

# Habitual Noncompliers

*Michael Duggan, Martyn Knottenbelt, Jason Byrnes, Judi Scheffer, Kevin Green, Phillip Anderson,  
and Stewart Donaldson, Inland Revenue New Zealand*

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## 1 Introduction

A habitual noncomplier (HNC, also known as an egregious repeater) is an individual with a history or pattern of noncompliance—a person who serially and deliberately does not comply—even after compliance intervention. HNCs are a risk to tax administrations in terms of lost revenue, integrity of the tax system, and reputational damage. They can also be costly to deal with through compliance interventions. The purpose of this paper is to outline research that was conducted to understand, quantify, and assess the risk posed by habitual noncompliers and discuss the management of this customer group going forward. The research project was initiated by tax administration investigators, and was a collaboration among researchers, managers, analysts, and investigators within the organisation.

Tax noncompliance is a problem for all jurisdictions and includes all facets of tax administration spanning registration, filing, paying, reporting, and entitlements. Repeated noncompliant behaviour by a person, a habitual noncomplier, is not unique to the field of tax. However, the study of habitual noncompliance within the tax context and an understanding as to how to effectively treat this behaviour is limited. The identification of HNCs as a population of interest for New Zealand Inland Revenue began with an internal discussion document that identified the need for a coordinated approach to managing the noncompliant behaviour of recidivist tax offenders. This paper will first briefly cover the literature on HNCs, followed by four interrelated research studies: 1) the creation of a research database of HNCs known by staff; 2) “Voice of the HNC”—qualitative indepth interviews with HNCs; 3) a profile of habitually late filers and payers; and 4) statistical modelling to identify key indicators of the “worst” noncompliers and using these indicators to detect other potential HNCs. Lastly, the paper will discuss the implications of the research findings and further research directions.

### 1.1 Literature Review

Habitual noncompliance and recidivism as theoretical constructs span many academic disciplines and research foci including criminology, psychology, sociology, white-collar crime, fraud, recidivism or habitual noncompliance, and tax. As the literature on the link between habitual noncompliance and tax is limited, a literature scan was undertaken across the confluence of disciplines and ideas.

Habitual noncompliance is a research topic in itself as well as often being the measure of the success of any treatment. For instance, within the New Zealand prison and correctional context, the recidivism rate is often a primary measure to assess the effectiveness of an intervention over time (e.g., Nadesu, 2008, 2009). However, this is not the case within taxation.

Arguably, the preeminent international source of tax compliance strategies and activities can be found in the reports published by the Organisation for Economic Cooperation and Development (OECD). In recent papers, however, few examples or instances of the habitual noncompliance, repeat offender, or recidivism concepts were published (refer to OECD 2011; 2010a; 2010b; 2009; 2008).<sup>1</sup> While recidivism is acknowledged as an issue it has not been widely and consistently considered or addressed. These references include: Her Majesty’s Revenue & Customs (HMRC) managing deliberate defaulters programme; the use of audit revisit programmes to ensure repeat noncompliance does not occur; the need for longitudinal and repeated evaluation measures; and, that for HNCs a deterrence strategy involving recurring audit activity may be required.

Fundamentally, habitual noncompliance is not part of the common lexicon or language that taxation authorities use when they describe taxation in the context of treatment, evaluation, influence, or compliance improvement. Thus a gap exists between the language tax authorities use to describe noncompliance in comparison to the language used in the literature of crime, punishment, and effective treatment.

As HNCs span all areas of compliance issues there is an important distinction between areas where the noncompliance *reveals* itself and is clearly visible, such as filing and paying, compared to where it is largely *invisible* and requires the revenue authority to identify through enforcement action, such as in the cases of fraud, evasion, and aggressive tax planning. If a taxpayer is registered correctly then filing HNC behaviour is detectable and if the taxpayer files correctly then paying compliance is readily identifiable.

In contrast, issues of registration, reporting, and entitlements are far more hidden. For a taxpayer to be identified as noncompliant, enforcement actions generally need to have been undertaken, and for HNCs multiple actions. Known HNCs are identifiable through staff awareness of the behaviour and through analysis of instances of multiple compliance actions against a taxpayer and their related entities. Detection of this type of harm is therefore dependent on prevalence of HNC activity, and our ability to detect it and have it confirmed through enforcement (Sparrow, 2008).

## ***1.2 General Causes of Habitual Noncompliance***

Noncompliance is undoubtedly caused by the interactions of a wide variety of factors. In basic terms, and from a tax administration perspective, these causes can be split into three broad categories (see Appendix 1 for further description):

- *Individual*—personality, tax thinking (including motives, drivers, and rationalisations), and circumstances (such as addictions, financial situation, and business performance).
- *Administration*—the interaction between the individual and tax administration including tax knowledge, legislation, opportunities for noncompliance, rewards, and real and perceived consequences.
- *Social Influences*—other people, groups, and societal factors that directly and indirectly influence the HNC compliance behaviour.

Noncompliance occurs when there are sufficient underlying causes present and insufficient inhibitors to prevent it from occurring (Andrews and Bonta, 2010). From a tax authority perspective, the central difference between HNC behaviour and other forms of noncompliant behaviour is our inability to restrict, monitor, identify and treat the noncompliance successfully. Habitual noncompliant behaviour continues serially and deliberately. HNCs are more likely to be: people with personality issues or who have strong rationalisations and attitudes against tax; have repeated easy opportunities to not comply, with limited or no consequences applied; and where there is strong social pressure for noncompliance—such as from trusted advisors or where noncompliance within a population segment is the norm. HNCs highlight a gap between a tax administration's ability to restrict, monitor, detect, and treat noncompliance in a manner that changes an individual's tax behaviour to sustained compliance.

## ***1.3 Treatment of Habitual Noncompliance Within Revenue Authorities***

Although recidivism within tax administrations may not have a large body of published research, a number of agencies are focusing on taxpayers who repeatedly choose to not comply with their tax obligations—particularly filing and paying compliance.

Where identified, tax authorities' treatment of HNCs has been attempted through:

- Use of automated letters
- Issuing of arbitrary assessments
- Escalation of the case to a more advanced stage of the collection process (using fines and liens earlier in the collection process)
- Requiring increased disclosure
- Deterrence of phoenix activities
- Public Naming
- Prosecutions

### Canadian Revenue Authority (CRA)

For example, the Canadian Revenue Authority (CRA, 2005; 2007) researched various treatment options for those who have not filed tax returns including the use of arbitrary assessments. The results suggest that initial treatments effected behaviour change, but that this change was not sustained over time, and that the arbitrary assessment process did not appear to be a major deterrent for committed noncompliers.

### Internal Revenue Service (IRS)

The IRS has focused on identifying *balance due*<sup>2</sup> taxpayers who were likely to repeat noncompliant behaviour (i.e., filing and paying), and in particular, “hard core” (“egregious”) noncompliers (Scott, Plueger, and Mendelson, 2010). Using filing and payment data, the IRS differentiated their egregious customers from other repeat nonfilers using administrative data variables. Once an egregious noncomplier is identified, the IRS accelerates the higher risk cases into a more appropriate stage of the collection process and tests alternative compliance treatments. The targeted approach increases overall efficiencies by initiating collection action in a more appropriate manner and potentially by eliminating unnecessary steps.

### Her Majesty’s Revenue and Customs (HMRC)

HMRC initiated a Managing Deliberate Defaulters (MDD) programme in February 2011 (HMRC 2010; 2011).<sup>3</sup> The programme aims to deter defaulters from returning to noncompliant behaviour, encourages a permanent shift to compliant behaviour, and deters potential evaders. The HMRC monitors and manages the compliance behaviour of deliberate evaders across all their compliance responsibilities with HMRC (registration, filing, reporting and payment). A key theme behind the approach is that evasive behaviour in one tax area highlights a wider risk across the whole of the evader’s trading activities, and their relationship with HMRC.

### Australian Taxation Office (ATO)

In treating phoenixing, a form of habitual noncompliant behaviour, the ATO favours an early intervention approach to discourage directors from becoming repeat offenders (Roach, 2010). The ATO’s early intervention (and prevention) programme involves contacting phoenix operators sooner via targeted letter and phone campaigns. This is designed to deter fraudulent phoenix behaviour at inception before it becomes business as usual. The ATO also seeks out the worst offenders, subjects them to comprehensive audits and, where appropriate, refers them for prosecution.

## 1.4 General Treatment of HNCs

The literature has shown that a decision to not comply is influenced by a variety of factors both internal and external to the individual. In order to treat the root cause of HNC behaviour more effectively it is useful to consider how recidivist criminal behaviour in general is treated. Although there is a wide body of research on different aspects of treatment, two broad classes are important to the initial discussion of HNCs within tax—sanctions and behavioural approaches.

### 1.4.1 Sanctions and HNCs

At present, the main options for managing HNCs by tax authorities are generally education, penalties, and prosecutions. In criminal contexts, traditional mechanisms of greater penalties and sanctions such as imprisonment, although possibly effective as deterrents, have not been found to greatly impact recidivism rates. In fact, studies on the length and severity of punishment have found that increased severity leads to slight increases in recidivism compared to lesser punishments (Andrews and Bonta, 2010).

Ideally, for a sanction to be maximally effective there is a need for the early identification of offending, full discovery of all breaches, and prompt application of sanctions to fit the level of the offending. Obviously no enforcement system can deliver sanctions with such certainty. If detection of offending is less than certain, there is a strong likelihood that the extent and level of offending will remain unidentified, and punishments and sanctions not delivered, then recidivism becomes a more likely consequence.

### 1.4.2 Individual HNC Behaviour and Interventions

In terms of effecting behaviour change in HNCs most tax authorities face an obvious constraint in that they have no mandate to engage in individual behavioural interventions to treat underlying causes of noncompliance. One set of methodologies that have found wide success in reducing recidivism is the classes of treatment referred to as cognitive behaviour therapy (CBT). A number of meta-analytic studies have found CBT to be the most effective or one of the most effective treatment strategies for juvenile and adult offenders (i.e., Pearson, Lipton, Cleland, and Yee, 2002; Wilson, Bouffard, and MacKenzie, 2005). CBT looks to change how people think ('cognitive') as well as what people do ('behaviour'). However, tax authorities generally have no mandate or expertise to undertake this class of treatments.

HNCs or recidivists are an important segment to research and discuss. Within the tax literature HNCs are an area that has not been well researched and integrated in the compliance activities of tax authorities. Although there are initiatives in certain jurisdictions, tax authorities appear to be behind other agencies in their approach to reduce habitual noncompliance. Given the literature suggests sanctions may not be the best method to treat HNCs, and that the most effective class of treatments is beyond the mandate of most tax authorities, it is important to research the topic to identify more effective means of identifying, classifying, and intervening to maintain the integrity of the tax system.

## 2 Habitual Noncompliers Research Project

The HNCs research project was initiated following an internal discussion document written by a group of investigators in 2009. They identified HNCs as a segment requiring special attention and the need for a coordinated approach to managing the noncompliant behaviour of recidivist tax offenders.

The document noted that the behaviour of these types of people is costly and unlikely to change unless they were specifically targeted for intervention. As a result, a research project was set up to investigate HNCs as part of the wider compliance programmes and as outlined in Inland Revenue's compliance focus document.<sup>4</sup>

The project deliverables were:

- Study 1: A database of Tier 1 HNCs (the most serious offenders).
- Study 2: The 'Voice of the HNC'—qualitative research with HNCs (to gain insights into their perspective on tax compliance including their motivations and drivers).
- Study 3: A database of Tier 2 HNCs (those who repeatedly file or pay late—regarded as less serious).
- Study 4: Statistical modelling to identify indicators of HNC behaviour and exploratory analysis to ascertain those who are a HNC risk.

This paper presents an overview of the findings from each of the aforementioned project deliverables. These initiatives were exploratory and action research focused.

### 2.1 HNC Definition Used in the Research

HNCs are people who have a persistent history of noncompliance—individuals who intentionally choose not to comply, or who assist others to not comply, even after an Inland Revenue compliance intervention.

The working definition of a "**Habitual Noncomplier**" is a person who has a history of noncompliance who serially and deliberately:

1. commits tax evasion (including phoenixing and bankruptcy to evade payment)
2. makes fraudulent claims for pecuniary advantage
3. promotes, initiates or participates in tax avoidance schemes
4. fails to keep, maintain or provide documents and returns, or pay tax
5. has come to Inland Revenue's attention because of their noncompliance.

### 3 Study 1—Research Database of HNCs

#### 3.1 Introduction

Many HNCs are known to tax authorities but are hidden by the fact that HNCs are not considered a separate risk population and staff have no mechanism with which to report them. Consequently the starting point of the research was to use staff knowledge to identify and describe their HNC encounters, which was then analysed.

#### 3.2 Methodology

The HNC project working group developed a research form to collect information about known HNCs from Inland Revenue employees. The resulting HNC database became the central collection point of information relating to each individual HNC and covered:

- Demographic characteristics.
- Loss of revenue, tax entities involved, duration of offending.
- Risk areas of noncompliance (evasion, fraud, aggressive tax planning etc.).
- Tax types of noncompliance covering income tax, employer obligations, and social policy.
- Strategies used by the HNC to facilitate noncompliance (non-response, phoenixing, disputes, complaints, etc.).
- Treatments applied such as forms of investigations, penalties, bankruptcy etc.
- Responses to treatments—adaptability, financial risk, and time to re-offend.
- Noncompliance with other government agencies.

The database was promoted to all staff via the intranet, email reminders, and a number of articles on the Intranet home page. In addition to this, forums were held with business units likely to have engaged with HNCs in the five main regional centres. Presentations were delivered to management across different levels to promote the initiative.

#### 3.3 Analysis

The analysis of the database illustrates that a small proportion of taxpayers are negatively affecting Inland Revenue through repeated noncompliance. The habitual noncompliance of some taxpayers is not a new phenomenon, as some of the behaviour identified within this database goes back many years.

Data was also extracted from internal systems to supplement the information contained in the HNC database. The analysis is broken into a summary of the demographics of HNCs, their noncompliant behaviour, and Inland Revenue's response to their activities. This analysis provides a richer understanding of HNC behaviour and their interactions with Inland Revenue.

##### 3.3.1 HNC Population

The information collected in the HNC database related to 644 individuals. The list below provides a summary of the demographics:

- The HNCs were predominantly male (89 percent)
- Almost all were New Zealand residents (99 percent) for tax purposes.
- Individuals tended to be older with the majority (63 percent) of HNCs being 46 years of age or older. This is logical given habitually noncompliant behaviour requires multiple years of noncompliant activity and that it takes time for Inland Revenue to identify them.

### 3.3.2 Categorised Historical Value of Lost Revenue

Respondents were asked to estimate and categorise the historical value of lost tax revenue due to the actions of the HNC, and the other tax entities or individuals they enabled. Figure 1 shows the number of HNCs within each band of estimated revenue loss.

**FIGURE 1. Estimated Lost Revenue**

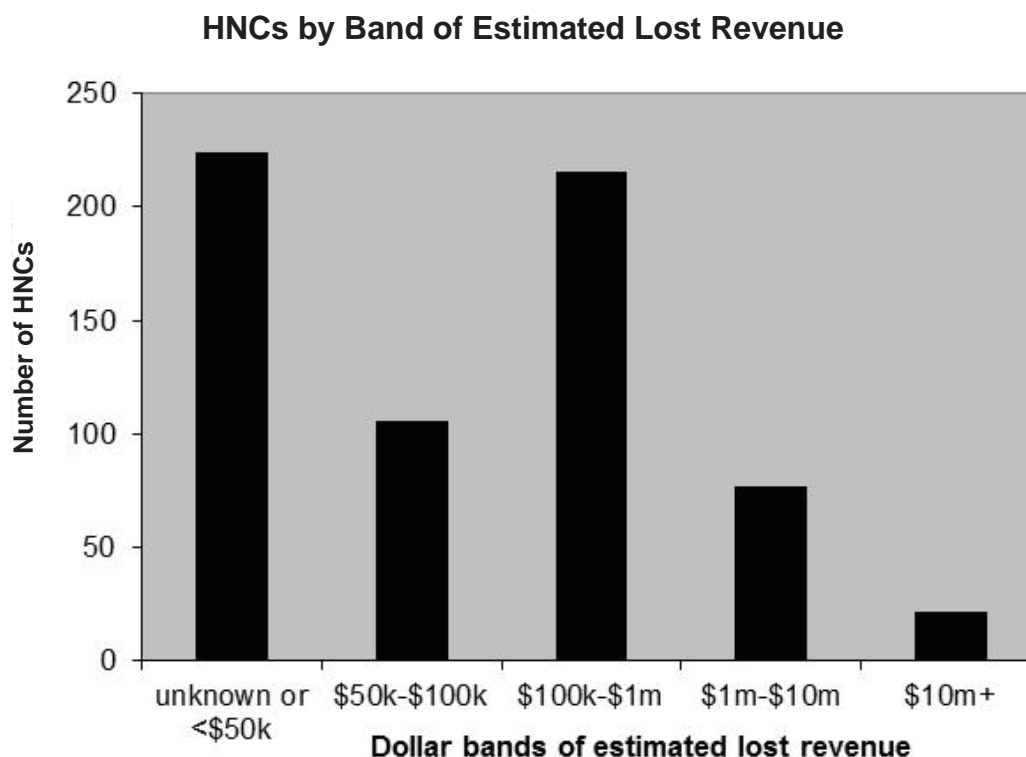


Figure 1 indicates that the dollar value (NZD—New Zealand dollars) of lost revenue is concentrated in a relatively small number of HNCs with 100 HNCs, or 15 percent of the sample, reported in bands of estimated lost revenue of \$1m or greater. Note that there are also many identified as unspecified or less than \$50,000.

### 3.3.3 Structure and Number of Entities Involved

Staff were asked to provide the number of entities linked to, or enabled by, the person that they were providing information about. The '1 entity' choice represents 1 entity or unspecified. As indicated in Table 1, approximately 75 percent of HNCs used structures with 5 entities or less. Fifteen percent of HNCs were associated with 11 or more entities. The structure and number of associated entities varied significantly.

**TABLE 1. HNC Entity Structure**

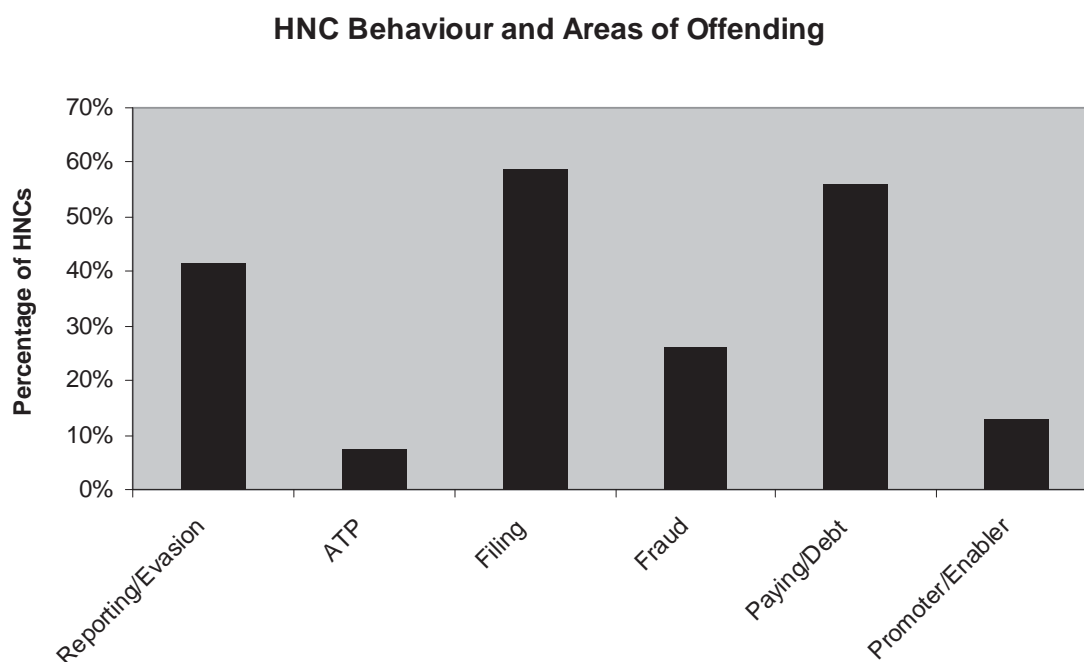
Entity Structure	Number of HNCs	Percentage of HNCs
1 entity/unspecified	293	46
2-5 entities	189	29
6-10 entities	65	10
11-50 entities	69	11
50+ entities	28	4
<b>Total</b>	<b>644</b>	<b>100</b>

Categorised revenue loss was also concentrated with HNCs with more complicated entity structures—those with 11 or more entities.

### *Areas of Offending*

Respondents of HNC information were asked to identify the area/behaviour of HNC activity. They were able to choose from Reporting/Evasion, Filing, Paying/Debt, Aggressive Tax Planning, Fraud, Promoter/Enabler, and Other. Figure 2 shows the HNC areas of offending.

**FIGURE 2. HNC Areas of Offending**



The majority of HNCs were identified as being noncompliant in the areas of Filing (59 percent) and Paying/Debt (56 percent). Reporting/evasion noncompliance was displayed by two out of five HNCs. Some of the more significant areas indicating intent—Fraud and Promoter/Enabler—made up 19 percent of the offences. Approximately 3 percent of HNCs were identified as being noncompliant in the area of “Other”. The *Other* category related primarily to the abuse of bankruptcy and the misuse of other people’s identity.

Furthermore, the HNCs aged 55 and older participated in Aggressive Tax Planning to a greater proportion than the other age groups while those 35 and under were not identified as participating in Aggressive Tax Planning. This suggests that HNCs become more sophisticated in their activities as they mature. Filing and Paying/Debt were the two most frequent types of offending within the rest of the age brackets. When looking at the total number of areas of offending by age bracket, a greater percentage of older HNCs have acted across more areas than younger age brackets. This could be the result of gaining experience over time and learning how to most effectively be noncompliant.

The majority of HNCs (78 percent) had been noncompliant in one to three different areas of offending. However, HNCs associated with the highest band (\$10m plus) had generally been noncompliant in four or more areas. This indicates that the most significant offenders exhibit noncompliant behaviour across the greatest number of areas.

### 3.3.4 Strategies Used by HNCs

Respondents were asked to identify strategies that HNCs use to facilitate their noncompliant behaviours. They were provided a list of strategies and were asked to select as many strategies as applicable. The strategies ranged from illegal (e.g., fake/stolen identity) to legal activities (e.g., Official Information Act request). Many of the HNCs used multiple strategies as part of their HNC behaviour.

Table 2 lists the noncompliance strategies used by the HNCs and the total percentage of HNCs that used them. Fundamentally HNCs are either trying to defraud the tax authority to generate income or they are trying to shield their income from tax. They were often identified as using multiple strategies. The strategies used range in sophistication from the simple (and most popular of *nonresponse* and *other delaying tactics*) to those requiring greater initiative and intent (*creating false identities* and *complex company structures*). The majority of HNCs had used *nonresponse* as a strategy. A smaller portion of the HNC population used the dispute process, filed complaints, made information requests, and initiated judicial reviews.

**TABLE 2**

Strategy	Number of HNCs	Percentage
Nonresponse to Requests	381	59
Other Delaying Tactics	222	34
Liquidation	122	19
Phoenix	93	14
Disputes	91	14
Complaints against Inland Revenue	83	13
Acting through Surrogate	71	11
Write-off	70	11
Change of Name	61	9
Fake/Stolen Identity	54	8
Judicial Review	32	5
Official Information Act Request	27	4
Privacy Act Request	19	3
No Strategy Identified	82	13

The HNCs estimated to be responsible for high revenue losses tend to employ a greater number of strategies while the lower dollar value HNCs tend to employ a fewer number of strategies. This may suggest that as HNCs learn about systems and processes, they learn about additional strategies to elude the administration of the tax acts.

The detailed comments reported in the strategies section highlight how HNCs change, or adopt new identities, structures, and tactics to be noncompliant. HNCs were reported to be clever, some being very well educated, and paid attention to responses, legal practices, limitations, and actively sought weaknesses in systems and processes. In this regard HNCs were known to:

- Abuse the bankruptcy process by changing identities.
- Claim that they have been victims of identity theft themselves.
- Use friends, work associates, and family member identities.
- Trade through struck-off companies.
- Use a wide network of agencies and employees to conceal their actions.
- Switch the names of trustees in a trust.
- Subtly alter names to prevent attempts to match bank accounts, customs records, etc.



### 3.3.5 Treatments Applied by Inland Revenue

The HNCs have been treated by the full range of options available to Inland Revenue. Table 3 provides a count of the treatments applied to HNCs and the total percentage of HNCs that received the treatment.

**TABLE 3**

Treatment	Count	Percentage
Debt Action/Investigation	255	40
Personal Audit/Investigation	210	33
Prosecution	196	30
Entity Audit/Investigation	181	28
Bankruptcy	140	22
Shortfall Penalties	120	19
Failure To Furnish	116	18
Court Order	113	18
Liquidation	98	15
Other	58	9
Community Relationship Visit	43	7
Banning of Directors	19	3

Investigations were carried out on 404 (63 percent) of the HNCs. Prosecution, one of the more costly treatment options, was applied to 30 percent of HNCs. Just over half of these prosecutions related to HNCs identified as committing Fraud. A Community Relations visit, a form of education, was applied to 7 percent of the HNCs.

Seven or more treatments were targeted at approximately 4 percent of the HNCs; the majority of these HNCs were categorised as having a historical loss of tax revenue of \$1 million or more. Inland Revenue has applied three or fewer treatments to approximately two out of every three HNCs (68 percent).

### 3.3.6 Noncompliance Across Other Government Agencies

One out of six HNCs had either a nontax criminal record or had been investigated by another government agency. Thirteen percent of the HNCs were reported to have other nontax criminal records, 7 percent had been investigated by another government agency, with a small number having both. These percentages were based on information known by the respondents and are therefore conservative, as many would have other compliance issues that the staff member was unaware of. Analysis based on the submissions that were not linked to Child Support issues found approximately one out of four of the HNCs had either a nontax criminal record or had been investigated by another government agency.

### 3.3.7 HNC Response to Treatment

The responses that HNCs had to Inland Revenue treatments were recorded. Staff were asked a series of questions in regard to length of time for repeat noncompliant behaviour, how adaptive their behaviour became, how the financial risk changed, and how the HNC influences others to be noncompliant.

#### *How Quickly Does the HNC Typically Re-offend?*

Just about half of the respondents answered unsure/nonresponse for this question. Of those that did answer, Table 4 describes the length of time until the next noncompliant activity. Approximately 85 percent of the HNCs committed their next noncompliant activity within a year.

**TABLE 4**

Length of Time Until Next HNC Activity	Percentage
Over 1 year to the next noncompliance activity	15
6 months to 1 year	9
Within 6 months	10
Immediately	55
Sets up next HNC activity prior to resolution of the previous	11
<b>Total (n=329)</b>	<b>100</b>

*How Adaptive Is the Re-offending (Modus Operandi)?*

Just under half of the respondents answered unsure/nonresponse. Of those who did respond, 78 percent of HNCs used the same methodology or something similar for their next HNC activity—as shown in Table 5. Nearly a quarter of the HNCs showed the ability to change their HNC behaviour a reasonable amount in the attempt to exploit Inland Revenue's systems, processes, or other tax types.

**TABLE 5**

Level of Adaptive Change in HNC Methodology	Percentage
Exactly the same methodology—area, tax type, and channel	55
Minor changes in methodology—same tax type or method	23
Moderate changes—different tax type or method	10
Highly adaptive and changeable—different tax type and method	11
Changes nearly all aspects of the noncompliance activity	1
<b>Total (n=342)</b>	<b>100</b>

*How Has the Financial Risk Changed in Re-offending Patterns?*

About 60 percent of the respondents were unsure/nonresponse as to whether or not the HNC revenue risk changed. For those who responded, as shown in Table 6, in two-thirds of the responses the amount of revenue at risk from HNCs either stayed the same or decreased. For the other one-third of HNCs the amount of revenue targeted increased, perhaps in an effort to recoup previous losses caused by previous treatments.

**TABLE 6**

Change in Revenue at Risk	Percentage
Significant decrease in amounts	6
Minor decreases in amounts	5
Similar financial amounts	57
Minor increases in amounts	11
Significant increases in amounts	21
<b>Total (n=257)</b>	<b>100</b>

*How Many Other Individuals Are Being Influenced/Contaminated to Noncompliance?*

Table 7 shows that approximately two-thirds of the respondents answered unsure/nonresponse as to the number of people being influenced by the HNC. Of the one-third who responded, approximately 80 percent were influencing others with 33 HNCs influencing 50 or more other people.

TABLE 7

Number of Others Influenced	Percentage
Has not influenced any other individual	20
1-3 others	28
4-10 others	20
11-50 others	17
50+	15
<b>Total (n=225)</b>	<b>100</b>

### 3.4 Study 1—Discussion

HNCs negatively impact Inland Revenue in terms of lost revenue and their detrimental effect on the integrity of the tax system. HNCs inflict cost through defrauding social policy entitlements, underreporting and evading tax obligations, and through requiring a significant amount of attention and resource. Although this sample of HNC taxpayers is not necessarily representative of all HNCs nor comprehensive, the data as it stands demonstrate the need for greater attention to be paid to this segment.

Study 1 has a range of limitations that limit what can be inferred. The HNC database reflects a purposeful sample as opposed to a population, or random sample of a population, of HNCs. Staff members from across the country were given the opportunity to provide information, and responses were dependent on the motivations of staff and team leaders. Some noncompliant behaviour is also more readily identifiable, such as non-custodial parents neglecting to pay child support (as opposed to fraud or evasion), and therefore this class of HNCs was likely overrepresented in the database. Furthermore, one region suffered a catastrophic earthquake during the data collection phase which limited the HNCs that were entered into the database. All of these factors limit the conclusions that can be made from the data. However, the information does provide very useful insights into the various elements of habitual noncompliant behaviour and guides what tax administrations can do in order to improve compliance with this class of taxpayer.

The findings of this research have a number of clear implications for the types of activities tax authorities need to develop in order to address this compliance issue. This includes the value of a repository of HNCs, the benefit of coordinated activity that spans across government, and the need for monitoring. A centralised HNC registry would allow for a more consistent approach to the identification, classification, and treatment of HNCs. Also, since many of the HNCs were identified as being noncompliant with other government agencies, tax authorities could further explore information exchanges. However both information exchanges and an HNC registry have significant privacy and legal issues that would require being worked through before they could be implemented.

HNCs are people who have not complied even after interventions, which suggests that limiting the associated tax risk may require expanding the range of monitoring and treatments presently available. For instance, both passive and active monitoring could be developed; passive monitoring might be possible through sophisticated system tools for lower risk HNCs, while active monitoring would be required for those operating outside of the tax system, using multiple identities, or who enable others, since tax systems may not receive the information to appropriately monitor. Given there appears to be significant fiscal risk associated with a smaller number of taxpayers (within Study 1 there were 100 individuals classified associated with losses of \$1 million or more) the level of monitoring should reflect both the behaviours and the individual risk.

The Study 1 analysis is based on the reactions, perceptions, and experiences of staff members who dealt with the HNCs; and as such, only presents one side of the story. It is reasonable to presume that many of these individuals would disagree with the way they are portrayed within the HNC database, and would describe their circumstances and actions in very different terms. Therefore, while the analysis and inferences gained through the study of the HNC database are valid, it provides only a partial view of the HNC issue as a whole and to obtain a greater understanding the perspectives of the HNC themselves should be considered (as in Study 2, below).

## 4 Study 2—Voice of the HNC

### 4.1 Introduction

Although we can research HNCs from an internal tax authority perspective by surveying staff (as in Study 1), this represents only part of the HNC view and is biased towards internal thinking. We therefore conducted a qualitative research project to solicit the view of the HNCs themselves.

### 4.2 Methodology

#### 4.2.1 Research Approach

All fieldwork was conducted by an independent research company. Anticipating the possibility that HNCs' interest in participating in the research might be low, particular care was taken during the recruitment stage, to encourage participation—including telephone recruitment, followed by a letter, and a small financial incentive to participate.

The primary respondents for this research were HNCs and a sample was drawn from the Study 1 database. The sample was intended to be  $n=27$  respondents. Despite recruiting and confirming  $n=27$  (at least twice) there were nine 'no shows' which is unexpectedly high for normal social research but may represent the difficulties in working with this class of individual. The final number of HNCs interviewed was  $n=18$ . The 18 represented a cross section of HNCs as identified in Table 8 and the types and nature of offending.

**TABLE 8. Types of Offending Amongst the Final Sample**

Type of HNC Behaviour	Number of HNC Respondents
Type 1 (< 100K)	10
Type 2 (> 100K)	8
Social Policy	4
Evasion	6
Aggressive Tax Planning	7
Fraud	3
Enabler	6
<b>TOTAL*</b>	<b>18</b>

\* Because any one HNC may have been involved in multiple types of offending, the total does not add up to  $n=18$ .

#### 4.2.2 Interviewing Method

HNC respondents were interviewed on an individual, face-to-face basis, with the duration of most interviews being between 60-90 minutes. The researchers used a combination of elicitation interviewing and enabling techniques in their interviews with HNCs to encourage them to talk confidently and safely about their own and others' participation in noncompliant tax behaviour.<sup>5</sup>

### 4.3 Results

The factors leading to habitual noncompliant tax behaviours were explored through participants' motivations and pressures initiating the behaviour; justifications used for their behaviour; and the opportunities to participate. This was followed by four behavioural archetypes of HNCs identified by the research (Game Players, Opportunists, Pretenders, and Achievers) which can be differentiated on the basis of the sophistication of their noncompliant behaviours and their intention not to comply.

#### 4.3.1 Motivations and Pressures

The initial motivations and pressures leading to noncompliant tax behaviour are one, or a combination of, the following:

- Greed and ambition.
- Personal problems.
- Professional or business problems.

The findings of this research suggest that, while the motivations and pressures leading to noncompliance (i.e., greed, personal and professional or business problems) may remain consistent for some HNCs, for others they may change over time. For example, greed may have been the motivator the first time they did not comply, but subsequent noncompliance may have resulted as a consequence of business or personal problems.

#### *Financial Greed and Ambition*

Some of the HNCs interviewed in this research were candid enough to admit that greed had been a driving force in their noncompliance. For some, financial wealth was part of an overriding ambition to be, and be seen as, successful (i.e., a desire for social status). As opposed to financial desire and ambition, personal and professional problems may be more about survival.

#### *Personal Problems*

Within this research, personal problems were alluded to that might lead individuals to wilfully avoid compliance (e.g., to help pay for an addiction), and personal problems that led to HNCs' inability to focus on and complete their compliance requirements (e.g., a wife's suicide, a heart attack).

#### *Professional or Business Problems*

Professional or business problems leading to noncompliance identified within this research included cash flow problems resulting from: a major creditor not paying a self-employed builder; inability to meet child custody payments because of the irregular commission based income of a salesman; and the sporadic work of a contractor.

The root of some of these problems was the poor business management of some small businesses and the self-employed (e.g., not keeping proper records and poor knowledge of how to comply).

### 4.3.2 Justifications

Justifications for different habitual noncompliant behaviours included: the social acceptability of noncompliant behaviours; negative attitudes to the tax system; and negative perceptions of the tax authority.

#### *Social Acceptability of Noncompliant Behaviours*

One of the intriguing findings of this research was the prevalence of beliefs amongst the HNCs interviewed about the social acceptability of tax noncompliance. For example, the view that it is acceptable to do some cash work to supplement a taxable income appeared to be commonplace. Rationalisations in this regard include: *I need the cash, you're stupid if you don't, and everyone's doing it.*

Attitudes towards the acceptability of tax minimisation were also found to be commonplace. In fact, some see it as their "moral duty" to minimise their tax (or the tax of their clients). Rationalisations in this regard include: *It's smart business practice, it's your obligation to your family to minimise your tax, you look after your own first, and I haven't broken the law.*

#### *Attitudes Toward the Tax System*

Attitudes toward the tax system and paying tax are used as a justification for noncompliance.

One of the surprising findings of the research was that most HNCs had no philosophical issues with the concept of paying some tax, in order to fund social services and infrastructure, which seems to be at odds with their noncompliant behaviour. However, despite this belief many expressed dissatisfaction of some sort with the tax system. As might be expected, those most dissatisfied are likely to feel the greatest justification for their behaviour.

More commonly, HNCs believed that the current tax system is unfair, because some people are carrying more than their share of the burden (e.g., salary and wage earners, the self-employed and SMEs), while others are paying nothing, or next to nothing (beneficiaries and the very wealthy). The rationalisation in this regard includes: *It's my money, I worked hard for it, and I need it more than anyone else.*

Others' concerns were in relation to how the tax purse was being spent (e.g., not enough focus on the things that matter, like education and health, and government officials spending money on their own leisure). Some believe that there should not be any sort of personal tax collected, or that tax should be collected only through a value added tax.

### *Perceptions of the Tax Authority*

The HNCs interviewed in this research, although recognising the need for taxation in society, were united by their poor perception of the Tax Authority (the organisation and its staff). At worst, this was expressed as a passionate dislike, and at best, a lack of respect.

As with the attitudes to the tax system and social acceptability of noncompliant behaviours, negative perceptions of the tax authority are also used as a justification for noncompliant behaviours. Most criticisms are levelled at the way in which the organisation conducts itself if there is a question of noncompliance, in particular if it is a heavy-handed approach. This kind of approach was labelled as “**bullying**” and “**predatory**.”

Such perceptions are reinforced by the behaviour of some staff and their accusatory approach, summed up by many as “Guilty until proven innocent” (albeit others are regarded as exemplary in their behaviour). In this regard some HNCs are adamant that the organisation picks on the weak and the vulnerable, rather than focussing on the “big players” (individuals and corporations) who they perceive as getting away with paying little or no tax.

Other criticisms include Inland Revenue's stereotypical government department status, leading it to be described as “bureaucratic”, “incompetent” and “slow to act.” These same factors also leave the organisation vulnerable to being taken advantage of, and undermine the effectiveness of some of its treatments.

As a consequence of its reliance on technology and mail for communications and transactions, the tax authority is perceived as “faceless.” The facelessness of the organisation, like its bureaucratic status, is also viewed as both a pro and a con by different HNC behaviour types. For some, the disadvantages are that it makes the organisation appear to be less approachable and as a result they avoid dealing with their tax issues which eventually spirals into repeated noncompliance. For other HNCs, the facelessness makes it “easier to rip it off.”

### 4.3.3 Opportunities

Opportunities include reactions to Inland Revenue's treatments (including perceptions of the likelihood of being caught and level of concern about the consequences), as well access to enablers.

#### *Reactions to Inland Revenue's Treatments*

It is evident from this research that HNCs hold a perception that their treatment has not been effective and may justify further noncompliance. Factors that appear to be undermining the perception of treatments include:

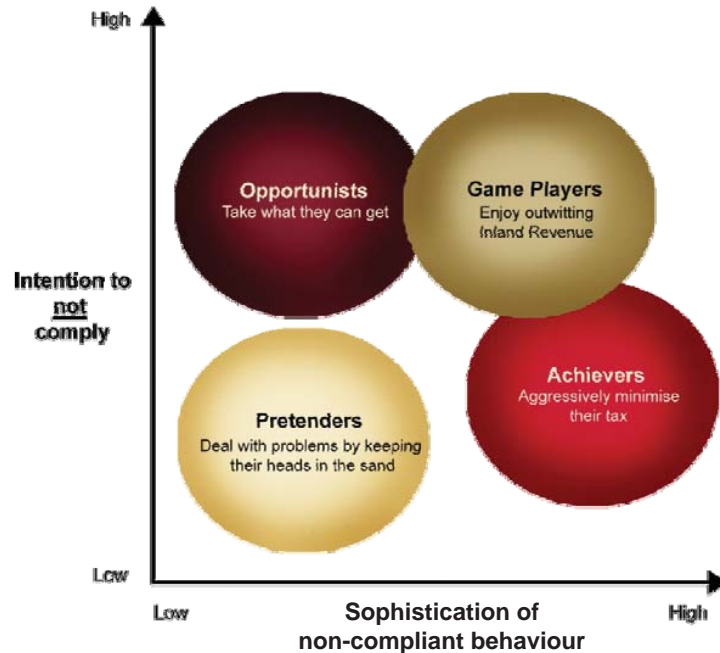
- The length of time it takes for the tax authority to identify noncompliant behaviour.
- The use of automated and impersonal communications (mail), rather than personal contact as soon as the problem has been identified.
- An inability/unwillingness to be flexible and to negotiate solutions (in the best interests of both parties).
- The lengthy delay (sometimes years) between the identification of a problem and its resolution (e.g., compounding penalties and long, drawn out court cases).
- The impact of compounding penalties that have become so enormous (hundreds of thousands of dollars) that it is inconceivable, if not impossible, to ever be able to pay these back.

Overcoming these collective perceptions against the tax authority and compliance is challenging. There may need to be different strategies depending on the particular motivations and intentions of the taxpayer.

#### 4.3.4 HNC Behavioural Profiles

This research identified four behavioural profiles of HNCs, which can be differentiated on the basis of the sophistication of their behaviours and their intention to not comply:

**DIAGRAM 1. Four HNC Behaviour Profiles**



<p><b>Opportunists</b> Take advantage of the vulnerabilities and weaknesses of systems and processes. Often enablers, sharing knowledge with others.</p> <ul style="list-style-type: none"> <li>▪ Little respect for Inland Revenue and the government.</li> <li>▪ Take what they get, including taking advantage of IR's weaknesses.</li> <li>▪ Comfortable being noncompliant, as long as they are below the radar.</li> <li>▪ Believe they are of little interest to IR, because they are "small fry".</li> <li>▪ Believe their behaviour is socially acceptable.</li> <li>▪ May be overrepresented in cash-orientated industries.</li> <li>▪ Don't use tax specialists; rely on informal enablers (e.g. friends).</li> </ul>	<p><b>Game Players</b> A strong desire for business and financial success (to be a winner), general dislike of tax authority and take pleasure in the challenge of outwitting, or pulling one over them.</p> <ul style="list-style-type: none"> <li>▪ Long and colourful relationships with IR.</li> <li>▪ True entrepreneurs (e.g. multiple business interests).</li> <li>▪ Strong desire for success.</li> <li>▪ No strangers to IR's scrutiny.</li> <li>▪ Enjoy outwitting IR. A challenge fuelled by their intense dislike for the organisation and its staff.</li> <li>▪ See themselves as David up against Goliath, and enjoy the fight.</li> <li>▪ Aggressive and stubborn.</li> </ul>
<p><b>Pretenders</b> They do not share the same intentions for noncompliance as the other profiles and appear to be contrite and to want to remedy the problem.</p> <ul style="list-style-type: none"> <li>▪ Good at their trades, but have irregular incomes and little financial acumen.</li> <li>▪ Too frightened to approach the tax authority.</li> <li>▪ Deal with their problems by burying their heads in the sand.</li> <li>▪ Don't want to fight IR; are contrite, and want to remedy the problem.</li> <li>▪ Genuinely appreciative of help.</li> <li>▪ Generally don't use tax specialists, but are potentially vulnerable to the advances of enablers.</li> </ul>	<p><b>Achievers</b> Single minded in their objective of minimising their tax liability (or helping their clients to this end) with an <i>intention</i> to work within the law.</p> <ul style="list-style-type: none"> <li>▪ High profile and successful.</li> <li>▪ Are either tax specialists, or use them.</li> <li>▪ Important influencers.</li> <li>▪ Confident and self-assured.</li> <li>▪ Are single-minded in their objective to aggressively minimise their tax.</li> <li>▪ Have little respect for the tax authority, and believe it fails to appreciate the importance of their contribution.</li> <li>▪ No strangers to tax authority scrutiny.</li> <li>▪ If need be, will mobilise whatever resources are required to minimise their losses.</li> </ul>

#### 4.4 Study 2—Discussion

The *Voice of Habitual Noncompliers* research provides valuable insight into the behavioural profiles of HNCs resulting in an increased understanding of this population. The results of Study 2 supports the literature review in further highlighting the complexity of HNC behaviour and the multifaceted causes interwoven through individual factors, interactions with the tax authority, and social influences.

It is important to note that this research was qualitative in nature (i.e., involved talking in depth to a small sample of respondents) and, as such, its value was in providing an understanding of what makes HNCs tick (e.g., their attitudes, drivers, etc.). The research does not purport to provide a comprehensive understanding of all types of HNCs. Many respondents differed in terms of the richness of information they were willing to provide. This appeared to be primarily based on how comfortable they were with their noncompliant behaviour (i.e., those who could justify their behaviour were the most open to discussing it). In particular, fraud related behaviour could not be explored in detail as they were more difficult to recruit, and those who had ostensibly committed tax fraud who were recruited, were relatively more guarded in talking about this behaviour. It was hypothesised that this may be because of the clearly illegal status of fraud and the negative social opinion of fraudulent behaviour.

Individual factors were clearly linked with HNCs with some exhibiting personality traits consistent with noncompliant behaviour such as grandiose perceptions of themselves and they held cognitions and rationalisations that supported noncompliant activity. In addition, the role that other individual factors play in turning noncompliant behaviour into HNC behaviour was illustrated with one of the HNCs attributing a personal life tragedy as the primary cause of his HNC behaviour. The HNCs' view of the tax administration confirms the importance of these considerations including the proportionality of penalties, timeliness of penalties, and fairness. Some HNCs specifically sought to exploit the grey areas of tax legislation and many felt that tax legislation design was too complicated.

The interviews with HNCs provided further support for the notion that social influences, both direct and indirect, can play a strong role in HNC behaviour. Tax agents known for exploiting the grey areas of tax legislation were seen as invaluable. The “don't ask, don't tell” policy for other intermediaries seems to be the way of doing business. For the less sophisticated HNCs, it was often a family member or other associate who encouraged the noncompliant behaviour. On this basis, HNCs of all types seemed to be heavily influenced by direct influencers.

The HNC interviews also highlighted the significant role that indirect influencers play in shaping HNC behaviour. Some expressed the opinion that tax noncompliance was just part of the industry they were working in. Others explained that ‘everyone else is doing it’ and that the hidden economy is huge. HNCs referred to the strong role that culture plays in tax noncompliance by relating their experiences with particular immigrant communities that settle in New Zealand and have difficulty with tax compliance. In their previous countries they did not pay tax and this was the norm. The interviews above indicated the strong effect social norms have on the behaviour of HNCs.

The drivers that shape HNC behaviour are complicated—personality traits, tax administration, and social influences are all strongly intertwined. The effective treatment of HNC behaviour requires assessing these different strands on an individual basis and developing treatment strategies that limit the effect of these factors. Whether an HNC's behaviour is due to their personality, their world view, or other events, to successfully intervene requires developing new treatment strategies beyond the current approaches.

### 5 Study 3—HNC Filers and Payers

#### 5.1 Introduction

Studies 1 and 2 focused on more serious HNCs, but a second wider group also operates: those who repeatedly fail to meet their filing and payment obligations on a regular basis. This second group of HNCs (Tier 2), who are habitually late, are the focus of this study.



## 5.2 Methodology

Filing and payment compliance information for Goods and Services Tax (GST—a value added tax), Employee deductions (Pay-as-you-earn PAYE), and Income Tax was extracted for individual Inland Revenue Department numbers. The period of analysis covered the 2003 to 2009 Tax Years.

Customers eligible for analysis must have had an “active” status for at least 4 of the 7 tax years between 2003 and 2009. Customers must also have been active in the 2009 Tax Year. Customers who had been prosecuted or who had a shortfall penalty imposed in more than one financial year were excluded from the sample as they would more likely represent Tier 1 HNC and covered in Studies 1 or 4.

Customers were divided into four main categories. The categories, their type of activity and numbers are shown in Table 9 below:

**TABLE 9. Categories used in the Analysis.**

	GST/PAYE activity over 7 Year period?	Income tax activity over 7Year period?	Number of customers in each category
Sel-Employed	YES	YES/Likely	238,290
Non-Business Individuals	NO	YES	952,521
Business—GST/PAYE	YES	YES/Likely	492,323
Business—Income tax only	NO	YES	266,433

Each customer was given an overall compliance rating based on their filing and paying obligations. A Tier 2 HNC was defined as a person whose overall filing and paying compliance was late 75 percent or more of the time.

## 5.3 Results

### 5.3.1 Characteristics of HNCs in Each Category

Table 10 provides a summary of the characteristics of HNCs in the four main categories, based on the analysis of Tier 2 customers.

The table highlights the similarities in HNC characteristics across customer categories. A YES indicates that HNCs in a category are more or less likely to have a particular characteristic.

**TABLE 10. Characteristics of HNCs in Each Customer Category.**

	Business—GST/PAYE	Business—Income tax only	Non-Business Individual	Self-Employed
More likely to have fewer tax returns	YES	YES	YES	YES
Less likely to be linked to an agent	YES	YES	YES	YES
More likely to be in debt	YES	YES(L)*	YES	YES
Debt value is higher	YES	NO	YES	YES
More likely to have a shortfall penalty	YES	YES(L)*	NO	YES
More likely to be a younger organisation	YES	YES(L)*	N/A	N/A
More likely to have GST income < \$80,000	YES	N/A	N/A	YES
More likely to have GST income < \$250,000	YES	N/A	N/A	NO
Less likely to have employees	YES	N/A	N/A	YES
More likely to be under 55 years old	N/A	N/A	YES	YES
More likely to be male	N/A	N/A	YES	YES
Personal Income more likely to be under 40K	N/A	N/A	YES	N/A

\*Note: Yes (L), means ‘Yes’—a little.

HNC characteristics common across all categories were:

- More likely to have filed fewer tax returns.
- Less likely to be linked with an agent.
- HNCs in most categories were more likely to be in debt.
- Debt value tended to be higher.

Additional common HNC characteristics between the Business—GST/PAYE and Business Individual categories were:

- GST Income tended to be lower.
- More likely to have no employees.
- More likely to have a shortfall penalty imposed (although the rate is low, at 3 percent or less of customers).
- Small businesses employing only some of the time have much higher HNC rates in regard to PAYE, compared to those employing regularly.
- HNCs in business categories were more likely to be in debt.

Common characteristics between the Self-Employed and Non-Business Individuals were:

- More likely to be male.
- More likely to be less than 55 years old (i.e., between 26 and 54 years of age).

## **5.4 Discussion**

Within the business sector, small businesses<sup>6</sup> were most likely to be habitually late in terms of filing tax returns and paying tax. This pattern applied to both the Self-Employed group and small businesses with some formal structure (e.g., company or partnership). Small businesses with some structure performed better on GST and PAYE compliance compared to the Self-Employed group.

The results of Study 2 and Colmar Brunton (2004) identified that business owners do not always have the business skills or cash flow to meet tax obligations. This may provide some explanation for higher HNC rates among small businesses. Furthermore, there was a significant link between submitting fewer tax returns and higher rates of habitual noncompliance, which suggests that those with less experience or who don't file regularly are more likely to be late. Similarly, small businesses employing occasionally were much more likely to be habitually late in regard to PAYE returns. This poses the question whether different treatments for irregular filers could be implemented and suggests that more support could be needed for this part of the business sector.

Educational interventions may also be better targeted at certain industries and business structures. For instance, construction and related industries, and agriculture made up a significant proportion of Tier 2 Business individual HNCs (i.e., self-employed). Certain areas may also be better targets for debt recovery as the incidence and value of tax debt was higher among business HNCs when compared with individuals.

The results of Study 3 make it clear that HNCs are present in all forms and types of compliance. Studies 1 through 3 have looked at various aspects of HNCs but an ultimate goal is to be able to identify and intervene early on these types of taxpayers and consequently Study 4 looks at the identification of indicators of habitual noncompliant behaviour.

## **6 Study 4—Indicators of Habitual Noncompliance and Prediction of HNCs**

### **6.1 Introduction**

From Study 1 it is clear that staff knowledge can successfully be used to identify HNCs. However, identifying HNCs in this manner is limited by the motivations and awareness of staff and there may be greater benefit in detecting potential HNCs prior to multiple re-offenses to enable early prevention. Consequently, identifying

key variables or indicators of HNC behaviour would not only allow for the detection of more HNCs but also potentially allow tax administrations to intervene early before behaviours become entrenched. Firstly, study 4 seeks to identify a core group of noncompliers for which indicators of habitual noncompliance can be identified and modelled; secondly, we use the indicators and model to classify other individuals as potential HNCs; and lastly, we test the classification efficacy using experts.

## 6.2 Methodology

### Identifying a Group To Model

As a starting point to exploring analytical identifiers of HNC behaviours a dataset was created from which modelling could be developed. The dataset was created with known points of more serious noncompliance from which a group could be identified to model. This included bankrupts, banned directors, those with audit shortfall penalties, and prosecutions. This group comprised 54,000 individuals (Serious Noncomplier group) with bankrupts (46,000) making up the largest portion. Note that the Serious Noncomplier group was based on an individual's attributes and therefore did not include links to associated entities or the compliance history of associated entities.

This population could not readily be pared down to a core group of repeat offenders so a decision was made to create a core group to be modelled from three sources: those identified by staff in Study 1; those who have been prosecuted as generally only very serious offenders are prosecuted; and those who have had two or more shortfall penalties applied for separate interventions. There was around a 5 percent overlap for these three data sources representing 2,200 individuals (Modelling group).<sup>7</sup>

A range of additional data was extracted for the Modelling group to look for possible underlying attributes. This analysis involved descriptive statistics (Appendix 2), cross-tabulations, and two-way interactions, to draw out underlying relationships in the data. The lack of a single outcome variable was problematic, due to these individuals coming from different datasets with different measures of noncompliant behaviour. In order to produce a single measure for all the Modelling group an index was created by summing multiple variables that related to noncompliance. This method of creating indexes is fairly common practice in the management research methods literature, most typically used when combining Likert scales in surveys to provide an index of similar questions (Currell, Hammer, Baggett, and Doniger, 1999; Driscoll, Appiah-Yeboah, Salib, and Rupert, 2007; Feyers and Macin, 2000).<sup>8</sup> Combining multiple factors into a single interval (or ratio) variable allows its use as an overall outcome variable.

There were 18 variables included in the construction of this index. To ensure consistency, these were either standardised or recoded to an ordinal variable before summation. These 18 variables were:

- Total number of audits
- Gender (male = 1)
- Age strata
- Prosecutions
- Audit discrepancy total
- Shortfall penalties value
- Link to liquidated company
- Client status not active
- Debt write-off total
- Current days in debt
- Current total debt
- Voluntary administration
- Beneficiary
- Loss returns
- Loss amount
- Donations
- Number of agents
- Address changes

On inspection, the distribution was very right skewed so a natural log was taken. This transformed variable approximated a normal curve sufficiently to fit a general linear model. The sum total of these variables was therefore transformed  $\text{LnINIndex} = \text{Ln}(1+\text{INIndex})$ .

#### 6.2.1 Variable Reduction

To reduce the number of variables a general linear model was fitted to the LnINIndex. After some exploratory analysis was undertaken on a range of variables and factors the number of indicators were pared to

six predictor variables (fitted as factors): Bankruptcies, shortfall penalties (NoSFP), write-offs, aAnonymous information, tax types associated with agents (NoTaxTypes), and current Debt elements. Note: These were not the exact same variables used in construction of the LnINIndex, but essentially a combination of other variables, as broad as possible, both qualitative and quantitative, combined to give an overall 'score' of the data. These were all highly statistically significant, and the overall model is highly significant, *indicating* reasonable predictive ability. This model was trained on the original 2,200 Modelling group. The model developed was:

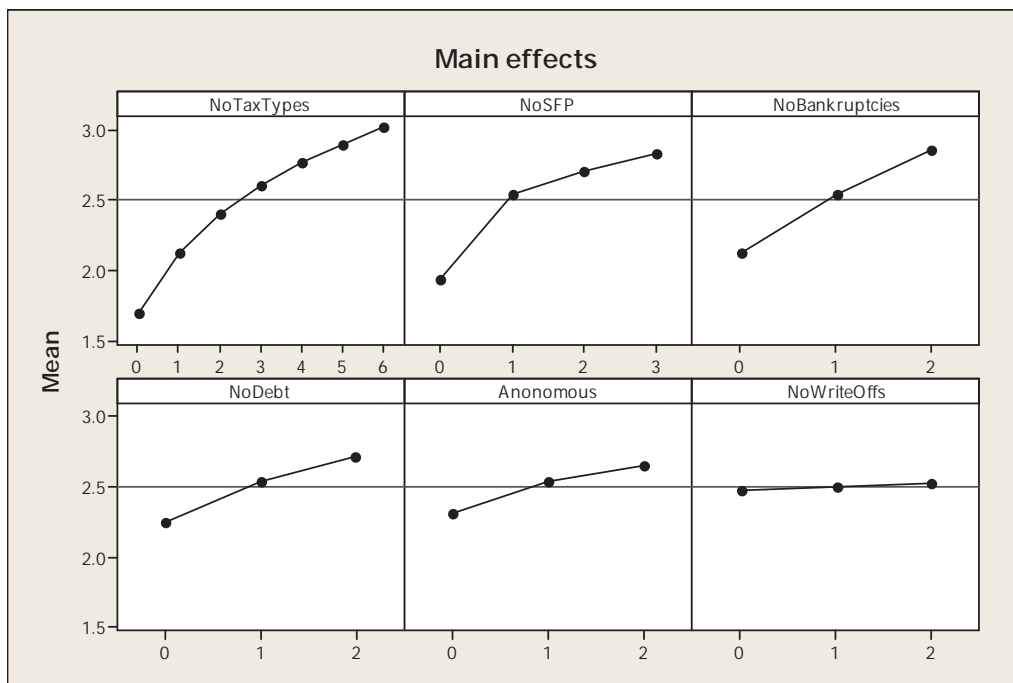
$$\text{Ln}(1+\text{INindex}) =$$

$$(\text{coef}_1(\text{Taxtypes}(i) = 0^6) + \text{coef}_2(\text{NoSFP}(i) = 0^3) + \text{coef}_3(\text{No Bankruptcies}(i) = 0^2) + \text{coef}_4(\text{No Debt}(i) = 0^2) + \text{coef}_5(\text{ANON}(i) = 0^2) + \text{coef}_6(\text{No WriteOffs}(i) = 0^2)).$$

To determine the robustness of this model, the same model was fitted on the Serious Noncomplier group. The model was statistically significant, both the overall model and each of the component F tests, for each of the explanatory factors. Some 93 percent of the variation in the data was explained by the model, so that the overall predictive ability of the model is good. This means it is reasonable to take these indicators and use them to predict potential HNC individuals within the overall data.

Figure 3 shows the main effects of each of the fitted factors on the Serious Noncomplier group. A main effects plot represents the change on the overall (grand) mean given each level of each of the factors *if everything else is held constant*. This is based on all of the Serious Noncompliers, and shows the effect on the overall mean for each of the levels of each of the factors, one at a time; holding all other factors constant. The graph shows the increasing effect on the transformed index is increasing for each of the factors.

**FIGURE 3. Main Effects Plot**



### 6.2.2 Identifying Potential HNCs

To further validate this model, and as a quick method to determine potentially other HNCs, the Modelling group subset were flagged, and a discriminant function analysis was performed on the Serious Noncompliant group using the same predictor variables used in the model.

Table 11 displays the discriminant function (DFA) classification matrix. The results showed only a 12 percent misclassification rate with 47,756 classified correctly. This also suggests a further 6,000 (Potential HNC group) entities that are similar to the Modelling group and therefore potential HNCs.

**TABLE 11. Classification by Model: Misclassification Rate**

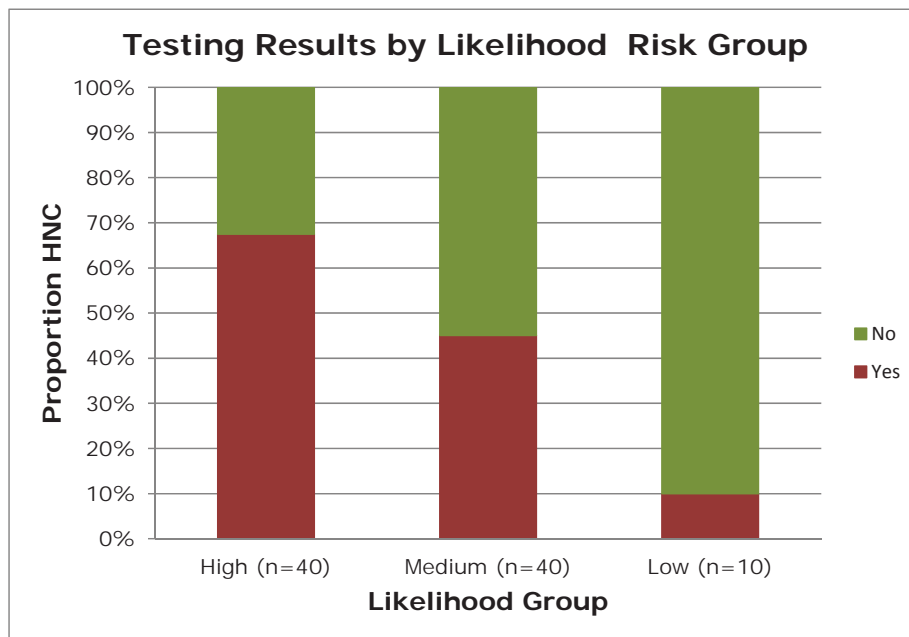
DFA Modelled/ Original SNC Group	Serious Noncomplier (SNC) Group		Total
	Balance of SNC Group	Modelling Group Subset	
No	46,083	545	46,628
Yes	6,027	1,673	7,700
Total	52,110	2,218	54,328

### 6.3 Model Testing

To assess the model’s usefulness, the model was tested through selecting a stratified sample of the Serious Noncomplier group to see how well the model fits according to expert opinion. Ninety individuals were selected across the fitted value range from which investigators would review and evaluate (by filling in a template) whether the individual was likely to be a HNC or not. This comprised 30 high likelihood and 40 medium likelihood from within the 6,027 of Table 11 and 10 low likelihood that were not predicted to be HNCs. Additionally there were 10 high likelihood that had high-fitted value scores but who were not within the 6,027. The Modelling group of 2,200 was excluded from the test population given they had been used to model the data.

To determine whether an individual was a HNC, investigators were asked to spend 1-2 hours assessing an individual’s audit, debt, and filing history as well as their interaction with the tax authority and complexity of business operations. Summary results are presented in Figure 4 and show that over 65 percent of the high likelihood were considered HNCs whereas 45 percent of the medium and just 1 out of 10 of the low. Overall the model predictions and investigators’ classifications had a reasonable fit.

**FIGURE 4: Model Testing Results**



Analysis of what characterised the classification of a HNC and not HNC was additionally undertaken, and notably it was observed that:

- Taxpayers who are slow to respond within audits, who have a poor attitude towards Inland Revenue and fail to respond in a timely manner, were more likely to be judged a HNC.
- A significant characteristic of HNC individuals was that they were more likely to not file tax returns when required and are uncooperative and/or fail to meet repayment schedules in regards to debt.
- People who have abused processes like bankruptcy and liquidation in order to continue income production or avoid prosecution are highly likely to be HNC taxpayers.

The experts were also asked to classify the HNC individuals into the behavioural typologies identified as part of the qualitative interviews of Study 2—Voice of the HNC (see HNC Behavioural Profiles subsection). Those placed in a typology most were identified as Opportunists (55 percent) and Pretenders (30 percent). This is unlikely to reflect the proportion of all HNCs, given the data used were less likely to identify Achievers or Game Players.

#### **6.4 Study 4—Discussion**

This study represents exploratory analysis undertaken to identify indicators of HNC behaviour and potential HNCs. It was found that the combination of six ordinal factors can go some way to characterising habitual noncompliance and HNCs. These six indicators were: Shortfall penalties, number of write-offs, number of debt elements, number of bankruptcies, number of tax types linked to an intermediary, and number of pieces of anonymous information held on the taxpayer. Expert assessment judged that 60 percent of those predicted by the model to be HNCs were HNCs. Given that this represents the first modelling iteration, and that there were limitations on the data available for both prediction and assessment, this is a very positive result.

There are a number of limitations to this data and analysis. Firstly, the data are based on information associated with an individual taxpayer. Where noncompliance and other concerns are associated with tax entities that the individual HNC controls (i.e., companies and trusts) this analysis is less likely to have identified them. Secondly, given the nature of the data available, it is likely that the model identified certain classes of HNCs (such as defaulting noncustodial parents on child support payments) to a greater extent than other classes of HNCs. Thirdly, a number of the variables were ‘current’ data and did not include the history or pattern of non-compliance. Lastly, Study 1 indicated the relevance of data sources outside the tax authority, such as offences against other government agencies, but these were unable to be included.

In the model testing through experts there were a number of methodological and data limitations, which meant that the percentage of HNCs in the group is possibly higher. For example, in a number of instances there was little information held on the individual and their behaviours within systems and therefore they were judged to not be a HNC. Also, in reviewing some of the investigators’ notes on individuals judged not to be a HNC, it was apparent that the assessment was made due to the low value of offending rather than the behaviours exhibited that were recidivist in nature.

The best predictor within the model developed was the number of different tax types that are linked with an agent. This raises a number of questions regarding the role that agents and intermediaries play, as well as potential temporal aspects. For instance, is the recidivist behaviour occurring in part due to the influence of the agent or does the use of an agent occur after repeated noncompliant interventions, that is, is it an antecedent or more often a consequent?

All research has limits, but even within the boundaries of the data and analyses undertaken the model developed was reasonably effective at identifying certain classes of potential HNCs. Additional information could be used to improve the model, such as factors representing a continued opportunity and temporal factors like recency of offending. There is wide scope for future endeavours to take the indicators and modelling of HNCs further through: more indicators including opportunity, links to noncompliant entities, and data from other government agencies; developing additional models and applying other statistical techniques; and actively identifying HNCs as part of ongoing business processes.

## 7 Overall Discussion and Implications

The HNC research project improves the understanding of the HNC issue by consolidating experiences on the topic and by exploring the causes of their behaviour. Analysis of the sample of HNCs provided insight into their motivations, behaviour, and strategies. The research confirms that the HNC population is a high tax risk population and has many complexities—some of which appear able to be modelled through statistical procedures.

The extent of the noncompliance committed by HNCs is difficult to measure. Firstly, much of the non-compliant behaviour of HNCs is hidden from tax authorities. They often engage in nonfiling, underreporting, non-payment, and fraud. Secondly, HNCs are often described as “conscious opponents” (i.e., their non-compliant behaviour adapts and evolves over time based on what they learn from their interactions with the tax authority and others). Their actions often reflect a wilful intent to be noncompliant and in many instances they align themselves with aggressive tax advisors or they are tax specialists themselves.

Most tax authorities do not appear to have an organisation-wide approach to identifying HNCs or to managing the tax risks posed by HNCs. HNCs are not necessarily viewed as a separate population, rather, anecdotally they are known as the worst of the worst taxpayers. As a result staff members involved in compliance interventions with HNCs may handle them on an individual and reactive basis rather than in a coordinated manner.

The common link among HNCs is their repeated noncompliance. The high level findings of the HNC research adds to this understanding by showing that HNC behaviour may be caused by personality and internal cognition, tax administration factors, opportunity, and by both direct and indirect social influences. HNC behaviour often overlaps among one or more risk areas (High Wealth, Aggressive Tax Planning, Property, Hidden Economy, Debt, etc.).

Aspects that may cause habitual noncompliance, like personality and cognition are beyond most tax authorities’ operational mandate to “fix.” Yet an awareness of these dispositions may assist with HNC identification and should be taken into account when designing treatments. Other factors, such as opportunity (which can be limited by tax authorities) or social influences (which can be shaped by tax authorities), can be targeted to limit the HNC risk. In this regard recognition of HNCs as a risk population will enable tax authorities to more effectively manage noncompliance across multiple risk areas and to direct the appropriate interventions.

The HNC research involved the completion of a number of related projects to identify potential HNCs and to analyse their behaviour. Study 1 found that a proportionally small number of HNCs produced the majority of revenue losses. These HNCs were linked with more entities, were noncompliant across multiple risk areas, and used more strategies to be noncompliant. Many of the HNCs were identified as re-offending within one year while using the same or a similar method of noncompliance. Study 4 identified further potential HNCs and Study 3 identified considerably more habitually late payers and filers.

Some HNCs are identifiable within tax authority systems and some will be operating outside the system. What this research has demonstrated is that HNCs could be identified through:

- collecting information concerning HNC behaviour identified by staff,
- by analytical models,
- social network analysis, and
- by exchanging information with other government agencies regarding noncompliers.

Additionally, HNCs could be identified through a random audit programme or through enhanced post audit compliance checks.

The nature of HNC behaviour requires a multi-pronged approach to their identification. Since habitual noncompliant behaviour occurs repeatedly over time, one implication of this research is the development and maintenance of a central registry which would enable tax authorities to preserve institutional knowledge, to

analyse the known HNC population, to operate more efficiently, and to limit the HNC risk. However, such a registry would be subject to legal and privacy considerations.

Each HNC poses a different level of risk. The research indicates that HNC behaviour varies in its sophistication, intent, and impact on revenue collection and tax administration integrity. For instance, HNC behaviour ranges from nonfiling (unsophisticated but which could still be responsible for any range of revenue at risk) to more sophisticated operations involving numerous entities and aggressive tax planning. Some HNCs operate in isolation while others are promoters. Some are tax specialists themselves while others act as tax advisors and enable others into habitual noncompliance. Furthermore, based on their words and attitudes, the HNCs exhibited differences in their capability to be noncompliant, their ability to influence others to be noncompliant, and their remorsefulness for being noncompliant.

As a result of this variation, tax authority response to the risk should match the level of risk posed by the HNCs and seek to address the causes where practicable. To name a few examples, risk assessment and prioritisation could be based on previous compliance history and engagement with the tax administration, sophistication of operations, intent, size or potential size of social networks, likelihood of increased activity, likelihood of recovering lost revenue, judgment of remorsefulness, and amount of tax revenue at risk.

Monitoring could be used as a form of on-going risk assessment. The HNC research indicates that HNCs often repeat their noncompliant behaviour soon after interventions and in many situations they use the same or similar tactics. The monitoring of identified HNCs could be either direct and/or indirect. Direct monitoring (active monitoring) would be applied to the most severe HNCs and would include ongoing supervision by staff while indirect monitoring means the HNC's activities are passively monitored through the likes of system tools. The level of monitoring reflects the potential risk and therefore priority of the HNC.

HNCs, by their definition of repeated noncompliance, require an alternative intervention strategy. In some instances, the only successful intervention may be to control their opportunity for noncompliance through ongoing direct or active monitoring and audit activity. In other instances, the appropriate response may be providing education in regard to taxpayer obligations.

A robust analysis of HNC behaviour is crucial to selecting an appropriate and effective intervention response. Besides varying in the sophistication of their activities, HNCs also vary considerably in regard to their intent. Some HNCs refuse to pay tax because they see it as a game or because they question the legitimacy of the tax administration. They adjust their behaviour to maximise noncompliance as they learn from their interactions with Inland Revenue and others. Other HNCs appear to have become noncompliant by accident, either because of poor business acumen or because of a personal situation or emergency. The *Voice of the HNC Research* (Study 2) illustrates these differences by classifying the HNCs they interviewed into four categories based on factors of sophistication and intent. The variety of HNC behaviour and the range of strategies they use suggest that an assortment of interventions may be required to successfully limit the tax risk of HNCs.

Since HNCs continue to be noncompliant despite interventions, it is necessary for tax authorities to develop and consider new treatments to limit the negative effects of their noncompliance. Interventions will have to be continuously tested, refined, and evaluated. Possibilities include reducing opportunity through tax system and legislative changes, targeted messaging that appeal to specific cognitive perspectives, and providing business and tax obligation education to those who could benefit by it.

For instance, additional reporting requirements for serious HNCs could:

- help to better understand noncompliance activities and to improve the assessment of them;
- encourage HNCs to be compliant since the costs for noncompliant activity will be ongoing; and
- reassure the public that Inland Revenue is focused on the significant noncompliant taxpayers and re-offending will not be tolerated.

Overall, a positive outcome will be seen in an increase in tax revenue received from HNCs and it will also be seen by improvements in registration, rates of filing on time, accuracy of reporting, claiming what they are entitled to, and paying the correct amount on time. While the rate of return for investigative discrepancies will



be important, additional measures will need to be developed to ensure overall compliance behaviour is measured. This is particularly important since effective treatment results in compliant taxpayers and reductions in the traditional measure of audit discrepancy.

The goal of the HNC research project, being exploratory in nature and action research focused, is to ultimately turn these findings into implementable organisational processes to reduce the negative impact of HNCs. However, given the knowledge gap between HNCs in the tax context, and recidivism knowledge in the criminal context, there is extensive scope for further research initiatives that extend what was undertaken in Studies 1-4. This includes moving beyond identification and prediction into various treatments of HNC behaviour and measuring the effectiveness of these interventions.

## 8 Appendix 1. Key Indicators of Noncompliance

The key indicators of noncompliance derived from a review of the literature review summarised in Table 12.

TABLE 12

Individual Factors		
Area	Key Indicators	Description
<b>History &amp; Habit of Noncompliance</b>	Frequency, recency, & extent of noncompliance against: <ul style="list-style-type: none"> <li>• Tax Authority</li> <li>• Other Government Departments &amp; Agencies</li> <li>• Other laws</li> <li>• Society in general</li> </ul>	A history of noncompliance is reported to be a reliable and robust predictor of future noncompliance (Withers, 1984; Weisburd, Chayet, and Waring, 1990; Worthington, Higgs, and Edwards, 2000; Ratcliffe, 2008). Weissmann & Block, (2007) report recidivism rates for fraud and theft offenders with a criminal history exceeds 50 percent.
<b>Personality</b>	<ul style="list-style-type: none"> <li>• Lack of remorse</li> <li>• Lack of empathy</li> <li>• Manipulative</li> <li>• Desire to win</li> <li>• Grandiose sense of self-importance</li> <li>• Sense of entitlement</li> <li>• Low social conscientiousness</li> </ul>	Current evidence suggests that personality and specific traits are increasingly been seen as an important element in criminality and noncompliant behaviour (i.e., Listwan, Piquero, and Voorhis, 2010). Personality factors of increasing intensity define characteristics of social problems including tax noncompliance (Paulhus and Williams, 2002).
<b>Cognitions</b> Refers to mental processes such as thinking, knowing, remembering, judging, problem-solving, perception and planning.	<ul style="list-style-type: none"> <li>• Denial of harm</li> <li>• Belief that laws are unjust or even unnecessary</li> <li>• Business or individual survival</li> <li>• 'Everyone else is doing it'</li> <li>• Expectations of others</li> <li>• Deserve the money</li> <li>• Contempt</li> </ul>	From a HNC perspective cognitions incorporate values, attitudes, beliefs, rationalisations, and a personal identity that is favourable to compliance or noncompliance (Andrews and Bonta, 2010). Research in the tax specific domain has generally found a consistent but weak link between attitudes and self-reported evasion (Kirchler, 2007). Taxpayers can adopt many rationalisations to allow them to maintain a positive self-image while engaging in noncompliance (Coleman, 1987).
<b>Other Individual Factors</b>	<ul style="list-style-type: none"> <li>• Addictions including gambling, alcohol, and drug habits</li> <li>• Relationship problems</li> <li>• Business performance</li> <li>• Personal philosophies</li> </ul>	Personal and business issues have an impact on compliance behaviour. Such individual and circumstantial factors are dynamic and their influence varies (Andrews and Bonta, 2010).

TABLE 12—Continued

Tax Administration		
Area	Key Indicators	Description
<b>Fairness</b>	Aspects of fairness including: <ul style="list-style-type: none"> <li>• Distributive</li> <li>• Procedural</li> <li>• Retributive—such as are others penalised for transgressions</li> </ul>	Taxpayer perceptions and beliefs regarding fairness are closely related to inclinations and/or justifications to not comply with tax obligations (Wenzel, 2003; Braithwaite, 2003; Kirchler and Holzl, 2006; Murphy, 2004). Perceptions of fairness are specific forms of tax cognitions developed in the interplay between the individual, tax administration, and other social influences.
<b>Opportunities &amp; Controls</b>	<ul style="list-style-type: none"> <li>• Internal tax processes &amp; controls</li> <li>• Governance</li> <li>• Tax knowledge &amp; skill to pay the right amount at the right time</li> <li>• Tax knowledge to exploit vulnerabilities, legislation, as well as systems &amp; processes</li> <li>• Opportunities available (i.e., cash transactions)</li> <li>• Use of our systems and processes against us (delaying tactics, complaints, publicity exercises, etc.)</li> </ul>	Within the tax literature, opportunity to not comply has consistently been found to be the most important determinants of noncompliance (Kirchler, 2007). Opportunity has been consistently identified across jurisdictions using various research methodologies (e.g., Webley, Cole, and Edjar, 2001), surveys (i.e., Warneryd and Walerud, 1982; Porcano, 1988), and patterns of convictions (Wallschutzky, 1984). Opportunities for noncompliance also arise from personal or business internal tax processes and governance systems, including tax knowledge and ability to pay the right amount of tax at the right time.
<b>Rewards, Consequences &amp; Deterrence</b>	<ul style="list-style-type: none"> <li>• Length of time undetected</li> <li>• Frequency and expediency of consequences</li> <li>• Prior rewards greater than consequences</li> <li>• Prior consequences greater than reward (creating defiance)</li> </ul>	Consequences for noncompliance serves two purposes—a general deterrence to prevent others offending, and provision of consequences for undesirable behaviour (Weissman and Block, 2007). Poor delivery of consequences and punishment may lead to an increase, in HNCs rather than a reduction (Andreoni et al., 1998). Defiance towards tax compliance may increase following enforcement if there are perceptions of unjustness or unfairness about the application of penalties and this may promote further offending (Sherman, 1993).
Social Influences and Compliance Norms		
Area	Key Indicators	Description
<b>Direct Influencers</b>	Enablers that influence, facilitate, and educate noncompliance: <ul style="list-style-type: none"> <li>• Family and friends</li> <li>• Associates / gangs / organised crime</li> <li>• Professionals (i.e., influential accountants &amp; advisors)</li> <li>• Subculture</li> <li>• Celebrities</li> </ul>	Direct influencers are those within the social environment who have a more explicit impact on a taxpayer's behaviour. Associates who are noncompliant may provide both the opportunities to learn techniques and practices to be noncompliant, and promote associated attitudes and rationalisations (Andrews and Bonta, 2010). Noncompliance can be a learned behaviour. Enforcement may also create a greater alliance with noncompliant associates than with compliant references (Braithwaite, 2009). If the immediate social environment of a noncomplier supports noncompliance, then HNC activity is more likely to occur.
<b>Indirect Influencers</b>	<ul style="list-style-type: none"> <li>• Industry norms</li> <li>• Culture</li> <li>• Social norms</li> </ul>	The term 'indirect influencers' refers to social influences that are less represented by individuals, and more by groups and social values in general. Such influencers include national and local cultures, industry and political messages, and prevailing social norms. There is evidence that within industries illegal practices spread from one organisation to another by the dispersion of motivations and rationalisations, as well as specific techniques to enable noncompliance (Coleman, 1987). Taxpayers are also strongly influenced by their perceptions of the compliance of other taxpayers (Frey and Torgler, 2007).

## 9 Appendix 2. Exploratory Data Analysis of the Modelling Group

The 2,200 Modelling group were examined for age, gender, and a selection of other attributes. Categorical (underlying ordinal) variables were: number of debt elements (recoded), number of write-offs, anonymous information, shortfall penalties, number of audits, tax types, category of taxpayer and bankruptcies were all examined along with location, gender and age group. Cross tabulations were used to discover underlying relationships in the data, thus providing an indication as to what combinations may be drivers for HNC behaviours.

**TABLE 13. Age**

Age Group	Number	Percentage (%)
Unknown	258	11.6
<30	43	1.9
30-40	242	10.9
40-50	612	27.6
50-60	649	29.3
60-70	347	15.7
70+	67	3.0
<b>Total</b>	<b>2,218</b>	<b>100</b>

Clearly, age is clustered around the 40-60 age group.

**TABLE 14. Gender**

Gender	Number	Percentage (%)
Male	1,612	72.7
Female	388	17.5
Unknown	210	9.8
<b>Total</b>	<b>2,218</b>	<b>100</b>

Males outnumber females by 4 to 1. This is very inconsistent with the general population. As the data were coded from prefix to name (such as Mr, Mrs, Ms) not all could be coded to gender (such as Dr).

**TABLE 15. Write-offs (Recoded)**

Write-offs	Number	Percentage (%)
None	1,046	47.1
One	161	7.3
Two or more	1,011	45.6
<b>Total</b>	<b>2,218</b>	<b>100</b>

The original variable for write-offs is extremely right skewed, and the recode shows around half have not had write-offs. The category two or more includes all multiple write-offs, some into hundreds. This U-shaped distribution is interesting (as the result of truncation of the right-skewed distribution), in that it quite effectively dichotomises those who have and those who have not had write-offs.

**TABLE 16. Anonymous Information**

ANON Information	Number	Percentage (%)
None	2,050	92.4
One	131	5.9
Two or more	37	1.7
<b>Total</b>	<b>2,218</b>	<b>100</b>

This shows how rare an event anonymous information is, even for this population.

**TABLE 17. Shortfall Penalties (Recoded)**

Shortfall Penalties	Number	Percentage (%)
None	954	43.0
One	135	6.1
Two	884	39.9
Three or more	245	11.0
<b>Total</b>	<b>2,218</b>	<b>100</b>

A high percentage have two shortfall penalties, but this drops off for three or more. The Modelling group was in part selected from those who had two or more shortfall penalties which explains these proportions.

**TABLE 18. Tax Types [with Agent] (Recoded)\***

Tax types	Number	Percentage (%)
None	528	23.8
One	181	8.2
Two	394	17.7
Three	378	17.0
Four	241	10.9
Five	128	5.8
Six or more	368	16.6
<b>Total</b>	<b>2,218</b>	<b>100</b>

\*Tax types represent the number of tax types linked to an agent.

Tax types have a classic beta distribution (ignoring the zeros) that is right skewed, with the rise in the six or more category accounted for by the truncation of the tail. There are sufficient numbers in each category to fit as a factor. Tax types refer to the number of tax types linked to a tax agent or intermediary. As a result of this, those with a higher number of tax types (linked to an agent) could be considered to be more complex in their tax affairs, which is why this was considered to be a proxy for complexity.

**TABLE 19. Bankruptcies (Recoded)**

Bankruptcies	Number	Percentage (%)
None	1,559	70.3
One	603	27.2
Two or more	56	2.5
<b>Total</b>	<b>2,218</b>	<b>100</b>

It would appear bankruptcies are almost as rare an event as anonymous information, again even in this population.

**TABLE 20. Debt (Number of Current Debt Elements) Recorded**

Debt Elements	Number	Percentage (%)
None	1,568	70.7
One	370	16.7
Two or more	280	12.6
<b>Total</b>	<b>2,218</b>	<b>100</b>

Debt is another relatively rare event, although not as rare as either anonymous information or bankruptcy.

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## Endnotes

- <sup>1</sup> Strings searched were “habit,” “recid,” and “repeat.”
- <sup>2</sup> A “balance due” account occurs when the taxpayer has an outstanding liability for taxes, penalties and/or interest.
- <sup>3</sup> Approximately 900 taxpayers are in the MDD programme, and they are made aware that they have been placed in the programme.
- <sup>4</sup> The *Our compliance focus—helping you get it right* document is Inland Revenue’s annual publication that is externally released. It details current compliance issues and focus themes, and advice on how taxpayers could maintain and improve their tax compliance. Refer to: [www.ird.govt.nz/taxagents/compliance/focus/](http://www.ird.govt.nz/taxagents/compliance/focus/).
- <sup>5</sup> Elicitation techniques utilise a semi-structured question and answer approach. Responses, therefore, tend to be at a rational level. Enabling techniques used in this research included photo sorts (animals and people), which were used as a projective device, in order to provide greater depth of response, including at an emotional level.
- <sup>6</sup> In relation to both lower business income and no employees.
- <sup>7</sup> The overlap is relatively small due to two factors: 1) individual taxpayer data were used, which did not include links to entities, and much of the recorded noncompliance is at a tax entity level; and 2) often shortfall penalties or a prosecution is applied but not always both.
- <sup>8</sup> Also see [http://en.wikibooks.org/wiki/Social\\_Research\\_Methods/Indexes,\\_Scales,\\_Typologies](http://en.wikibooks.org/wiki/Social_Research_Methods/Indexes,_Scales,_Typologies) retrieved 19/03/2012.

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