

POLICY PAPER

Understanding Taxpayer Behaviour – New Opportunities for Tax Administration

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Abstract: There is a growing literature on the contribution of behavioural economics to the design and improvement of tax policy. A less well-developed area is the potential for behavioural research to contribute to better tax administration. Better understanding of the motives of taxpayers and their attitudes and behaviour towards taxation can improve both voluntary compliance and the efficiency of the tax administration. The literature suggests tax compliance is determined by five broad factors: deterrence; norms (both personal and social); fairness and trust (in the tax administration); complexity of the tax system; and the role of government and the broader economic environment. Research in Ireland suggests that deterrence, the more traditional tool of tax administrations, is important but not sufficient to explain the level of tax compliance in society. Other factors are shown to be important, particularly the influence of personal norms and the level of trust in the tax administration. Perceptions of the prevailing social norms are also important determinants of compliance but appear to exert less influence on taxpayers than personal norms. The experiences of tax administrations in using behavioural research to influence taxpayers are examined and work in this area in Ireland is outlined.

I INTRODUCTION

In Ireland, the Office of the Revenue Commissioners is responsible for the Administration of the tax system and the customs regime. In areas of tax policy, Revenue's role is to advise the Department of Finance and others

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responsible for policy. The separation of tax policy and administration is found in many countries.

The objectives of most tax administrations, including Revenue, are to ensure compliance with tax laws and to improve taxpayers' customer service satisfaction. Tax administrations have a wide range of compliance and customer service programmes that aim to change behaviour among taxpayers.

In recent years there has been an increasing focus on better understanding the underlying factors that influence taxpayer behaviour. Research is being undertaken in Ireland, in tax administrations in other countries and at EU and OECD levels, to improve knowledge of taxpayers and their behaviour. This research ties in with behavioural economics, an expanding sub-discipline within economics that seeks to better explain how and why decisions are made.

An improved understanding of taxpayer behaviour and attitudes to taxation can help tax administrations to develop stronger and more effective compliance risk treatments, as well as improve customer service programmes. This paper outlines the research and how it may be used to influence taxpayer behaviour. Many factors influence behaviour, the focus in this paper is on those that can be tested and used by a tax administration in a practical setting.¹ Traditional tools of tax administration (audit for example) are an expensive way to attempt to improve compliance even when targeted at specific tax risks. Influencing behaviour may offer an effective but less expensive option. The aim of this research is to find efficient and cost effective approaches to improving taxpayer behaviour.²

The next section discusses the literature on the main factors that influence taxpayer behaviour. Section III examines what is known about attitudes and behaviour of taxpayers in Ireland. Section IV reviews some practical experiences from the application of behavioural research to taxation. Section V concludes.

II FACTORS THAT INFLUENCE TAXPAYER BEHAVIOUR

There is already a considerable literature on the subject of taxation and behavioural economics – see for example, Congdon *et al.* (2011, 2009) for useful summaries. However, for the most part, this literature is focused on the implications of behavioural or psychology research for tax policy or tax design.

¹ Factors related to tax policy or those more broadly associated with economic and social conditions, beyond the influence of the tax administration, are not considered in detail.

² There are likely to be other, related areas that could benefit from this type of research (for example, there may be applications to social welfare entitlements and fraud).

As noted in the Introduction, in Ireland and many other countries there is separation between tax policy and tax administration. Using behavioural research to inform tax administration is a less developed but growing area in the literature.

The work of a tax administration includes activities that cover both compliance and customer service. For example, Revenue's range of functions includes: assessment, collection, debt management, audit and other interventions, anti-smuggling and other customs functions and anti-avoidance. Many of the functions of tax administration depend to at least some degree on the voluntary compliance of taxpayers. In addition, large elements of the tax system in Ireland are based on self-assessment. In this context, there is clearly potential to influence behaviour to improve compliance.³ The central contribution of behavioural research to tax administration is to understand why taxpayers are compliant or not. This can inform the work of tax administrations across a range of their functions.

Several factors that contribute to the level of compliance in a taxpayer population have been identified. The sections below present an overview of these factors and Section III examines the relevant findings for Ireland. The factors are grouped under headings adapted from research by the OECD Forum on Tax Administration (OECD, 2010): deterrence; norms (personal and social); fairness and trust; complexity; and the role of government and broader economic and social factors.⁴

2.1 *Deterrence Effects*

The standard model of tax compliance, derived from Becker (1968) and Allingham and Sandmo (1972), assumes that a rational taxpayer assesses the costs and benefits of evading taxes. If the expected benefits (less income "lost" to tax) outweigh the costs (the chances of a non-compliant taxpayer being caught and the sanctions incurred) then the taxpayer will evade tax. The taxpayer makes a rational choice having considered the options.

Deterrence is a vital tool (audit, other interventions and sanctions) for any tax administration. A targeted approach to deterrence is likely to be more effective.⁵ Increasing the perceived likelihood of getting caught raises the cost of evasion. The tax administration has other options to reduce opportunities for evasion as well as increasing the likelihood of audit or imposing harsher

³ Compliance in taxation has a broad meaning, it covers filing compliance (filing returns on time), reporting compliance (reporting incomes correctly) and payment compliance (paying tax due on time).

⁴ The recent European Commission/Fiscalis report (European Commission, 2010) also covers similar topics.

⁵ For example, the REAP risk model that provides a basis for audit targeting in Revenue.

sanctions. Examples of this in Ireland are Revenue's extensive use of third party data or withholding tax systems (such as pay as you earn (PAYE) income tax).⁶ Increasing the level of deterrence is often an expensive process for the tax administration and it is not guaranteed to improve compliance.

Deterrence (the risk of detection and the punishments incurred) should positively influence taxpayer compliance (Slemrod, 2007). However, the empirical evidence is somewhat mixed. OECD (2010) discusses several studies that examine the role of deterrence. Some findings are as expected (increases in the probability of detection improve compliance) but the effects are quite weak. One reason is that auditing compliant taxpayers is found to sometimes undermine their willingness to comply. In some cases taxpayer behaviour is found to worsen after an audit (either to get back "losses" or in the belief that they will not be targeted again).

The standard model alone is not enough to explain the level of compliance in society (Braithwaite, 2009; Phillips, 2011). The evidence suggests that, given the probability of being caught evading taxes and the size of the punishment if caught, the level of tax evasion should be higher than it is in many countries (i.e., that taxpayers should evade taxes more than they actually do). One explanation is the tendency of people to overestimate the probability of being audited and the sanctions that might follow if evasion is uncovered (Reeson and Dunstall, 2009). However, others factors beyond deterrence also influence taxpayers and these are discussed below.

2.2 *The Impact of Norms on Behaviour*

A key factor in tax compliance is a widespread desire to "do the right thing". Taxpayers seek to comply because they believe it is the right thing to do, not because of fear of punishment if they do not comply (Wenzel, 2005). The desire of a taxpayer to comply is strongly linked to behavioural norms, both the personal norms (and/or beliefs) of the individual taxpayer and the social norms that prevail in society at large.

Personal norms are the result of a combination of factors inherent to the individual. These guide a taxpayer's posture to the tax administration but are difficult to influence (OECD, 2010; Kirchler, 2007). Tax administrations can try to send messages that stress the importance of compliance to educate taxpayers and build up positive personal norms.⁷ Engagement by tax administrations with young people (early working age or younger) can

⁶ As OECD (2010) notes, withholding systems can have compliance benefits from simplification as they place less burden on taxpayers (as well as reducing opportunities for non-compliance).

⁷ Reinforcing positive norms is also important – if a taxpayer accepts that tax evasion is wrong then stressing the seriousness of evasion can strengthen that belief.

influence their personal norms and this benefits tax compliance in the long term.

There is evidence from diverse areas (not just tax related) that people seek to conform to social norms and that the behaviour of others strongly influences an individual's choices (OECD, 2010). This influence is important though in many cases people do not consciously realise it. This effect can be heightened when the relationship to the social grouping is stronger or closer. Peers or neighbours may exert greater influence than those more distant to the individual (BIT, 2012).

Social norms influence taxpayer behaviour. If there is a perception that tax evasion is limited and the majority of the people are compliant, this makes people less willing to evade taxes themselves. If people believe that non-compliance is more prevalent than it is in practice, correcting misperceptions regarding the scale of evasion is also a positive way to reinforce compliance. Wenzel (2001a, 2001b) demonstrates this in the Australian case (see Table 3).

2.3 Fairness and Trust in Tax Administration

Whether an outcome is perceived to be fair will influence behaviour. Experiments have shown that people prefer an option in which they receive no reward to an option in which they are rewarded but is perceived as unfair – they are rejecting an outcome that would make them better off (Braithwaite, 2009; Delaney and Harmon, 2009). Often trust and legitimacy are linked to fairness, as the perceived fairness of an outcome will be contingent upon them. OECD (2010) discusses three types of fairness in taxation: distributive fairness (the perception that government acts as a wise spender of tax revenues); procedural fairness (the perception that the tax administration adheres to procedures that are fair in dealing with taxpayers); and retributive fairness (the perception that the tax administration is fair in applying punishments when the rules are broken). The latter two are more relevant to (and can be influenced by) tax administrations. Distributive fairness depends on policymakers.

If taxpayers do not trust the tax administration to collect tax fairly, this will increase non-compliance (Murphy, 2004).⁸ A perception of fairness and trust are important tools for a tax administration in attempting to reduce evasion. The key to establishing trust is to frame the collection of taxes to the population in a transparent manner and emphasise the fairness of the approach taken. Norms and the motivation to pay taxes are influenced by fairness – both in how a person is treated by the administration individually

⁸ By extension, if there is a lack of trust in the broader government to spend tax revenues wisely (or a lack of legitimacy in the government), this will also have negative effects on tax compliance.

and perceptions of fairness of the taxation system in general (whether other people are also paying their fair share). If a tax administration can demonstrate its commitment in these areas, compliance should benefit (Alm *et al.*, 2010; Reeson and Dunstall, 2009).

A “service and client” approach by the tax administration is more likely to encourage trust than a “cops and robbers” approach based on sanctions (Kirchler, 2007; Torgler, 2011). The more respectfully taxpayers are treated by the tax administration, the less likely they are to evade and this contributes to the desire to “do the right thing” (NEF, 2005). Revenue’s customer charter and the presumption that taxpayers are honest reflect this type of approach.

2.4 Complexity of the Tax System

A key assumption in decision making is that people are capable of assessing a range of complex choices, and by correctly evaluating all of the available information, select the option with the best outcome for them. In reality it is rare to find situations in which people are fully informed of all their choices and always select the best option (Thaler and Sunstein, 2008). Faced with a range of choices, picking the correct option depends on calculating probabilities of events or risks occurring. In practice people tend to revert to rules of thumb (heuristics). While these rules of thumb may work in many cases, which explains why people fall back on them, they will be subject to biases by the person and this can lead to poor choices (Delaney and Harmon, 2009).⁹

For many people, tax is a complex subject and this complexity has been shown to contribute to non-compliance (GAO, 2011). OECD (2010) argues that tax administrations have tended to overlook the “lazy non-compliers” – taxpayers who would have complied if the opportunity for compliance had been easier. A range of concepts that influence decision making have emerged from behavioural research and several that closely relate to taxation are summarised in Table 1. The Table discusses some tax applications and should also highlight the potential for overlap between complexity and the other factors influencing behaviour discussed in this paper (a point also addressed in Section 2.6).

If the administration reduces complexity, this should lead to improvements in taxpayer behaviour (Alm *et al.*, 2010).¹⁰ Ways to make it easier to comply include the use of plain language in communications and simplifying forms and tax laws where possible. Assistance directed at lowering

⁹ More information or more choices is not always the best solution if it complicates the decision.

¹⁰ Reeson and Dunstall (2009) conduct a detailed examination of the Australian tax system from a behavioural perspective and their recommendations focus overwhelmingly on simplification.

unintentional non-compliance (genuine taxpayer error) should reduce evasion and perhaps boost the legitimacy and perceived fairness of the tax administration. Significant shares of taxpayers in Ireland and many other countries use the services of tax agents and advisors.¹¹ The use of advisors often reflects the complexity of the tax system and simplification may reduce this burden on taxpayers. However, agents also offer a channel to lower uncertainty via engagement with the tax administration. Interactions between Revenue and tax agents and representative bodies can improve communication and influence compliance. Cooperation can help to achieve buy-in and support for changes in the tax system.¹²

2.5 Broader Economic and Social Factors

There are many more factors that influence the level of compliance in a population beyond those outlined above. These are grouped together here, as they are mostly beyond the control of the tax administration. Some involve tax policy or public spending, while others relate to the broader economy. As noted in the Introduction, the focus of this paper is on methods that provide practical tools for tax administration to influence behaviour.

Section 2.3 notes that distributive fairness influences compliance. Taxpayers link the tax they pay to the ability of the State to fund expenditure on public goods and services (Barone and Mocetti, 2009). If there is a perception that the government spends tax revenues wisely, this should encourage tax compliance. If taxes are associated with spending that the taxpayer values (for example, schools or hospital beds), then the taxpayer is likely to be less reluctant to comply.

Economic conditions are important to compliance. For example, businesses with liquidity problems may be more likely to consider evading taxes. Although the research is limited, at a more macroeconomic level, factors that promote growth also encourage tax compliance (OECD, 2010). Likewise, economic downturns are often associated with increased evasion. Higher tax rates are linked with evasion if they incentivise taxpayers to move into the shadow economy.

There is also a body of the literature that looks at the characteristics (economic, demographic and social) of compliant and non-complaint taxpayers.

¹¹ In Ireland, it is not mandatory for taxpayers to use advisors in preparing their tax returns.

¹² It is worth noting that the problems in decision-making and deficiencies in accessing full or useful information on choices are likely to be particularly prevalent among the less well off in society. Wealthier individuals are often better informed in terms of their choices (or can afford to pay others to assist them). Therefore, failing to take heed of these difficulties may lead to a failure to provide entitlements to those most in need (Reeson and Dunstall, 2009).

Table 1: *Factors Affecting Decision-Making of Taxpayers*

<i>Loss aversion</i>	People are more reluctant to give something up once it is in their possession than they are happy to gain the same thing: a loss of €100 is felt much more sharply than a gain of €100. This is linked to risk aversion: people will be averse to taking risks for gains but may take risks to avoid losses. In a tax context, this suggests countering evasion could be more effective when shifting an evader's focus from potential savings to the risk of losses.
<i>Inertia</i>	Default options are strong drivers of behaviour. People often follow a path of least resistance and this results in selecting default options and failing to alter behaviour or choices even when better opportunities are available. Taxpayers will seek choices with easily identifiable outcomes and behaviour can quickly become established over time – whether compliant or non-compliant.
<i>Salience</i>	People tend to overestimate the likelihood of something that has been recently experienced or is easily imagined. Chetty <i>et al.</i> (2009) show that displaying tax inclusive prices has significant effects on demand (sales taxes are often omitted from display prices in the US). It is the change in salience of the tax that impacts on the consumption decision. Highlighting norms regarding taxpayer behaviour will be more effective the closer the individuals associate the norm to themselves.
<i>Discounting</i>	People tend to underestimate the relevance of future effects but this discounting is not consistent. Given the choice of between 5 hours work today or 6 hours work next week, people tend to choose the latter. However, in a choice between 5 hours work in a month's time or 6 hours work in a month and a day's time, people will often select the former. A taxpayer considering the risks of evasion may behave differently depending on perceived timing of sanctions risked.
<i>Framing</i>	Decisions are influenced by how choices are presented. A medical treatment that is framed as having a 10 per cent chance of death may seem less appealing than one with a 90 per cent survival rate. Framing is important when used in conjunction with other behavioural insights. For example, suggesting that an action would conform to social norms is often used in advertising “two-thirds of people agreed that product X was better than product Y”. To encourage people to claim back tax entitlements on health expenses “do it and save €X” may be less persuasive than “don't do it and lose €X”.
<i>Anchoring</i>	People tend to lock on to something that is known as an anchor for their expectations and make adjustments from that point. Thaler and Sunstein (2008) give the example of asking someone to guess the population of a city and providing them with the population of a similar city to help. Anchoring is useful provided the anchor is close to the truth. In another example, advertising a course for Australian government employees, when enrolment was free applications were low but when a fee was included enrolment increased. The initial price (zero) provided an anchor suggesting the course has no value. In a tax context, providing accurate and honest information on levels of evasion may improve compliance if misperceptions of higher than actual levels of evasion are establishing negative social norms.

Source: The material in the table below draws heavily from several sources: NEF (2005), Thaler and Sunstein (2008) and Delaney and Harmon (2009).

The Appendix Table presents a summary.¹³ It is important to note that these characteristics are mainly seen as being correlated with higher or lower compliance. This correlation does not imply causation.

While these issues are clearly important in determining tax compliance they are not discussed further. In the Irish case, these factors are beyond the control of Revenue, some are beyond the influence of any policymakers, but they should certainly be borne in mind when considering the issues raised in the paper. Tax administrations can and do attempt to mitigate their impacts as much as possible. One example in Ireland is Revenue's introduction of new arrangements for taxpayers facing payment difficulties arising from the recession.¹⁴

2.6 Interactions Between Factors

Section III examines in more detail the influence of these five factors for Irish taxpayers but it should be clear that no single factor can explain the compliance attitude or behaviour of an individual. It is the interaction of the factors and their varying importance that contribute to compliance behaviour at the individual and population levels.

There are complementarities between the factors but there are also some potential conflicts that should be considered from the tax administration perspective. As noted above, there is likely to be a compliance gain from addressing misperceptions, for example if the level of tax evasion in society is perceived to be higher than it is in reality.

However, some misperceptions may benefit compliance. For example, the perceived probability of being audited (or other deterrence measures) may be higher than the actual level. While openly correcting this misperception may build trust and improve the perceived fairness of the administration, it could be at the expense of weakening the deterrence factor due to the lower audit probability.¹⁵

2.7 Principles of Influence

To move from the literature to practical applications of the behavioural insights, Cialdini's principles of influence offer a useful structure. Cialdini (2001) develops six principles that can be applied to influencing individuals'

¹³ Most of the results cited in the Appendix Table use US data. The Boame papers use Canadian data and these studies find some similar results in Europe (for example SKAT (2009a, 2009b) for Denmark).

¹⁴ Revenue encourages taxpayers with genuine payment problems (in the interests of fairness) to make early contact and offers instalment arrangements (to reduce opportunities for non-compliance).

¹⁵ One option, building on Revenue's current approach, may be to openly report the probability of audit but with added information that audits are targeted at risk (to maintain the level of deterrence).

behaviour and decision making. OECD (2009) further develops a series of possible applications to tax administration – see Table 2.

Table 2: *Principles of Influence Applied to Taxation*

<i>Influence Principle</i>	<i>Explanation</i>	<i>Potential Tax Application</i>	<i>Link to Behavioural Factors</i>
<i>Reciprocity</i>	People feel obligated to return favours	Indicate to taxpayers the ways in which the tax administration can assist them and emphasise the benefits of compliance	Fairness and Trust Complexity
<i>Authority</i>	People look to experts to show the way	Take opportunities to communicate the tax administration's relevant expertise and experience in taxation matters	Complexity Deterrence
<i>Commitment and Consistency</i>	People want to act consistently with their values	Allow taxpayers the possibility to communicate their commitment to compliance and to show consistency with previous actions	Norms (personal) Fairness and Trust
<i>Scarcity</i>	People place higher values on resources that are limited	Attempt to characterise compliant behaviour as avoiding losses and show that the tax administration is unique as its services to taxpayers cannot be offered by anyone else	Deterrence Complexity
<i>Social Proof and Consensus</i>	People look to others to guide their behaviour	Signal to taxpayers that compliant behaviour is the norm but be wary of publicising evasion as severe or widespread as this may legitimise undesirable behaviour	Norms (social)
Liking	People are supportive to ideas or actions they like	Emphasise the positive aspects of the tax administration's work and the tax system to improve taxpayers' views	Norms (personal) Fairness and Trust

Source: Based on Cialdini (2001) and OECD (2009).

This paper focuses on practical approaches that move from behavioural research to influencing taxpayers. These principles offer mechanisms to use the factors discussed in previous sections but the mapping in Table 2 is not exhaustive.

III TAXPAYER ATTITUDES AND BEHAVIOUR IN IRELAND

Section II identifies the factors that impact on taxpayer behaviour from the research literature. OECD (2010) provides some information from surveys of tax administrations on their perceptions of the influence of these factors on compliance. However, it is important to know which of these factors are the most relevant in determining the behaviour of Irish taxpayers. Revenue has considerable sources of information on taxpayer behaviour and attitudes in Ireland. Of most relevance to discerning the determinants of behaviour are a series of taxpayer surveys. Revenue has conducted four surveys involving small or medium sized enterprises (SME 2006, 2008) or pay as you earn (PAYE 2007, 2009/10).¹⁶ The results and analysis provide information on a number of areas that can be evaluated against the behavioural factors discussed in Section II.¹⁷

In addition to these four surveys, Revenue also commissioned an independent survey of attitudes and behaviour towards taxation from a third party market research company in 2008/09. The results are not discussed here as the survey has not yet been published but they show similar outcomes across the ranges of issues examined below and provide external validation for the results of the Revenue conducted surveys.

3.1 *SME Attitudes to Compliance*

Overall satisfaction with the service taxpayers receive from Revenue is high. Among SMEs, 87 per cent of those that responded to the 2008 survey are either satisfied or very satisfied (up from 84 per cent from the SME 2006 survey). For PAYE taxpayers, the satisfaction level is 91 per cent in the 2009/10 survey (up from 88 per cent in 2007).

The survey of SMEs in 2008 asked respondents to rate the influence that ten statements have on their compliance. SME taxpayers' compliance appears to be highly influenced by factors related to personal norms. Factors such as *Doing the 'right thing'*; *Because it is the law* and *Presumption from Revenue that you have been honest* are indicated as having a strong influence on

¹⁶ These are postal surveys of randomly selected samples of taxpayers from Revenue's register.

¹⁷ Detailed reports on each survey and results are available on Revenue's website www.revenue.ie.

compliance. The *Belief that other taxpayers are declaring and paying honestly* is less influential. *Concern at having to pay interest charges for late payment of tax* is indicated as the most influential within the topics related to deterrence. Other deterrence factors such as *Concern that Revenue will obtain a court judgment against you for failure to pay tax and publish details of that judgment*; *Concern that you will be published on the Quarterly Defaulters List* and *Concern that you will be audited by Revenue* are influential for a sizeable share of the respondents. *Concern that a 3rd party owing you will pay Revenue* is influential only for small share of cases.

The SME 2006 survey asked respondents about their perceptions of *Revenue's fairness in administering taxes and duties*; *Revenue's efficiency in administering taxes and duties*; *Revenue's effectiveness in dealing with evasion* and *whether public confidence in Revenue is justified*. Across all four statements over two-thirds of respondents agree or strongly agree that Revenue is fair, efficient, effective and has the public's confidence. Less than 10 per cent disagree or strongly disagree in any of these areas.

3.2 PAYE Taxpayers' Attitudes to Taxation

The PAYE 2007 survey asked respondents for their views of Revenue's customer service delivery. Over 70 per cent agree or strongly agree with statements that *Revenue explains my tax credits and relief entitlements* and *Revenue makes it easy for me to claim* [credits and entitlements]. On questions related to Revenue's response speed and the courteousness and helpfulness of Revenue staff, agree or strongly agree responses are 90 per cent or higher.

The PAYE 2009/10 survey included a series of questions on taxpayers' attitudes to tax compliance (and compliance with other regulations) to which the respondents were asked to "agree" or "disagree". Significant majorities agree that *It is not acceptable to declare some but not all income for tax purposes* (85 per cent); *It is not acceptable to buy services knowing the income from them will not be declared to Revenue* (83 per cent); *It is not acceptable to claim credits or reliefs from Revenue that you are not entitled to* (92 per cent);¹⁸ *Those who evade tax repeatedly should receive a jail sentence* (86 per cent) and *It is acceptable to report tax evaders* (92 per cent).¹⁹

The above statements reflect some of the personal norms around tax evasion. It is interesting to note that a lower share (73 per cent) consider it unacceptable to legally avoid paying taxes by using loopholes in legislation. Also, only 72 per cent consider it unacceptable to purchase goods abroad, over the customs limit, and not declare them to customs on returning to Ireland.

¹⁸ Similarly, 95 per cent say it is unacceptable to claim welfare benefits if not entitled to them.

¹⁹ 95 per cent say it is acceptable to report someone fraudulently claiming welfare benefits.

The responses related to statements that reflect social norms are slightly weaker. Only 69 per cent believe deliberate tax evasion is considered unacceptable by Irish society. While 77 per cent believe Revenue has been successful in dealing with tax evasion in the last five years and 76 per cent believe Revenue is able to detect people not paying the right amount of tax, 81 per cent agree that deliberate evasion is on the increase.

3.3 Summary of Survey Findings

The results across the taxpayer surveys indicate that deterrence remains an important determinant of compliance behaviour, as do fairness and trust. The majority of the population considers tax evasion unacceptable and views on Revenue's effectiveness in dealing with evasion are positive. There are suggestions in the responses that tax avoidance and customs issues are seen less unacceptable than tax evasion by some respondents.²⁰ Responses related to personal norms are strong from a compliance perspective but the responses to statements that reflect social norms appear weaker. Many respondents hold positive personal beliefs with regard to tax compliance but the level that believe the same beliefs are widespread in society is lower.

This demonstrates the importance of misperceptions that may negatively influence compliance behaviour. The actual level of non-compliance in Ireland is most likely well below the perceived level reported in the social norm related survey questions. The independent survey of attitudes and behaviour referred to in the introduction to Section III shows that only 3 per cent of people in Ireland actually engage in undeclared work (in a separate Eurobarometer (2007) study 4 per cent of Irish respondents admitted to engaging in undeclared work).

IV PRACTICAL EXPERIENCES IN CHANGING TAXPAYER BEHAVIOUR

As noted in the Introduction, tax administrations have long been in the business of changing taxpayer behaviour. Recent developments have seen tax administrations move towards trying to better understand taxpayer behaviour and to use the behavioural insights developed from research to change behaviour more effectively and from a more scientific perspective.

²⁰ Another factor that emerges from the survey responses is that many taxpayers have little opportunity to evade taxes on their wages (for example, people with PAYE only income). As NEF (2005) points out, due to loss aversion and salience, taxes levied at source (like PAYE) are likely to cause less resentment and be easier to administer than taxes that must be actively paid.

4.1 *Changing Thinking in Tax Administrations*

The traditional view of tax administration focuses around detecting and correcting errors after they have been made (after tax returns have been filed or payments made). However, there is an increasing trend across tax administrations in many countries to develop more preventative approaches that seek to prevent errors before they occur (OECD, 2012; EC, 2010). This is linked to better understanding taxpayer behaviour and motivations. Some tax administrations have placed changing behaviour in this way at the heart of their risk or compliance strategies.

OECD (2010) suggests that every action or message from tax administrations should “resonate” with the behavioural factors and that tax administrations should be alert to public misconceptions or inaccuracies that may impact on behaviour. The challenge for tax administrations is to communicate the message that most taxpayers are honest but those that are not are successfully pursued.²¹ This should be the central message of the tax administration but there is scope for variation regarding norms, deterrence, fairness and other factors.

Perhaps the most well established example of this type of preventative approach is the “Right from the Start” model adopted by the Sweden Tax Agency (STA, 2005). This involves developing a more holistic view of the taxpayer based on knowledge acquired and research conducted. The approach incorporates education, active engagement with taxpayers and representatives, making it easier to comply and building both trust in the administration and positive norms. OECD (2012) examines experiences in other countries in implementing similar strategies based on “Right from the Start” type approaches.

The Behavioural Insights Team in the UK is working in the tax administration area.²² This includes examining ways to make it easier to comply, building social norms and looking at choice architecture changes to improve compliance.

The Dutch approach of “Horizontal Monitoring” establishes agreements between taxpayers (in some cases individual taxpayers, in other cases groups of taxpayers) and the tax administration and focuses on cooperation and mutual trust (NTCA, 2010). Other countries, including Ireland, operate similar programmes although not on the same scale.

²¹ Another issue to consider is that messages about successful measures against tax evasion may inadvertently create an impression that non-compliance is widespread or, as OECD (2010) puts it, may promote a non-compliant norm. For example, for Revenue this is a factor to consider in light of the media coverage of events like the quarterly defaulters list or large customs seizures.

²² The work of the BIT is documented across several sources: Dolan *et al.* (2012); Dolan *et al.* (2010); House of Lords (2011); BIT (2011); and BIT (2012).

4.2 *Measuring Changes in Taxpayer Behaviour*

Considering the issues discussed above, it becomes apparent that communication is a key treatment tool for influencing behaviour. The framing of, and language used, when communicating with taxpayers will have a significant influence on behaviour. Even simple changes can make a difference. Broadly, there are two types of communications that can be used to influence behaviour. Direct approaches target specific taxpayers, for example through the use of a letter to individuals or groups of taxpayers. Direct approaches can also be more passive, for example providing information to specific taxpayers on a particular issue. Indirect approaches are measures that impact on large numbers of taxpayers (or even all taxpayers) in a relatively indiscriminate fashion, for example an advertisement placed on billboards or television.

To fully understand the importance of the various factors influencing taxpayers, pilot projects need to be constructed. Treatments need to be applied and behavioural changes measured. From the perspective of measuring the impact on behaviour, direct and indirect approaches present different challenges. The effect of a direct approach can be measured if appropriate treatment and control groups are established in an evidence based setting. Two samples of taxpayers are selected at random, one group is targeted (the treatment group) and the other is not (the control). As the two groups are the same except for the treatment (the intervention applied), any subsequent change in behaviour between the two groups can be attributed to the treatment.

With indirect approaches, it is often not possible to precisely measure the effect of a treatment, as there is no control group against which to compare. Behaviour can be measured, for example using surveys before and after (or comparisons made to different areas). Any changes may be assumed to have resulted from the treatment but this cannot be known with certainty.²³ It should also be noted that changing taxpayer behaviour is often a long-term project. Even if a treatment is established quickly, it may take several years before the full impact on behaviour is felt (for example, programmes to educate schoolchildren about tax may provide benefits for many years).

The scientific approach and the importance of measurement are key to being able to learn from initial experiences and projects. Piloting and analysing effectiveness are vital to test proposals before they are extended to

²³ In economic terminology, direct measurement in a treatment and control setting are referred to as randomised controlled trials (Delaney and Harmon, 2009). More indirect approaches, such as comparing people in two different jurisdictions or the same people before and after a change, are known as natural experiments. See List (2011) or Ludwig *et al.* (2011) for more discussion of experiments in economics.

the overall taxpayer population. The results then provide feedback to develop new ideas and projects in what is hopefully an ongoing cycle of knowledge discovery.

4.3 *Practical Applications to Changing Taxpayer Behaviour*

There have been experiments in several countries examining how providing information to taxpayers affects behaviour.²⁴ Although varied in their scope, the aim of these projects is to research and test the response of taxpayers to various types of information related to compliance. In the main, the information given to taxpayers concerns deterrence (audit and penalty information), assistance (offering to help taxpayers meet their obligations), education (the positive uses of tax revenue) and social norms (honest information showing that tax evasion is not as widespread as perceived). In most cases, the information is conveyed to the taxpayers via letters sent prior to tax return deadlines.²⁵

Table 3 shows a summary of some of the projects undertaken. The impact of all the studies shown is measured by analysing the differences in outcomes among randomised treatment and control groups.

Table 3: *Selected Evidence-based Experiments on Taxpayer Behaviour*

<i>Ireland</i> Doyle <i>et al.</i> (2009)	Letters were sent to treatment groups of taxpayers that had not filed returns. Letters with a soft, helpful tone had the highest response (30 per cent). A harsher, more authoritarian letter had less effect but still had a higher response (25 per cent) than the standard letter (21 per cent). All had higher contact rates than the no letter control group (15 per cent).
<i>US</i> Chetty and Saez (2009)	Earned income tax credit recipients were randomly split into two groups. One half received extra, personalised information from their tax preparers. The control group received no additional service. The effect on behaviour (labour supply) was significant. Individual preparers are found to impact the results within the treatment group.

²⁴ Alm (2012) provides an overview of a related strand of the literature, on the use of laboratory experiments to test theories on tax compliance.

²⁵ This was not the case in all experiments. For example, the Swedish Tax Agency (Appelgren, 2008) conducted an experiment to assess whether phone calls or letters are better at encouraging late filers to make a return. All of the studies target individuals rather than corporations, except Ariel (2012).

Table 3: *Selected Evidence-based Experiments on Taxpayer Behaviour*
(*contd.*)

UK Hasseldine <i>et al.</i> (2007)	Five letter types were sent to taxpayers (small businesses, sole proprietors) before the return deadline: enable (offering assistance); citizenship (majority of people pay their proper taxes); audit (HMRC increasing small business audits); audit/penalties (as audit but noting the penalties for incorrect returns); and pre-selected audit (inform taxpayer are pre-selected for audit). All had significant effects over the control (reported turnover and profit used to measure). Three audit letters had similar results and were most effective. All letters more effective for self-preparers than taxpayers with agents.
UK Behavioural Insight Team (2012)	HMRC sent letters to taxpayers in tax arrears for the first time. The letters noted that the majority of taxpayers paid their taxes on time. The results showed increases in payment by recipients of letters reflecting social norms (73 per cent) over the control group letters (68 per cent). Letters mentioning local norms, compliance rates in taxpayers' postcode (79 per cent) or town (83 per cent), were more successful than the letters citing national norms.
US Coleman (1996, 2007)	The Minnesota Department of Revenue sent letters to taxpayers prior to their filing deadline. The letter types were: increased chance of examination/audit; offer of enhanced customer assistance; and information messages (on the use of tax revenue for public services and on social norms). The threat of examination/audit increased voluntary compliance for low to middle income taxpayers but was mixed for higher income taxpayers. The enhanced service offer had no impact. The message regarding social norms had a positive but modest effect.
Australia Wenzel (2001a, 2001b)	The Australian Tax Office surveyed a group of taxpayers. This showed people perceive evasion as more widespread than it is. Various forms of feedback were given to the survey respondents and their subsequent tax returns assessed (deductions claimed were compared across the treatment groups). Some respondents were given feedback on the actual prevalence of non-compliance (descriptive norms), another group was provided with feedback on the social acceptability of non-compliance (injunctive norms). Those that received the injunctive feedback made fewer deductions (compared to the control group). The descriptive feedback had a slightly significant effect. Receiving the survey (no feedback) had no effect.
Australia Wenzel and Taylor (2004)	Taxpayers sent schedules to account for certain deductions. Schedules for personal use had no effect. When the taxpayer had to complete the schedule there was a compliance benefit. Interaction of the schedule as an educating tool and a warning of possible audit was key to increasing compliance (warning letters alone had no effect).

Table 3: *Selected Evidence-based Experiments on Taxpayer Behaviour*
(*contd.*)

<i>Israel</i> Ariel (2012)	Treatment letters sent to corporations prior to reporting deadlines. Neither of the letter types, focused on deterrence or moral persuasion, positively influenced reported sales, tax paid or tax deductions compared to the control (no letter). Some evidence that corporations receiving the moral focused letter actually increased their deductions.
<i>Sweden</i> Appelgren (2008)	Letters sent to small businesses prior to the tax return deadline. One group informed that audits would focus on taxpayers declaring low cash flows. Second group informed that audits would be at random. In subsequent returns declared income rose in the year by 20 per cent for the first group, 11 per cent for the second and 9 per cent for the control (no letter).

Source: The papers cited in the table.

Overall, the studies prove changes in the information provided to taxpayers can positively influence behaviour. However, the magnitude of these changes is quite varied and the effectiveness of different factors (norms, deterrence and fairness) is also mixed. This confirms the need to test different approaches in Ireland to ascertain which options are most effective for Irish taxpayers. As opposed to the more direct, evidence-based approaches in Table 3, several tax administrations have implemented policies to change behaviour that can only be measured indirectly.

Tax administrations in Sweden and Denmark have run initiatives involving marketing campaigns (OECD, 2011). The messages varied but centred around the theme of showing the importance of tax revenue for funding public goods and services and the problems arising from shadow economy involvement. Survey results suggest that attitudes and behaviour to tax compliance improved over the period in which the campaigns were run. Both the Danish and Swedish campaigns focused particular attention on trying to change the attitudes of young people. Sweden, along with other countries such as Canada and Austria, has tested an approach of tax officials visiting schools. These visits serve two purposes: to reinforce positive attitudes to taxation but also educate future taxpayers on the workings of the tax system. Surveys suggest these positively impacted on taxpayer behaviour (OECD, 2011).

In the Netherlands, an investigation by the tax administration used media coverage as a tool (OECD, 2010). The investigation included a voluntary disclosure phase. By studying media reports on the investigation, combined with the timings of disclosures, several features are noted. Media reports that

contained messages regarding norms are found to have the greatest correlation with the number of new disclosures. Reports that provided information on how to make a disclosure have a positive correlation. A large proportion of the media reports covered the risks and consequences of detection but these appear to have little influence on the number of disclosures.

The Australian Tax Office publishes information on the average activity levels in several industries (OECD, 2011). These “Business Benchmarks” indicate to taxpayers what the tax administration expects to see from businesses operating in those industries (based on tax returns and third party data). Taxpayers are warned that if they operate outside these norms (below or above the industry averages) they may attract the attention of the tax administration.

4.4 *Developments in Revenue*

Revenue has multiple channels of interactions with taxpayers (for example, tax returns, letters, call centres, walk in offices, audits, online systems, information guides). Many are suitable for direct or indirect measures to influence taxpayer behaviour. However, first there is a need to test which messages are most effective in influencing behaviour in Ireland. Revenue’s interactions with taxpayers are providing pilot projects. The research literature provides the behavioural framework to approach and existing experience of taxpayer behaviour is informing the approach.

Revenue is undertaking several evidence-based pilot projects, across different taxes and groups of taxpayers. Projects in 2011 include letters to encourage excise licence renewals, repayment of tax arrears and compliance in construction. The results show that the piloted changes have improved taxpayer compliance and generated efficiency savings for Revenue. Some treatments have been put into production for the full population of taxpayers. Further projects are underway in 2012, building on the research carried out to date.

Aside from the pilot projects underway, another direct communication avenue is the pre-population of certain tax returns and forms sent to taxpayers with information that is already known to the tax administration. Revenue has begun to implement this in some cases.²⁶ The underlying idea is to limit the unnecessary work needed by the taxpayer. This enhances customer services by reducing complexity and reduces the opportunity for non-compliance.

For indirect messages, Revenue’s broader communications strategy (press releases and other interactions with the media and public) builds on the

²⁶ See Revenue *eBrief* No. 52/11 and No. 20/11 for more information.

framework described above and the communications themselves become tools to encourage compliance. All communications by Revenue should be informed by the factors underlying behaviour and be in line with the organisation's goals.

V CONCLUSIONS – INFLUENCING TAXPAYER BEHAVIOUR

Behavioural research is providing a deeper understanding of taxpayer behaviour. In the context of tax administration, the behavioural literature offers a framework for influencing taxpayers to improve compliance and customer service.

The five factors determining tax compliance (Sections 2.1 through 2.5) provide a basis (interactions between the factors should not be ignored). Cialdini's principles of influence (Section 2.7) are a useful model as to how to apply the factors at a practical level. While there is no best practice guide, this framework offers a structure to guide tax administrations seeking to change behaviour.

The framework is informed by domestic and international research, from academic and tax administration sources. Revenue continues to survey taxpayer attitudes and behaviour as discussed in Section III.²⁷ Results suggest that deterrence, the traditional tool of tax administration, is important but not sufficient to explain the level of tax compliance in society. Other factors are important, particularly the influence of personal norms and the trust in the tax administration. The perception of prevailing social norms is also important but appears to exert less influence on taxpayers than personal norms.

Tax administrations have many treatment tools available to change behaviour. However, tools like audit are expensive. Understanding and influencing behaviour offers an effective approach to complement other options. This is particularly the case for treatments that seek to improve voluntary compliance. Relatively small scale but targeted interventions can have large effects on behaviour.

Section IV provides an overview of new patterns in thinking in tax administrations and experiences to date in influencing behaviour. The section concludes by outlining the work being carried out in Revenue to use

²⁷ OECD (2010) stresses the need for tax administrations to be aware of the prevailing attitudes and behaviour by using regular public opinion research to provide knowledge critical to developing compliance and customer service strategy. These sources need to be fully exploited for all possible insights into behaviour. For example, statistical segmentation offers a new dimension to identify segments in the taxpayer population and further refine treatments for particular groups of taxpayers.

behavioural research as a framework to influence taxpayers. Pilot projects to develop and test behavioural insights are ongoing and future work will continue the process of putting the lessons learned to use in Revenue.

REFERENCES

- ANDREONI, J., B. ERARD and J. FEINSTEIN, 1998. "Tax Compliance", *Journal of Economic Literature*, Vol. 36, No. 2, pp. 818-860.
- ALLINGHAM, M. and A. SANDMO, 1972. "Income Tax Evasion: A Theoretical Analysis", *Journal of Public Economics*, Vol. 1, Nos. 3-4, pp. 323-338.
- ALM, J., 2012. "Measuring, Explaining, and Controlling Tax Evasion: Lessons from Theory, Experiments, and Field Studies", *International Tax and Public Finance*, Vol. 19, No. 1, pp. 54-77.
- ALM, J., T. CHERRY, M. JONES and M. MCKEE, 2010. "Taxpayer Information Assistance Services and Tax Compliance Behavior", *Journal of Economic Psychology*, Vol. 31, No. 4, pp. 577-586.
- APPELGREN, L. 2008. "The Effect of Audit Strategy Information on Tax Compliance – An Empirical Study", *eJournal of Tax Research*, Vol. 6, No. 1, pp. 67-81.
- ARIEL, B., 2012. "Deterrence and Moral Persuasion – Effects on Corporate Tax Compliance: Findings from a Randomized Controlled Trial", *Criminology*, Vol. 50, No. 1, pp. 27-69.
- BARONE, G. and S. MOCETTI, 2009. "Tax Morale and Public Spending Efficiency", Banca D'Italia Working Paper No. 732.
- BECKER, G., 1968. "Crime and Punishment: An Economic Approach", *Journal of Political Economy*, Vol. 76, No. 2, pp. 169-217.
- BEHAVIOURAL INSIGHTS TEAM (BIT), 2011. *Annual Update 2010-11*, UK, London: Cabinet Office.
- BEHAVIOURAL INSIGHTS TEAM (BIT), 2012. *Applying Behavioural Insights to Reduce Fraud, Error and Debt*, UK, London: Cabinet Office.
- BOAME, A., 2008. *Individual Tax Compliance: A Time-Series Regression Using Canadian Data, 1987-2003*, Canada Revenue Agency Baseline Research Paper.
- BOAME, A., 2009. "A Panel Analysis of Behavior Change in Individual Income Tax Compliance", *Recent Research on Tax Administration and Compliance*, IRS Research Bulletin, July 2009.
- BRAITHWAITE, V., 2009. *Defiance in Taxation and Governance: Resisting and Dismissing Authority in a Democracy*, UK, Cheltenham: Edward Elgar.
- CHETTY, R. and E. SAEZ, 2009. *Teaching the Tax Code: Earnings Responses to an Experiment with EITC Recipients*, National Bureau of Economic Research Working Paper No. 14836.
- CHETTY, R., A. LOONEY and K. KROFT, 2009. "Salience and Taxation: Theory and Evidence", *American Economic Review*, Vol. 99, No. 4, pp. 1145-1177.
- CIALDINI, R., 2001. *Influence: Science and Practice*, US, Boston: Allyn and Bacon.
- COLEMAN, S., 1996. *The Minnesota Income Tax Compliance Experiment: State Tax Results*, MPRA Paper No. 4827.
- COLEMAN, S., 2007. *The Minnesota Income Tax Compliance Experiment: Replication of the Social Norms Experiment*, MPRA Paper No. 5820.

- CONGDON, W., J. KLING and S. MULLAINATHAN, 2009. "Behavioral Economics and Tax Policy", *National Tax Journal*, Vol. LXII, No. 3, pp. 375-386.
- CONGDON, W., J. KLING and S. MULLAINATHAN, 2011. *Policy and Choice: Public Finance Through the Lens of Behavioral Economics*, US, Washington DC: Brookings Institute.
- DANISH TAX AND CUSTOMS ADMINISTRATION (SKAT), 2009a. *Compliance with the Tax Rules by Businesses in Denmark*, Denmark, Copenhagen: SKAT.
- DANISH TAX AND CUSTOMS ADMINISTRATION (SKAT), 2009b. *Compliance with the Tax Rules by Private Individuals in Denmark*, Denmark, Copenhagen: SKAT.
- DELANEY, L. and C. HARMON, 2009. "Behavioural Economics and Taxation", memo, Dublin: University College Dublin.
- DOLAN, P., M. HALLSWORTH, D. HALPERN, D. KING and I. VLAEV, 2010. *MINDSPACE – Influencing Behaviour Through Public Policy*, UK, London: Cabinet Office and Institute for Government.
- DOLAN, P., M. HALLSWORTH, D. HALPERN, D. KING and I. VLAEV, 2012. "Influencing Behaviour: The Mindspace Way", *Journal of Economic Psychology*, Vol. 33, No. 1, pp. 264-277.
- DOYLE, E., K. GALLERY and M. COYLE, 2009. "Procedural Justice Principles and Tax Compliance in Ireland: A Preliminary Exploration in the Context of Reminder Letters", *Journal of Finance and Management in Public Services*, Vol. 8, No. 1, pp. 49-62.
- EUROBAROMETER, 2007. *Undeclared Work in the European Union*, Special Eurobarometer 284 / Wave 67.3, for the European Commission.
- EUROPEAN COMMISSION (EC), 2010. *Compliance Risk Management Guide for Tax Administrations*, Belgium, Brussels: Fiscalis Risk Management Platform.
- GOVERNMENT ACCOUNTABILITY OFFICE (GAO), 2011. *Tax Gap – Complexity and Taxpayer Compliance*, US, Washington DC: GAO, report GAO-11-747T.
- HASSELDINE, J., P. HITE, S. JAMES and M. TOUMI, 2007. "Persuasive Communications: Tax Compliance Enforcement Strategies for Sole Proprietors", *Contemporary Accounting Research*, Vol. 24, No. 1, pp. 171-194.
- HOUSE OF LORDS, 2011. *Behaviour Change*, Report by the Science and Technology Select Committee, UK, London: The Stationery Office.
- KIRCHLER, E., 2007. *The Economic Psychology of Tax Behaviour*, UK: Cambridge University Press.
- LIST, J., 2011. "Why Economists Should Conduct Field Experiments and 14 Tips for Pulling One Off", *Journal of Economic Perspectives*, Vol. 25, No. 3, pp. 3-16.S.
- LUDWIG, J., J. KLING and S. MULLAINATHAN, 2011. "Mechanism Experiments and Policy Evaluations", *Journal of Economic Perspectives*, Vol. 25, No. 3, pp. 17-38.
- MURPHY, K., 2004. "The Role of Trust in Nurturing Compliance: A Study of Accused Tax Avoiders", *Law and Human Behavior*, Vol. 28, No. 2, pp. 187-209.
- NETHERLANDS TAX AND CUSTOMS ADMINISTRATION (NCTA), 2010. *Horizontal Monitoring within the Medium to very Large Businesses Segment*, Netherlands: NCTA.
- NEW ECONOMICS FOUNDATION (NEF), 2005. *Behavioural Economics: Seven Principles for Policy-Makers*, UK: NEF.
- ORGANISATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD), 2009. *Conference on Influencing Taxpayers' Compliance Behaviour*, Conference Report, OECD Forum on Tax Administration.

- ORGANISATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD), 2010. *Understanding and Influencing Taxpayers' Compliance Behaviour*, France, Paris: OECD Forum on Tax Administration.
- ORGANISATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD), 2011, "Cash Economy Strategies", draft, France, Paris: OECD Forum on Tax Administration.
- ORGANISATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD), 2012. *Right from the Start: Influencing the Compliance Environment for Small/Medium Sized Enterprises*, Information Note, France, Paris: OECD Forum on Tax Administration.
- PHILIPS, M., 2011. "Taxpayer Response to Targeted Audits", paper presented at the Joint HMRC/ESRC Conference on Taxation Analysis and Research, London, December.
- REESON, A. and S. DUNSTALL, 2009. *Behavioural Economics and Complex Decision-Making: Implications for the Australian Tax and Transfer System*, CSIRO / CMIS Report No. 09/110.
- SLEMROD, J., 2007. "Cheating Ourselves: The Economics of Tax Evasion", *Journal of Economic Perspectives*, Vol. 21, No. 1, pp. 25-48.
- SWEDISH TAX AGENCY (STA), 2005. *Right From The Start – Research and Strategies*, Sweden, Solna: STA.
- THALER, R. H. and C. R. SUNSTEIN, 2008. *Nudge – Improving Decisions about Health, Wealth and Happiness*, UK, London: Penguin Books.
- TORGLER, B., 2011. "Tax Moral and Compliance – Review of Evidence and Cases Studies for Europe", World Bank, Policy Research Working Paper 5922.
- WENZEL, M., 2001a. "Misperceptions of Social Norms about Tax Compliance (1)", Australian National University and Australian Tax Office Working Paper 7.
- WENZEL, M., 2001b. "Misperceptions of Social Norms about Tax Compliance (2)", Australian National University and Australian Tax Office Working Paper 8.
- WENZEL, M., 2005. "Motivation or Rationalisation? Causal Relations between Ethics, Norms and Tax Compliance", *Journal of Economic Psychology*, Vol. 26, No. 4, pp. 491-508.
- WENZEL, M. and N. TAYLOR, 2004. "An Experimental Evaluation of Tax-Reporting Schedules: A Case of Evidence-Based Tax Administration", *Journal of Public Economics*, Vol. 88, No. 12, pp. 2785-2799.

APPENDIX

Table A1: *Compliance Characteristics*

<i>Age</i>	Older people are more compliant, perhaps as they are generally more risk averse. Some studies suggest both the young and old are more compliant than the middle aged.
<i>Gender</i>	Males evade taxes more than females (a similar result is found in the broader literature relating to overall levels of crime).
<i>Marriage</i>	Some studies find married people tend to have higher tax morale and are more constrained (less opportunity for non-compliance) but others suggest non-compliance is higher in households where the head of the household is married. Widowed taxpayers are more compliant.
<i>Education</i>	Educated people may be better informed of tax laws, which should positively influence compliance, but they may also have better knowledge of the opportunities for tax evasion. The empirical results are inconclusive.
<i>Tax Status</i>	Sole proprietors and the self-employed are less compliant on average. The self-employed often have higher compliance costs (taxes are more visible to them) and more opportunity to evade taxes. This is often linked to their sectors of trade.
<i>Employment</i>	Unemployment results in lower incomes and cash flow difficulties but also likely lower (or no) tax liabilities. The empirical results are mixed. Unemployment has a positive effect on payments but a negative effect on reporting compliance. Bankruptcies should have a similar effect to unemployment but again the evidence is limited.
<i>Tax Rates</i>	Tax rates are negatively associated with compliance (i.e., higher rates encourage more non-compliance) in most studies but there is some contradictory research.
<i>Sector</i>	Certain economic sectors are associated with non-compliance: cash and retail businesses, traders operating from a fixed business location (e.g., garage, shop or restaurant), agriculture, those with income from rental or investment sources.
<i>Income</i>	Empirical studies have found mixed results. Higher income may offer more opportunities (or motives) to evade but lower income reduces cash flow and may present payment and collection difficulties. Therefore, both lower and higher income may negatively affect compliance.
<i>Sanctions</i>	The penalties and actual number of audits have a positive impact on compliance but the impact is often found to be small. The subjective level of audit (people tend to overestimate the number and probability of audit) is associated with more compliant behaviour. Prior audit has little effect on compliance, either because the experience may not have been as negative as the taxpayer expected or because once the audit is completed there is a desire to “get back” the income lost.

Voluntary disclosure programmes may negatively affect compliance, perhaps due to the fact that taxpayers intentionally under-report their income, hoping that they can avoid sanctions by availing of future amnesties.

Table A1: *Compliance Characteristics (contd.)*

<i>Agents</i>	Use of tax practitioners tends to promote compliance on unambiguous items such as reported wages and salaries but is less effective on more ambiguously defined items such as business expenses and other topics that may be more open to evasion. There are selection issues also (taxpayers chose to self-prepare or a hire an agent).
<i>Filing Method</i>	Electronic filing is associated with higher rates of compliance than paper filing. This may be a selection issue (more compliant taxpayers may select to file electronically).

Source: Andreoni *et al.* (1998) and Boame (2008, 2009).