherent desire to be consistent with the images they have of their own moral values, which means that it is possible to encourage greater honesty by reminding individuals of their own desire to be honest through prompts.

There are a range of different studies that show how this can be done, and many of the prompts are cheap and easy to implement. Some of the most interesting and potentially impactful results have been found by a group of US researchers who examined the impact of changing the location of signatures on forms. They found that moving a signature box from the end of a form to the beginning can help to promote more honest declarations (see Box 10).

Requiring someone to sign at the beginning of a form is in some respects the equivalent of getting someone to declare in court *before* they have given evidence that they will 'tell the whole truth'. The majority of government forms include a signature at the bottom of the form, so moving this signature to the top may be a cost-effective way of reducing fraudulent claims.

Box 10: Signing at the beginning of forms

A large-scale field experiment has demonstrated that moving the signature from the end to the beginning of application forms can significantly increase honest reporting.¹⁶ The study used a randomised controlled trial on self-reporting of the number of miles driven for a car insurance application (the higher the number of miles reported, the higher the premium). Completed forms were received for 13,488 policies covering a total of 20,741 cars. The results showed that customers reported driving around 10% more miles (i.e. they were more honest) when they signed their name before filling in the form, rather than after. On average, the difference amounted to 2,428 miles per car. The authors estimate the per-mile cost of car insurance in the United States to be between four and ten cents, suggesting a minimum of \$97 average difference in annual insurance premiums per car between customers depending on whether they signed at the top or bottom of the form.



To date, most of the research in this area has focused on individuals reporting how many miles they have driven or how much they have spent on expenses. What we do not yet know is whether

a change in the location of signatures will affect more binary applications such as applying for a benefit (rather than declaring particular amounts). The Behavioural Insights Team is therefore running a trial with Manchester City Council (see Trial 6) to see whether this might be equally effective in relation to applications for council tax discounts for people living on their own.

It is also not clear from the research how long the increase in honesty lasts. For example, if a form is over 50 pages long and you sign at the beginning, we do not know whether the effect lasts for the time required to complete the form. This is an area for further investigation, but our hypothesis is that the greatest impact is likely to be felt by placing the signature box immediately prior to the information which most requires an honest declaration, or by bringing these questions to the start of a form (rather than – as often happens – embedding them half way through a lengthy form). It would also be interesting to test the efficacy of using cut-out boxes so that the signature is visible on every page (similarly to the prescription chart redesign outlined in Box 7). The move to digital forms and channels and the potential use of electronic signatures and ‘pop-ups’ present another topic for future research in this area.

These US researchers have also looked at other ways of prompting honesty.¹⁷ In two laboratory experiments they found that they eliminated cheating by using ‘moral reminders’ such as asking participants to sign an honesty or honour code or to recall as many of the Ten Commandments as possible. Therefore, it may be possible to reduce fraudulent claims by creating short honesty statements or declarations that applicants have to sign or even manually write out, for instance ‘the details I complete below will be an honest account of the truth’. Indeed, our instinct is that writing out an honesty code may focus people’s attention on the ‘moral reminder’ to a greater extent than simply signing their name.

The academic literature also suggests that people are more likely to be dishonest if they can do so by omission rather than by commission, that is by not providing or updating information rather than actively providing false information.¹⁸ This is because actively providing false information makes the dishonesty more salient and makes it more difficult for individuals to maintain their moral self-image. Examples might include requiring people to file nil returns (for example, by declaring £0 in earnings over the previous year) or asking them to state that circumstances have not changed where this has implications for the benefits that they receive. Clearly, there is a balance to be struck here with simplifying processes (including pre-populating forms), so this technique would need to be targeted at areas at high risk of fraud and should be as user-friendly as possible – for instance, simply asking people to respond ‘yes’ or ‘no’ to quarterly text messages enquiring about changes in circumstances.

One of the quirkiest pieces of research into prompting people to be more honest involved alternately placing pictures of flowers and eyes over an honesty jar in a graduate student common room. The study showed that individuals were almost twice as likely to pay for their tea and coffee when there was an image of eyes above the honesty jar compared with when a more ‘neutral’ image such as a picture of flowers was used.¹⁹ The results have been replicated elsewhere and demonstrate the wide and often surprising ways in which individuals respond to different types of prompts.^{20, 21}

Insight 5: Tell people what others are doing

Social norms are the behavioural expectations, values and behaviours within a particular society or group. In other words, human beings are strongly influenced by what those around them are doing.²²

Social norms offer often implicit guides to our behaviour within society, and have a very strong influence on how we respond to different situations. Most people in the UK do not commit fraud because they have a very strong sense of moral obligation, justice and fairness, which is shared by those around them. There is, in other words, a strong social norm against committing acts of fraud and avoiding paying debts.

We can use this knowledge to reinforce individuals’ underlying motivations by using ‘descriptive norms’ which simply describe what most people are doing, so that people are made explicitly aware of other people’s good behaviour. This has been demonstrated to be effective in encouraging recycling, energy and water efficiency, and reducing littering.²³

Trials utilising social norms have also been shown to be effective in encouraging tax compliance.^{24, 25} By informing people of the true (low) rate of tax evasion in Minnesota, taxpayers’ mistaken perception that many other people didn’t pay their taxes was corrected, helping to increase rates of voluntary tax compliance.

Drawing on these insights, the Behavioural Insights Team and HMRC have been pioneering the use of descriptive norms to encourage people to pay their tax debts in the UK. These simply stated that 9 out of 10 people in an area had already paid their tax, and resulted in substantial increases in tax repayments compared with the control group (see Trial 1).

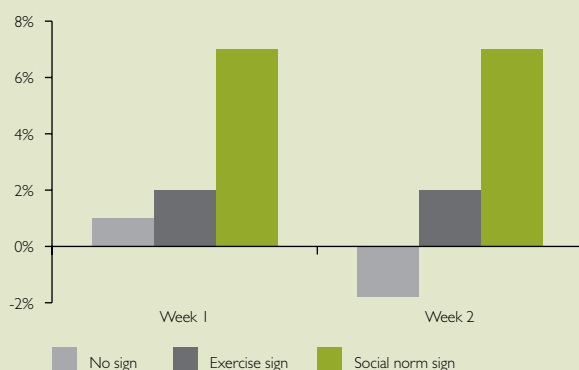
This work reinforces wider evidence that descriptive norms are more effective the more they can be targeted at a specific population or group, which in this case was achieved by referencing their local area as opposed to the national norm.

Box II: Using social norms to encourage people to use the stairs

Social norms have been used to influence behaviour in a wide range of settings. Some of these have been applied in very simple ways with often surprising results. In one study the authors counted the number of people who used the lift rather than the stairs to go up one or two floors. This study was carried out for three weeks, in three university campus locations. Signs posted near two of the lifts during the second week stated either that most people used the stairs or that taking the stairs was a good way to get some exercise. In the location with the norm information sign, the number of individuals who used the stairs increased by seven percentage points (from 85% to 92%) between the control and the first week. This higher rate of stairs use was also found the week after the sign had been removed (week 2). In contrast, no significant change in stairs use was seen either at the location with the sign encouraging exercise or at the location with no sign.²⁶

Percentage point change over baseline in number of people taking the stairs

(Sign removed after week 1)



It is important to recognise, however, that there are a number of limitations and pitfalls in using social norms which should be avoided. There will be circumstances where it will not be appropriate to highlight a descriptive social norm, in particular where large numbers are engaged in non-compliant or problematic behaviour. Similarly, campaigns sometimes inadvertently give the impression that problematic behaviour is widespread, for example by displaying notices in doctor's surgeries explaining how many people missed their appointments in the previous year.

Insight 6: Reward desired behaviour

In some circumstances, it may be possible to find cost-effective ways of motivating individuals to act by rewarding their actions.

One way in which this can be done is by positively reinforcing good behaviour, which may be as simple as saying 'thank you' in response to a desired behaviour. The research in this area is still in its infancy, so it is difficult to know at this stage how much the context of saying 'thank you' matters. However, we might expect a 'thank you' letter to be more effective as a response to a specific, positive and non-obligatory behaviour, such as filing or paying taxes prior to the deadline, than as a response to a standard payment method or timeframe.

A more explicit way of promoting positive behaviours is through the use of incentives. The UK and other tax authorities already employ a range of negative incentives in the form of penalties, but there is evidence to suggest that more positive rewards might be effective ways of motivating good behaviours.

One of the more innovative examples of rewarding positive behaviours is through the introduction of a prize draw or lottery. Research has shown that lotteries can be a cost-effective way of structuring incentives and rewarding people because a small number of big prizes can help to focus the minds of large groups of people.^{27, 28}

A prize draw might, for example, be an effective way of encouraging people to file or pay their taxes prior to specific deadlines, with the numbers of tickets individuals obtain being proportionate to how soon they file and pay.

Prize draws and lotteries have been used in other parts of the world to encourage tax compliance. For example, the Chinese have printed lottery numbers on the back of receipts to increase tax compliance by encouraging more customers to ask for receipts – bringing black economy activity into the mainstream.²⁹

Closer to home, a group of London boroughs used a prize draw to encourage people to pay their council tax by Direct Debit, due to the cost-effectiveness of this payment method.

Box 12: London boroughs' Direct Debit prize draw

Direct Debit (DD) is considered to be the most effective and efficient method of collecting council tax (with DD levels varying from 45% to over 80% between local authorities). In 2011, fifteen London boroughs came together with BACS and the London Revenues Group to create a prize draw to incentivise take-up of DD. By working together, the boroughs were able to fund a prize of £25,000 which, combined with the campaign marketing and time-limited opportunity to take part, attracted significant public attention. In order to reward existing DD customers, these people were automatically entered into the draw. The campaign was a success, delivering 34,500 new DD payers, with efficiency savings delivered close to £345,000 (at £10 per conversion). The boroughs invested £4,814 on average, which was paid back within three months from cost savings.



As with other areas of behavioural insights, it will be important to be wary of any potentially perverse effects of introducing rewards to encourage positive behaviours. There is a danger that overusing rewards may 'crowd out' an individual's underlying positive motivations. The general conclusion from this wider literature is therefore that such incentives need to be interesting and salient enough to catch attention, but not so large or frequent as to inadvertently change people's underlying motivation.

Insight 7: Highlight the risk and impact of dishonesty

The traditional way of thinking about how to tackle fraud is to make it more risky or costly for an individual to engage in the activity, for example by increasing punishments or efforts to catch individuals committing crimes.

In a world in which individuals are constantly recalculating the pros and cons of committing fraud, any increase in the relative cost to an individual of committing fraud will result in a commensurate decrease in the fraudulent activities.

One of the reasons that this is not uniformly the case, even in the absence of the other insights listed above, is that the risks and the consequences of dishonest activity are not always clear. Research suggests that people are more likely to be dishonest if there are low or ambiguous risks and consequences of getting caught, or if the impact of dishonesty – to the perpetrator and others – is not clear. The implications of this research, much of it relatively new, are important for many areas of fraud, error and debt. This section summarises some of these findings.

The first finding is that individuals tend to think beyond the impact of dishonesty. One study demonstrated that people are much less likely to lie to someone else for personal financial gain if

the impact on other participants is high.³⁰ Because individuals committing fraud against public bodies are unlikely to understand the impact that these actions might have on others, HMRC is investigating whether framing tax debts as a loss to particular public services might increase compliance. At a local level this might be done by highlighting the impact of unpaid council tax bills on street cleaning services, for example.

In many areas, the consequences and risks of fraudulent activities are not always felt to be credible. Warnings and punishments need to be seen to be credible to be acted upon, which can be done, for example, by highlighting recent successful prosecutions (see Trial 7).

The way in which punishments are framed may also be important in particular contexts. For example, people may be more influenced by the thought of items or property being taken away than the imposition of monetary fines – an approach which has been taken by DVLA, which has publicised the fact that it can crush untaxed cars.

Another important finding is that individuals are more likely to commit dishonest acts if they feel that they have a degree of anonymity. This can be countered, for example, by publishing the names of repeat or significant fraudsters or late payers on a website or in a trade journal. In April 2010, legislation was introduced that allows HMRC to publish the details of people or companies caught deliberately evading more than £25,000.

As noted above (see Insight 5), when considering whether to publish information it will be important to avoid signalling that the behaviour is very widespread. This can have the perverse effect of reinforcing a negative social norm. The ideal solution is likely to be publishing evaders' names in a way that is publicly accessible (for example, to credit agencies and actively interested parties) but not so prominently that it creates the inadvertent signal that evading is widespread.

The framing of risk can also have a significant impact on behaviour. Behavioural science has demonstrated that people overweight small but salient probabilities. If resources are limited it may therefore be more effective to make it clear that a relatively small, randomly chosen proportion of applications or forms are going to be very thoroughly checked, rather than trying to check all forms or even those which have been identified as high risk. Making it clear that everyone is eligible for audit and that selection will take place on a random basis can not only change the behaviour of the most dishonest (as risk-based audit aims to do) but can also increase the deterrent effect on the larger group of citizens.

The risk of getting caught can also be emphasised by highlighting the use of third party information, for example from credit reference agencies or

trade bodies.³¹ Currently many local authorities use credit checks to confirm income declarations, but they do not make this clear to respondents. It may be effective to highlight that this is standard practice so that people understand that the information they provide is likely to be cross-referenced against other sources, such as bank and mobile phone accounts.

Highlighting dishonesty in the ways listed above should and need not mean threatening individuals with punishment. Such an approach can be counterproductive. Although it may initially capture attention, adopting an intimidating tone can elicit resentment and uncooperative behaviour. Indeed, many of the other insights listed above demonstrate the need to go with the grain of individuals' underlying motivations as a means of encouraging people to respond positively.

Part 2 – Test, learn, adapt: eight trials to reduce fraud, error and debt

The insights set out in Part 1 are based on behavioural effects that have been robustly evaluated in academic research. This research indicates that even relatively minor changes to processes, forms and language can have a significant, positive impact on behaviour. Evidence also suggests that the effectiveness of interventions depends heavily on the context and setting, and that – in some instances – interventions in one domain might not be as effective when translated into other areas.

In order to explore the effectiveness of the insights set out in Part 1 in different contexts, the Behavioural Insights Team has adopted a ‘test, learn, adapt’ approach. Central to this is the development of randomised controlled trials (RCTs), which are considered to be the gold standard of research trials.

This involves dividing the study population into two or more groups and randomly assigning individuals to each of these groups. By giving the intervention (for example the modified letter, the changed process, the new text message) to one of these groups while continuing to treat the other group as business per usual, we can determine the difference in effectiveness of each of the interventions. The key ingredient to this approach is the randomisation of individuals to groups, which enables us to assume that any difference in outcomes is attributed to the intervention rather than other factors.

Once the trial has been conducted, results can be used to refine new interventions to improve their effectiveness, and/or decide whether or not to roll it out more widely. In this way, RCTs can enable us to *test* evidence-based behavioural interventions, *learn* whether they are effective and how to make them more so, and *adapt* the intervention and/or our policy to improve outcomes and value for money.

This document launches eight separate RCTs. Each trial tests the effectiveness of one or more interventions grounded in behavioural science, which research suggests may be effective in reducing fraud, error or debt. In some cases, we are testing the effectiveness of interventions based on a single behavioural effect; in other cases, the interventions are designed to maximise impact by harnessing multiple behavioural levers.

Each of the trials has been developed in partnership with another government department or public body and has benefited from the expertise of the Behavioural Insights Team’s academic panel, some of whom are also helping to evaluate the results as they come in.

The eight trials, described in more detail below, are:

Trial 1. Using social norms: investigates whether informing people that the vast majority of those in their area have already paid their tax can significantly boost payment rates.

Trial 2. Highlighting key messages and norms: examines whether we can increase tax compliance among doctors by simplifying the principal messages and actions required, as well as using social levers and norms.

Trial 3. Using salient images: investigates whether using images captured by DVLA can help to reduce unnecessary repeat correspondence and encourage prompt payment of fines.

Trial 4. Better presentation of information: explores different ways of presenting information to discover which is most effective at encouraging the payment of debts.

Trial 5. Personalising text messages: tests the impact of sending more personalised text messages on people's propensity to pay court-ordered fines.

Trial 6. Prompting honesty: examines whether simplifying key messages, emphasising the consequences of fraud and getting people to sign forms upfront results in more honest declarations.

Trial 7. Varying the tone of letters: explores the effectiveness of different types of communication in encouraging plumbers to get their tax affairs up to date.

Trial 8. Using beliefs about tax: tests the effectiveness of different messages – related to the fact that most people think that paying tax is the right thing to do – on payment of tax debts by companies.

Trial 1: Using social norms

HMRC already achieves a high debt clearance rate of more than 70% of new self assessment cases from letters alone. Achieving this level of clearance is important because letters are a relatively cheap form of contact and HMRC has to deal with a significant volume of debt. However, HMRC is always looking for ways to make these letters more effective.

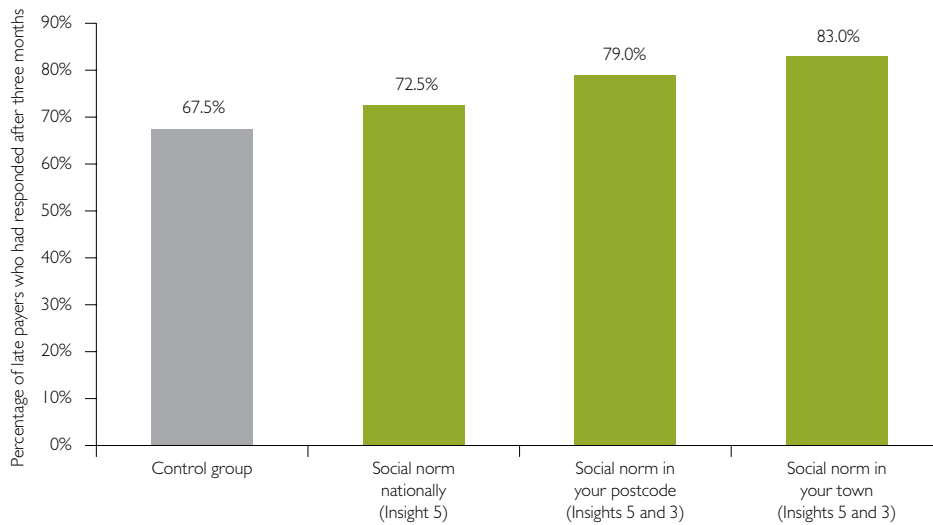
As part of this process, the **HMRC Debt Management and Banking Team** has partnered with the Behavioural Insights Team to introduce a 'test, learn, adapt' approach to discover how effectively social norms encourage individuals to pay their tax debts more quickly.

As set out in Insight 5, there is much evidence that saying what others do in similar situations is more powerful if those people are similar to the message recipient, or if the recipient identifies with them for another reason. We therefore set up a series of RCTs to test how effective the use of social norms might be to encourage people to pay their tax debts.

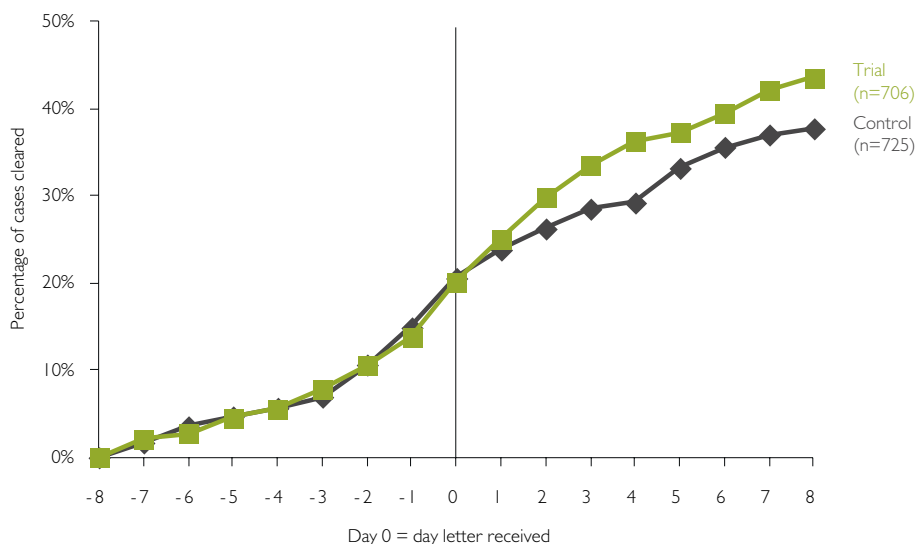
In the initial trial (see graph 1a below), a range of different messages were tested in letters sent to 140,000 taxpayers. Residents received either a control letter (which contained no social norm) or one of a number of different social norm messages. All of the social norm letters contained the statement that '9 out of 10 people in Britain pay their tax on time', but some also mentioned the fact that most people in the recipient's local area, or postcode, had already paid.

Referring to the social norm of a particular area gave impressive results. The graph shows that there was a 15 percentage point increase from the old-style control letter which contained no social norm and the localised social norm letters. HMRC estimates that this effect, if rolled out and repeated across the country, could advance approximately £160 million of tax debts to the Exchequer over the six-week period of the trial. This would free up collector resource capable of generating £30 million of extra revenue annually.

Trial Ia: Using social norms to increase tax debt payments



Trial Ib: Debt clearance by letter



HMRC is now conducting further trials to better understand these results, so that messages can have an even greater impact in the future. Rather than simply testing an old-style letter against a new letter that refers to social norms, these new trials involve varying only specific phrases, so that their impact can be fully understood (rather than the impact of one whole letter against another). Furthermore, these new letters are greatly simplified and shortened, so that any effects can be attributed to the social norm message alone.

The second RCT (see graph 1b above) sought to test the effectiveness of a localised norms message in three larger localities. In this case, the control

letters were otherwise identical (in the first trial, the control was the old-style HMRC letter). The sample size was 1,400 late payers, with total debts of around £4 million. The trial results therefore show more directly the effect of mentioning a localised social norm alone: payment rates rose from 38.7% to 45.5%. The graph above gives preliminary results from the trial and shows the percentage of self assessment cases that have been resolved after receiving the letter. So, a steeper gradient represents a more effective letter (the vertical line represents the date when the letters were received), reinforcing the fact that the trial letter was more effective than the control letter.

The third RCT was conducted on 108,000 self assessment debts, worth £290 million. This trial tested a control letter against five other letters to examine the effectiveness of messages highlighting the impact of paying tax on public services in terms of gains or losses, as well as generic and 'injunctive' norms. Provisional results suggest that a social norm message is much more effective if it contrasts the recipient's behaviour with the norm. So, saying that '9 out of 10 people pay their tax on time' is more effective if it is followed by 'you are one of the few people who have not paid yet'. Simply including a phrase with both these elements raised the payment rates achieved by a single letter from 36.8% to 40.7%.

Trial 2: Highlighting key messages and norms

As part of their programme to increase tax compliance among specific professional groups, HMRC is running a 'Medics Tax Health Plan', which offers doctors and dentists with outstanding tax liabilities an opportunity to come forward and put their tax affairs in order. The establishment of a voluntary disclosure facility saw over 1,500 medics come forward, raising over £10 million for the Exchequer. A further £4 million has been raised as part of the follow-up to this campaign, which includes letters to those who have not come forward but are believed to be non-compliant.

In order to encourage further medics to disclose outstanding tax, the Behavioural Insights Team has supported the **HMRC Risk and Intelligence Service (RIS) Campaigns Team** to develop a trial. As set out in Insights 2 and 7, it is important that these follow-up letters contain simple, clear messages about the campaign, spell out the actions required and underline implications of non-compliance. In addition, Insight 5 has shown that most people rightly think of themselves as honest and law-abiding and may underestimate the degree to which their fellow citizens or professionals are honest in their dealings with tax authorities.

In November 2011, around 3,000 letters were sent out to doctors with one or more outstanding tax returns in the last four years. This trial tested four different letters that were randomly assigned – two new letters and two traditional letters used in other campaigns run by HMRC:

- Generic letter: this is a generic HMRC letter sent to individuals who have a self assessment return outstanding.
- Traditional letter: this letter was drafted using the style and specific phrases employed in other communications from the Medics Tax Health Plan.
- Simplified letter: the traditional letter was redrafted to include several features which were likely to increase response rate. These included: simplified language; key messages and required actions highlighted at the top of the letter; emphasising the risk of fraud detection through the use of third party information; and a statement that underlined that while failure to come forward before was treated as an oversight, if they failed to respond to this letter, this would be treated as an active choice.
- Simplified + social norms and levers letter: this letter was identical to the simplified letter, but began with a strong social message – highlighting not only the high degree of tax compliance among doctors (97% of doctors have filed all their tax returns for the last four years), but also that their profession is widely perceived as highly honest and trustworthy (quoting a 2011 survey by Ipsos MORI that indicated that 9 out of 10 people surveyed said that they trust their doctor to tell the truth).

All recipients were encouraged to get in touch with HMRC by telephone to clarify their tax affairs. Early results of these responses suggest marked differences in the response rates to the different letters (see graph on page 25). The simplified letter resulted in a significantly higher response rate (35%) than the traditional letter (21%) and

generic letter (4%), underlining the importance of highlighting key messages and actions required, as well as the consequences and impact of not responding. Interestingly, the social norms and levers letter demonstrated no statistically significant difference in response rates (35%) relative to the simplified letter. This is surprising given the impact of our other trials using descriptive social norms (for example Trial 1), but serves to underline that these effects are heavily context dependent and emphasises the merits of a ‘test, learn, adapt’ approach.*

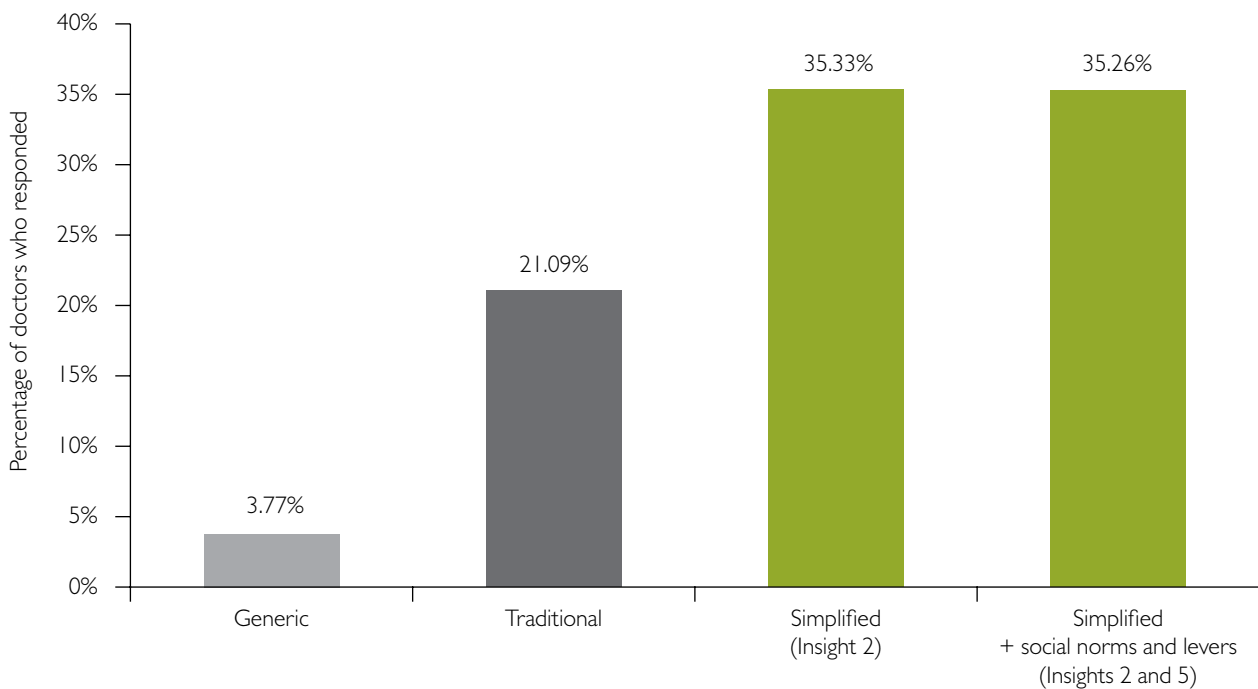
In addition, the two new behavioural letters have already resulted in voluntary disclosures worth over £1 million (with the final total expected to be several million pounds), while the greater response rate saves further resource being spent following up these individuals.

The next step is to see how well the responses translate into customers putting their tax affairs in order, and early indications are very positive. Further analysis is being undertaken on response time, follow-up to submit outstanding returns, size of tax declarations and determinations made by HMRC.

Trial 3: Using salient images

It is estimated that there were roughly 249,000 unlicensed vehicles ‘in stock’ in Great Britain in 2011, which could have cost around £40 million in lost revenue.³² Untaxed vehicles on the roads are liable to be spotted by DVLA cameras. This enables DVLA to send letters to the owners of these vehicles to remind them that their car tax

Trial 2: Response rate of doctors to HMRC letters



* These results are provisional, so detailed interpretation would be premature at this stage. Our academic advisers are analysing the data and exploring possible explanations for these results, which we intend to publish at a later stage. However, one possibility is that the behavioural effects of the simplified letter, including highlighting that non-response would be treated as an active choice and warning of the risks of detection, could have eclipsed the more subtle effect of the social messages. Alternatively, references to public perceptions of honesty among doctors may have had unintended consequences.

is overdue and that failure to pay could result in fines. Despite this warning, some drivers continue to drive their vehicle untaxed. Should they be spotted by DVLA cameras again, these drivers receive a second letter to request that they pay their car tax immediately or face consequences, which could include their car being towed and crushed. A significant number ignore or contest communications that request payment for this fine.

As set out in Insight 2, the use of visual imagery in written communications can capture the reader's attention, particularly if the image is relevant to that individual.³³ As with other areas, simplifying the messages and being clear about required actions and the implications of non-compliance are also likely to be effective in this area (Insights 2 and 7).

In order to examine the question of whether sharing the image captured by DVLA cameras of an offending driver's untaxed vehicle with the individual will encourage them to take action, the Behavioural Insights Team worked with **DVLA** to design a trial to test this. To maximise the effectiveness of this communication the language and format of the letter were also simplified. Therefore, in order to isolate the specific impact of the image, the trial required a third arm that just comprised the new, simplified letter.

Beginning in December 2011, all drivers who had been spotted more than once by DVLA cameras driving an untaxed vehicle were randomly allocated to receive one of three types of letter:

- Original letter: this letter was the same as the letter used by DVLA prior to December 2011. For the purposes of this trial, it acts as the control letter, which will enable us to determine whether or not adding new insights can encourage greater compliance.
- Simplified letter: the original letter was redrafted to include several features designed to increase compliance, including clearer language, highlighting key messages and required actions at the top of the letter, and a statement that failure to respond to this second letter would be treated as an active choice. The letter was also intended to tap into the strong aversion that individuals have to loss – the original letter header, 'Untaxed Vehicle Warning', was replaced with 'Pay Your Tax or Lose Your [Make of Car]'.
- Simplified letter + image of untaxed car caught on camera: this letter was identical to the simplified letter (above). However, a cover page was stapled on the front with two images of the untaxed car captured on camera: an image of the entire car and a close-up of the number plate. Time and location details were presented alongside these images.

This trial is under way and letters continue to be distributed. The responses of the drivers who receive this letter will be monitored to determine if either the new, simplified letter and/or inclusion of the car images serves to increase the response rate and the average time taken to pay the outstanding car tax.

The results of this trial are expected during spring 2012. While it is too early to draw any conclusions, preliminary results are promising – with the simplified letter and image outperforming the original and simplified letters at this stage.

Trial 4: Better presentation of information

Many people find tax and debt confusing and are not sure how to respond appropriately. As set out in Insights 1 and 2, there is a great deal of evidence that presenting information in simpler and more salient ways can encourage compliance. For example, simply including the explicit steps that people need to take in order to perform a behaviour makes that behaviour more likely: these small 'channel factors' have a significant effect on whether or not people act.³⁴

At the same time, there is much evidence that the way in which information is presented affects our responses. For a start, we are more likely to

register information that is presented in ways we can easily understand – particularly if we are not paying full attention.³⁵ Moreover, we are more likely to choose options that feel easier to understand, and are more confident in these choices.³⁶

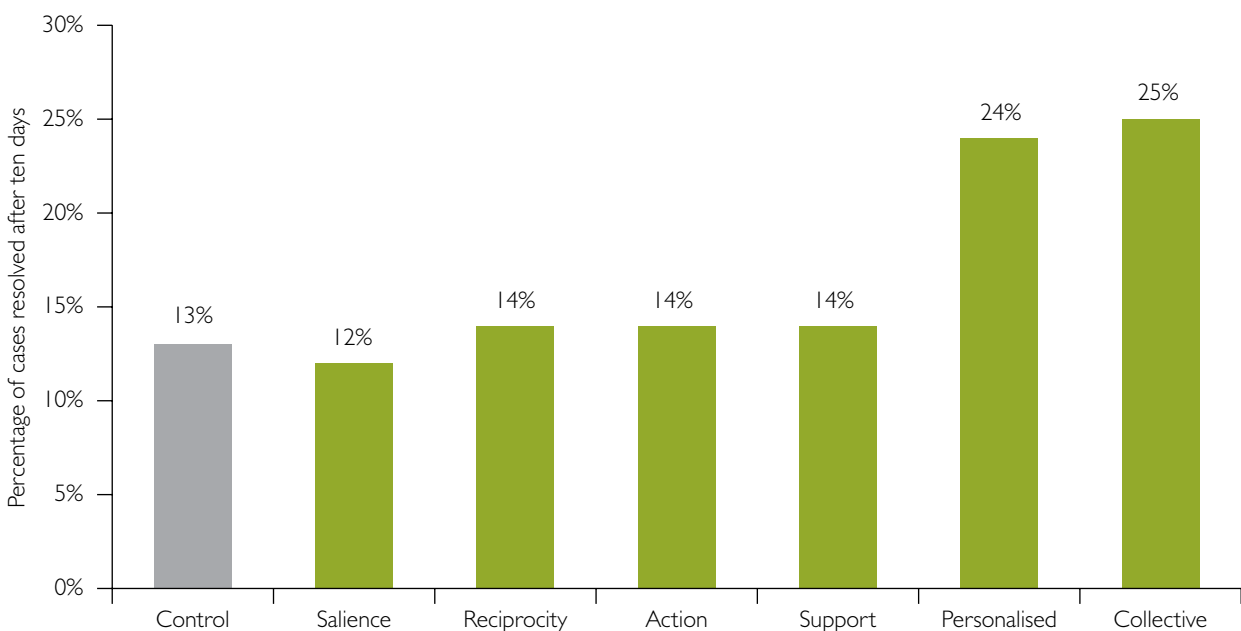
With this in mind, **HMRC** is exploring how to 'make it easy' to resolve debts from overpaid tax credits and have launched an RCT to test different ways of making processes simpler and easier to understand.

The trial comprises around 39,000 individuals, who are sent one of seven randomly allocated letters:

- Control: this letter simply states the telephone number to call.
- Salience: this letter includes a summary box at the bottom of the letter to highlight the key messages and actions required.
- Reciprocity: this letter highlights the services that HMRC is offering to help to resolve the issue.
- Action: this letter asks the recipient to choose a time and day to call in order to encourage them to respond.³⁷
- Support: this letter states that HMRC's telephone lines are open and ready to take the recipient's call.
- Personalised: this letter is framed as a personal message urging the recipient not to overlook the opportunity to contact HMRC.
- Collective: this letter is framed as a collective message urging the recipient not to overlook the opportunity to contact HMRC.

As with previous trials, the speed with which people respond to these different letters will be measured and evaluated. The overall goal of the trial is to understand how people can best absorb and act on information, and to tailor communications accordingly. These findings will then help to support other communications that HMRC has with citizens.

Trial 4: Impact of trial letters on resolving tax credit debts



The graph on the previous page gives preliminary results from this trial. It shows the percentage of resolved tax credits cases for each letter. While it is too early for a conclusive analysis, it seems clear that the collective and personalised appeals not to overlook the letter (stating that to do so would be treated as an active choice) are significantly more effective – outperforming the other letters by around ten percentage points. These results are particularly impressive because tax credits cases are some of the most problematic debts to collect. HMRC estimates that, if this result were sustained across all comparable tax credits debts, it could annually accelerate in the region of £80 million in cashflow by at least ten days. As a result, significant savings could be created by freeing up collector resources to pursue other debts.

Trial 5: Personalising text messages

Insight 3 has shown that personalising messages, such as by using someone's name, can improve response rates for online and written communications.^{38, 39, 40} Working with the Behavioural Insights Team, **HMCTS** is conducting a trial in South-East England to determine whether responses to text message reminders are more effective when they begin by stating the recipient's name and/or the specific amount they owe.

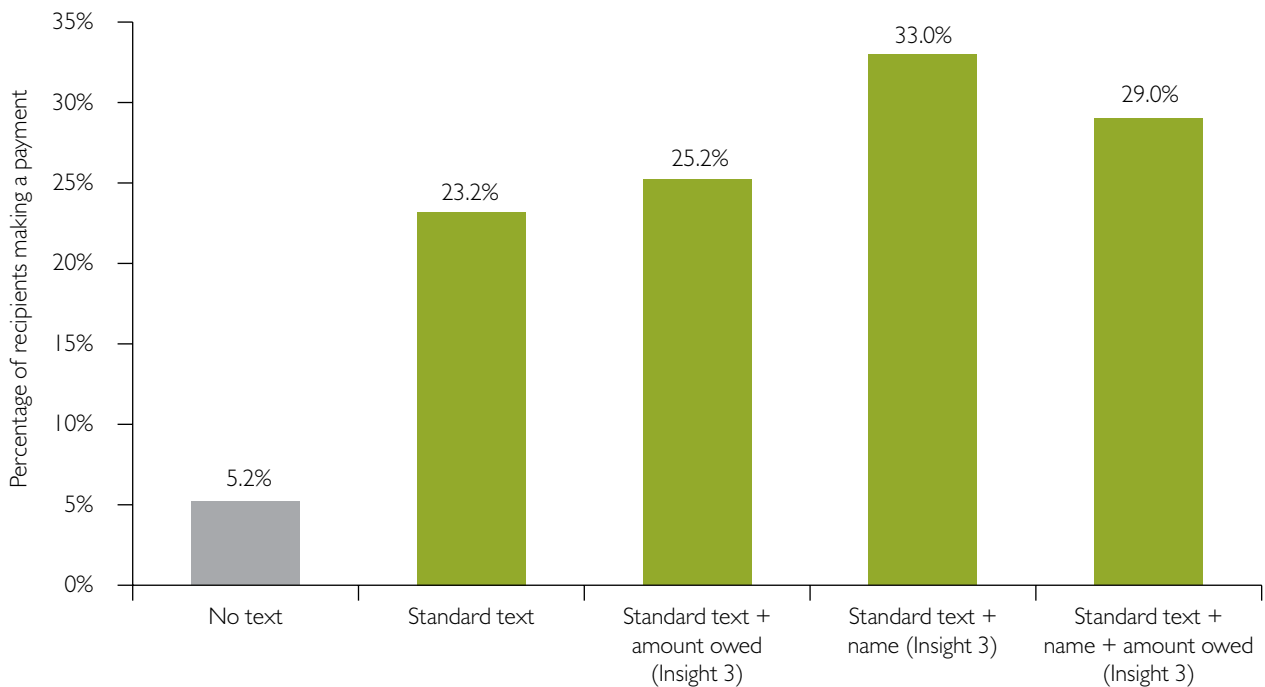
Over the last three years HMCTS has successfully achieved a 14.5% increase in collections of fines imposed by the courts, collecting a record £282 million. This has been largely achieved by focusing on making it easier for people to pay their fines (by increasing the number of payment methods), encouraging them to pay promptly, and increased use of telephone and text messaging to contact those with fines to pay. However, significant resource is still spent chasing the payment of these fines, while when bailiffs are used they charge their fee to defendants – meaning that these people pay bailiffs' costs on top of their fine.

This trial builds on a small-scale pilot consisting of 350 personalised text messages, which significantly increased response and repayment rates from those people who received a text that began with their first name, compared with the standard message. This effect is now being robustly trialled on a wider scale with three counties in the South East. Text messages are being sent to people who have failed to pay their fine in order to give them one final chance to pay before issuing a distress warrant for the bailiffs to recover goods up to the value of the fine. From January 2012, the texts to be sent out each week are randomly allocated to one of five conditions:

- No text message: this will act as the control, so that we can – for the first time – determine how effective text message prompts can be to recover court fines.
- Standard text message: this message states that the recipient has not paid their fine and that, if they do not pay, a warrant will be issued to the bailiffs. It also provides the telephone number to call and the recipient's reference number.
- Personalised text message – amount owed: this replicates the standard text message, but includes the specific amount owed by the recipient.
- Personalised text message – name: this message is the same as the standard text message, but begins with the recipient's first name.
- Personalised text message – name + amount owed: this message also contains the same text as the standard text message, but begins with the recipient's first name and includes the specific amount that they owe.

The responses to the different messages will be monitored to determine the effect of personalisation on the response rate, time to payment and size of payment made. Approximately 1,000 of these text messages are sent each month, so we expect final results to be available during April 2012. However, as illustrated in the graph

Trial 5: Impact of personalised text messages on payments made by court debtors



Figures reflect response rates to text messages which were delivered (i.e. HMCTS held correct mobile number)

above, the initial results are very encouraging – simply starting the text with the recipient’s name would appear to increase the percentage of people making a payment in response to the text by around ten percentage points.

Trial 6: Prompting honesty

Single Person Discounts are received by people who live on their own (excluding children), entitling them to a 25% discount on their council tax. Encouraging households that are eligible for the discount to confirm their living arrangements are unchanged, while discouraging those who might be inclined to submit fraudulent claims is critical to ensuring that this policy secures value for money. UK-wide losses on ineligible claims for Single Person Discount may be as high as £100 million.⁴¹

Given the reported rise in Single Person Discount

fraud,⁴² some local authorities have started writing to residents who have claimed this discount in the previous year (on an annual or biennial basis), in order to determine their continued eligibility. This draws on Insight 4 – prompting people to be honest by forcing them to actively provide false information to ineligibly claim the discount, rather than doing so by not updating their details (lying by commission, rather than omission).

Part I of this document demonstrates that you can promote honesty through a variety of mechanisms: Insight 1 indicates that perhaps most important of all is to make it easy and clear what you want people to do; Insight 2 illustrates the importance of highlighting key messages and required actions; while Insight 7 shows that the risk and consequences of fraud should be clearly communicated. Insight 4 sets out a range of other ways in which we might be able to prompt individuals to give more honest declarations

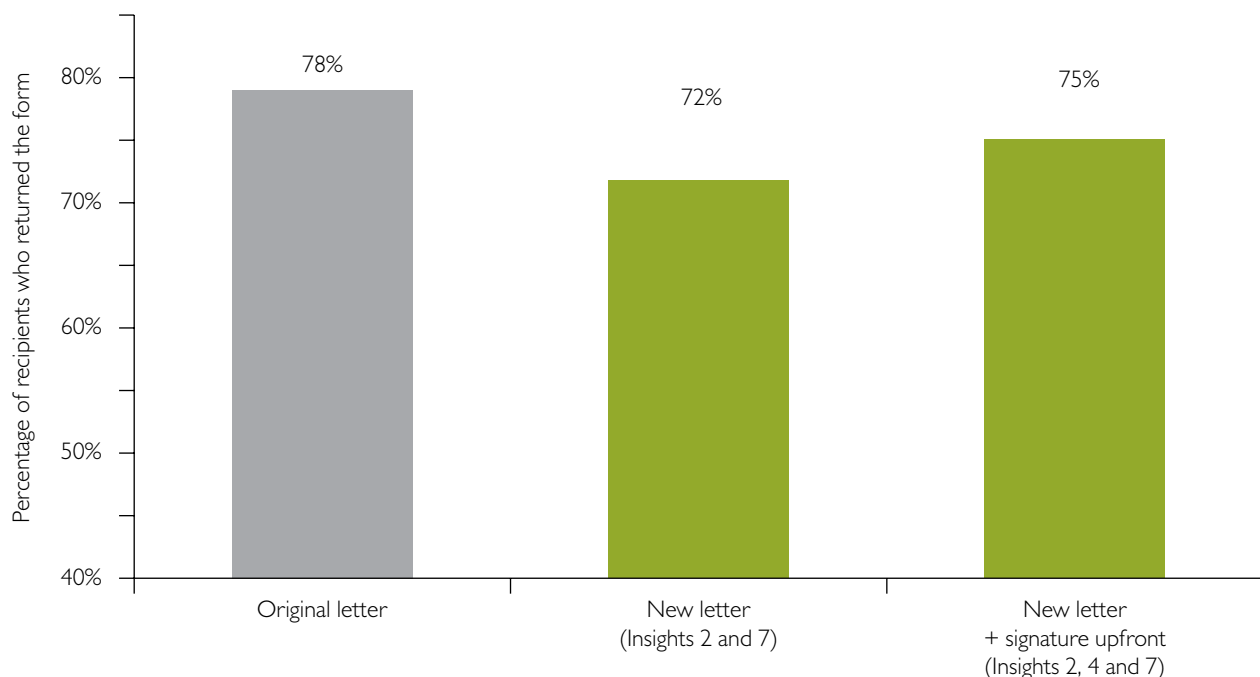
without having to resort to heavy-handed interventions, including asking people to sign forms upfront rather than at the end, which has proved effective in US research.⁴³

In order to test the effectiveness of these various mechanisms in a UK policy context, the Behavioural Insights Team is partnering with **Manchester City Council** to run a trial. In November 2011, Manchester City Council sent out almost 38,000 letters to residents who received a Single Person Discount on their council tax in the previous year. The majority of these are households in Band A properties, for which the discount is worth £240 per year, equating to exemptions of roughly £9 million per year.

As part of this trial, letters were sent out requesting residents to complete and return the form on the reverse of the letter if they were still living in the property on their own. Residents were randomly allocated to receive one of three letters:

- Original letter: this was the letter used by the council in a previous mailout. A form was provided on the reverse of the letter for residents to complete and return to the council to claim the Single Person Discount.
- New letter: the original letter was redrafted using several of the insights from Part I to reduce the incidence of fraud and/or error. These include: simplified language, and highlighting key messages and required actions at the top of the letter (Insight 2); reducing the salience of the size of the discount; highlighting the risk of fraud detection through the use of third party information (Insight 7); and informing recipients that knowingly providing incorrect information is an act of fraud (Insight 7). The form on the reverse of the letter was also simplified.

Trial 6: Requests to continue Single Person Discount on council tax



- New letter with required signature at the top of the form: this letter was identical to the new letter, except that the honesty declaration and the signature were at the top of the claim form on the reverse of the letter. This trial condition was intended to determine whether or not the US results in Insight 4 would prove effective for this specific situation.

The outcome measure being used to evaluate this trial is response rate – the percentage of people who received each type of letter who return the form to claim the Single Person Discount. Because recipients of the letters were randomly allocated to one of the three versions, we can be confident that any difference in response rate is due to the different communications they received (with a lower response rate suggesting a reduction in fraudulent applications).

The Behavioural Insights Team is working with academic advisers to analyse the results of this trial, but initial results appear to indicate that the new letter resulted in a six percentage point reduction in responses to renew their Single Person Discount compared with the original letter. Given the random allocation of letters, we can infer that this is likely to represent a reduction in fraudulent applications. Interestingly, moving the signature does not seem to have had the intended effect on response rates, with a greater number of requests to continue the discount relative to the new letter (although still fewer responses overall than the original letter). There are many possible explanations for this preliminary result, and we are awaiting further data which will give us a richer understanding of the different types of responses.* We expect this data to be available for analysis by March 2012.

However, the initial result suggests a significant saving for Manchester City Council – something that other local authorities may also wish to put into practice. And because the result was not quite as we expected in relation to the signature upfront letter, it also underlines the importance both of context and of adopting a ‘test, learn, adapt’ approach. Indeed, the Behavioural Insights Team is planning to see if this result is replicated in other local authorities’ attempts to reduce Single Person Discount fraud, as well as in other tax and benefit forms.

Trial 7: Varying the tone of letters

As part of their programme to increase tax compliance among specific trade groups, HMRC is running a ‘Plumbers Tax Safe Plan’ which offers plumbers, gas installers and heating engineers with outstanding tax liabilities an opportunity to come forward voluntarily and put their tax affairs in order on the best possible terms. While the majority of plumbers pay the right amount of tax, a minority compete unfairly against the honest trader, so this campaign is part of attempts to encourage compliance to ‘level the playing field’.

As part of this campaign, HMRC has collected internal and external data (for instance from trade bodies) to identify plumbers who it appears have paid less tax than required by failing to declare all the work that they have been paid for. This information will enable HMRC to follow up with those who have chosen not to take up the opportunity. The outcome for these individuals is at best higher cost, and in some circumstances individuals may be prosecuted.

* These results are again provisional so we would caution against detailed interpretation at this stage. Our academic advisers are analysing the data and exploring possible explanations for this result, which we intend to publish at a later stage. However, one possibility is that for a small proportion of people, signing at the beginning of the form motivates them to complete the remainder of the form. Alternatively, it may simply have dampened the effects of the newly simplified form.

The **HMRC RIS Campaigns Team** worked in partnership with the Behavioural Insights Team to develop a trial that tests the impact of varying the tone in communications to plumbers who are believed to have under-declared their income. As set out in Insight 7, in some contexts highlighting the consequences of non-compliance and using more direct or punitive language may be appropriate, while in others more conciliatory or cooperative language may prove more effective. This trial sets out to test the impact of the emotional tone within a specific professional tax compliance context, with one letter using more direct language, while the other is more cooperative in tone.

From January 2012 the roughly 12,000 individuals in this trial will have received, by random allocation, one of the following three letters:

- Traditional letter: this letter is drafted on the basis of previous HMRC campaigns communications.
- Letter with more direct language: this letter simplifies the language and highlights that this is a final opportunity for the respondent to come forward and disclose their liabilities (Insight 2). It also emphasises the use of the third party information from trade bodies and merchants to cross-reference data, as well as the use of criminal proceedings against tax evaders who do not come forward at this stage (Insight 7).
- Letter with cooperative language: this communication begins by acknowledging that tax can be complex and that times are difficult (Insight 7). It also stresses that the campaign is intended to level the playing field for honest traders and help recipients to get their tax affairs up to date, including help to set up a direct debit payment if they are not able to pay the full amount owed straight away (this option is also acknowledged in the letter with direct language, but in a less supportive manner).

Responses to the three letters will be monitored to determine whether or not the different styles and emotional tones of the letters results in different response rates, further declarations, payment times and payment amounts. Results are expected in early spring 2012.

Trial 8: Using beliefs about tax

The **HMRC Debt Management and Banking Team** is also trialling the use of different wordings in approximately 70,000 letters that ask companies to pay their overdue tax. This is useful because we do not know whether incorporated bodies respond to messages in the same way that individuals do – or indeed whether these messages have any effect at all. Since a significant proportion of the outstanding debt balance is owed to HMRC by companies, this is an important issue.

One trial focuses on whether there is a gap between the beliefs of the company or individual and their actions (drawing on the well-known concept of ‘cognitive dissonance’).⁴⁴ Most people believe in the idea of paying tax (and on time), even if they do not always manage to do so. Reminding people of these beliefs could, therefore, also lead them to change their behaviour and pay their overdue tax.⁴⁵ This trial will involve approximately 32,000 companies, which are sent one of four randomly allocated letters:

- Control: this letter is comprised of standard messages about how to pay the outstanding debt.
- Personal beliefs: this letter highlights a potential conflict between the recipient’s personal beliefs about tax and their company’s tax debt.
- Company beliefs: this letter highlights a potential conflict between the company’s beliefs about tax and its tax debt.

- Fairness: this letter highlights a potential conflict between the recipient's beliefs that businesses should pay tax and their company's tax debt.

While it is too early to state exact results, preliminary findings suggest that what seems to be particularly effective is to point out any gap between a taxpayer's belief that 'businesses should pay their taxes' and the fact that their own company currently owes tax. Interestingly, what seems to be less effective is to refer to a gap between the beliefs of a company itself and the fact that it owes tax. This may be because small business owners find the idea that their business has beliefs to be less convincing than people in larger companies, which may have mission statements and corporate social responsibility plans.

Concluding remarks

Public sector fraud, error and debt cost the UK government billions of pounds each year, costs that are borne by law-abiding taxpayers and firms. Insights from behavioural science can form an integral part of the government strategy to reduce this cost and the tax gap.

This document is intended to offer a practical guide to those who design and administer taxes and fines, and whose job it is to make such systems simple and easy to use for businesses and citizens. This is the first time that the Government has explicitly sought to draw upon behavioural insights to tackle fraud, error and debt in a systematic way. The insights outlined in this document, applied in a range of different contexts and settings, show that not only is it possible to apply behavioural insights to reduce fraud, error and debt, but also that it can be done in a highly cost-effective way.

Part 1 summarises the academic evidence and sets out seven key insights that can be applied in practice. It illustrates that behavioural insights can offer useful new perspectives on these familiar challenges, as well as the potential to move interventions 'upstream' by encouraging early and easy payments to prevent debts accruing in the first place.

Part 2 describes eight trials which demonstrate that it is possible – and important – for public services to adopt a 'test, learn, adapt' approach. This is important not only because the effectiveness of interventions will depend heavily on the context in which they are applied, but also because the use of such methods ultimately rests on public acceptability and trials allow this to be tested. Policymakers should innovate, but should do so with humility about the limits of current knowledge, and with respect for what is acceptable and helpful to the public whom we serve.

We would like to thank colleagues in HMRC, the Ministry of Justice, DVLA, HMCTS, Manchester City Council and local government for their help in conducting the trials and producing this document. We would also ask you – the reader – to help to improve it, and our collective understanding, by sharing results that you may have or trials that you may be undertaking.

References

1. Cabinet Office Taskforce on Fraud, Error and Debt (2012), *Reducing Fraud & Error in Government*; Cabinet Office Taskforce on Fraud, Error and Debt (2012), *Tackling Debt Owed to Central Government*
2. Adreoni J, Gerard B and Feinstein J (1998), Tax compliance, *Journal of Economic Literature* 36(2): 818–60
3. Leviner S (2008), An overview: a new era of tax enforcement – from “big stick” to responsive regulation, *Regulation and Governance* 2: 360–80
4. For example, see Fehr E, Fischbacher U and Gächter S (2003), *Strong Reciprocity, Human Cooperation and the Enforcement of Social Norms*, Microeconomics series paper 0305008, Economics Working Papers Archives
5. Leventhal H, Singer R and Jones S (1965), Effects of fear and specificity of recommendation upon attitudes and behavior, *Journal of Personality and Social Psychology* 2(1): 20–9
6. McKinsey & Company (2009), *The Road to Improved Compliance: A Benchmarking Study of Tax Administrations 2008–9*
7. Bettinger E, Long B, Oreopoulos P and Sanbonmatsu L (2011), *The Role of Application Assistance and Information in College Decisions: Results from the H&R Block FAFSA Experiment*, available at: <http://economics.uwaterloo.ca/documents/OreopoulosNov25.pdf>
8. See HM Revenue and Customs (2011), *Modernising the Administration of the Personal Tax System: Tax Transparency for Individuals* [discussion document]. The closing date of consultation is 24 February 2012
9. www.irs.gov/efile/article/0,,id=234412,00.html
10. <http://taxreceiptlog.com/blog/gst/tax-calculator/>
11. Kahneman D (2011), *Thinking, Fast and Slow*, Penguin
12. Levie WH and Lentz R (1982), Effects of text illustrations: a review of research, *Education and Communication Technology Journal* 30: 195–232; Glenberg AM and Langton WE (1992), Comprehension of illustrated text: pictures help to build mental models, *Journal of Memory and Language* 31(2): 129–51
13. Garner R (2005), Post-It® note persuasion: a sticky influence, *Journal of Consumer Psychology*, 15(3): 230–7
14. *Ibid.*
15. Burger JM and Caldwell DF (2011), When opportunity knocks: the effect of a perceived unique opportunity on compliance, *Group Processes & Intergroup Relations* 14(5): 671–6
16. Shu L, Gino F, Bazerman M et al (2011), *When to Sign on the Dotted Line? Signing First Makes Ethics Salient and Decreases Dishonest Self-reports*, Working Paper 11-117, Harvard Business School
17. Ariely D (2008), *Predictably Irrational: The Hidden Forces that Shape our Decisions*, HarperCollins
18. Mazar N, Amir O and Ariely D (2008), The dishonesty of honest people: a theory of self-concept maintenance, *Journal of Marketing Research* 45(6): 633–44
19. Bateson M, Nettle D and Roberts G (2006), Cues of being watched enhance cooperation in a real-world setting, *Biology Letters* 2(3): 412–14
20. Ernest-Jones M, Nettle D and Bateson M (2011), Effects of eye images on everyday cooperative behavior: a field experiment, *Evolution and Human Behavior* 32(3): 172–8

21. Haley K and Fessler D (2005), Nobody's watching? Subtle cues affect generosity in an anonymous economic game, *Evolution and Human Behavior* 26: 245–56
22. Cabinet Office and Institute for Government (2010), *MINDSPACE: Influencing Behaviour through Public Policy*
23. Schultz WM, Nolan JM, Cialdini RB et al (2007), The constructive, deconstructive and reconstructive power of social norms, *Psychological Science* 18(5): 429–34
24. Coleman S (2007), *The Minnesota Income Tax Compliance Experiment: Replication of the Social Norms Experiment*, MPRA Paper 5820, available at: <http://mpra.ub.uni-muenchen.de/5820/>
25. Bobek D, Roberts R and Sweeney J (2007), The social norms of tax compliance: evidence from Australia, Singapore and the United States, *Journal of Business Ethics* 74(1): 49–64
26. Burger JM and Shelton M (2011), Changing everyday health behaviors through descriptive norm manipulations, *Social Influence* 6(2): 69–77
27. Ayres I (2010), *Carrots and Sticks: Unlock the Power of Incentives to Get Things Done*, Bantam Dell Publishing Group
28. Loewenstein GF, Weber EU, Hsee CK and Welch N (2001), Risk as feelings, *Psychological Bulletin* 127(2): 267–86
29. Wan J (2008), The incentive to declare taxes and tax revenue: the lottery receipt experiment in China, paper prepared for the 64th Congress of the International Institute of Public Finance, University of Maastricht, The Netherlands
30. Gneezy U (2005), Deception: the role of consequences, *The American Economic Review*, 95(1): 384–94
31. Kleven H, Knudsen M, Kreiner C et al (2010), *Unwilling or Unable to Cheat? Evidence from a Randomized Tax Audit Experiment in Denmark*, NBER Working Paper 15769
32. Department for Transport (2011), *Vehicle Excise Duty Evasion Estimates: 2011*, available at: www.dft.gov.uk/statistics/releases/vehicle-excise-duty-evasion-estimates-2011
33. Levie WH and Lentz R (1982), Effects of text illustrations: a review of research, *Education and Communication Technology Journal* 30: 195–232; Glenberg AM and Langton WE (1992), Comprehension of illustrated text: pictures help to build mental models, *Journal of Memory and Language* 31(2): 129–51
34. Leventhal H, Singer R and Jones S (1965), Effects of fear and specificity of recommendation upon attitudes and behavior, *Journal of Personality and Social Psychology* 2(1): 20–9
35. Mann T and Ward A (2007), Attention, self-control, and health behaviors, *Current Directions in Psychological Science* 16: 280–3
36. Novemsky N, Dhar R, Schwarz N and Simonson I (2007), Preference fluency in choice, *Journal of Marketing Research* 44: 347–56; Gill MJ, Swann WB and Silvera DH (1998), On the genesis of confidence, *Journal of Personality and Social Psychology* 75: 1101–14
37. This draws on the insight that people respond more favourably when they have a degree of control over performing a certain behaviour, as well as the 'implementation intentions' literature. Refer to Gollwitzer PM (1999), Implementation intentions: strong effects of simple plans, *American Psychologist* 54: 493–503
38. Postma OJ and Brokke M (2002), Personalisation in practice: the proven effects of personalisation, *Journal of Database Marketing* 9(2): 137–42

39. Shapiro KL, Caldwell J and Robyn E (1997), Personal names and the attentional blink: a visual “cocktail party” effect, *Journal of Experimental Psychology: Human Perception and Performance* 23(2): 504–14
40. Bargh JA (1982), Attention and automaticity in the processing of self-relevant information, *Journal of Personality and Social Psychology* 43(3): 425–36
41. Northgate Consultancy, presentation to the Cabinet Office
42. Audit Commission (2009), *Protecting the Public Purse: Local Government Fighting Fraud*
43. Shu L, Gino F, Bazerman M et al (2011), *When to Sign on the Dotted Line? Signing First Makes Ethics Salient and Decreases Dishonest Self-reports*, Working Paper 11-117, Harvard Business School
44. Festinger L (1957), *A Theory of Cognitive Dissonance*, Stanford University Press
45. Stone J and Fernandez N (2008), To practice what we preach: the use of hypocrisy and cognitive dissonance to motivate behavior change, *Social and Personality Psychology Compass* 2(2): 1024–51



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