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# Deterrence, Coping Styles and Defiance

Valerie Braithwaite and Monika Reinhart\*

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Deterrence can boost compliance with tax authorities or undermine it depending on whether taxpayers cope with the threat of taxation through thinking morally, or feeling oppressed, or taking control of the tax they pay. When feeling oppressed dominates thinking morally in response to deterrence, resistant defiance is expressed. When taking control and feeling oppressed dominate thinking morally, dismissive defiance is expressed. Longitudinal data show that perceived deterrence predicts lower tax evasion. Over and above this prediction is the finding that dismissive defiance (which can increase or decrease with deterrence) predicts higher tax evasion. Deterrence needs to be used judiciously. If deterrence promotes dismissive defiance through being seen as too weak or too oppressive, deterrence may prove counterproductive.

*Keywords:* compliance, coping, deterrence, moral obligation, defiance

*JEL classification:* K 4, H 2

## 1. Introduction

At the macro level of policy and legislation, deterrence plays an important role in signaling what is and is not appropriate behavior for the population. Less clear is its effect on the compliance behaviour of individuals and businesses. A substantial body of research shows that deterrence is only one of many factors affecting compliance (see, for example, Alm et al., 1995; Andreoni et al., 1998; Hessing et al., 1992; Jackson and Milliron, 1986; Grasmick and Bursik Jr., 1990; Schwartz and Orleans, 1967). Moreover, deterrence may encourage compliance in some individuals, but not others (Hessing et al., 1992; see also Wenzel, 2002). Deterrence can even increase non-compliance (Makkai and Braithwaite, 1994).

This paper puts forward an explanation for why deterrence may have different effects on the compliance behavior of taxpayers through applying a stress and coping model to explain responses to deterrent action by an authority. Study 1 shows how deterrence can fuel coping responses in

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individuals that counter each other, increasing defiance on the one hand, and decreasing defiance on the other. Study 2 turns attention to the prediction of self-reported tax evasion. Deterrence may prove useful in containing tax evasion, but its effects will be muted if an unexpected consequence of deterrence is a rise in dismissive defiance against authority.

### **1.1. Historical Background**

Traditionally, tax researchers used an expected utility framework to explain tax evasion in terms of the characteristics of prescribed sanctions such as the likelihood of being caught, audited, and penalized, the size of penalties and the types of penalties (Andreoni et al., 1998). Subsequent research focused on how costs and benefits were psychologically and socially constructed, a development that generated interest in norms, obligations, justice, opportunities and risks as predictors of compliance (Cullis and Lewis, 1997; Kirchler, 2007; Lewis, 1982; Murphy, 2004, 2005; Weigel et al., 1987; Wenzel, 2002, 2004, 2005). With this work came an appreciation of how different individuals use different frames for their decision-making around compliance (Scholz and Pinney, 1995).

The concept of framing has been used in behavioural economics to describe people's propensity for riskier decision-making when a problem is framed as a loss rather than as a gain (Tversky and Kahneman, 1981). But people in comparable contexts can choose different frames by virtue of their life experience and expectations. One field in which this is evident is in response to stressful events. An event (for example a tax audit) may be embraced as a challenge, or may trigger a collapse in despair, or may be ignored completely. These different ways of dealing with the same event are at the heart of the present analysis of how people view taxation, and how they respond to a tax authority's deterrence measures.

## **2. Developing the Research Model**

### **2.1. Taxation as Threat**

The first step of the argument is to conceptualize taxation as a threat. This is not to be interpreted as a political statement, rather as a psychological one. Taxation is a social institution that threatens because it deprives people of something they assume is theirs (their money) and removes their freedom to refuse to pay. When people reflect on loss of this kind, they may accept it philosophically as the price of living in a civilized society and hope their money is being put to good use. But they also are likely to experience a degree of discomfort over their lack of choice in the matter (Brehm and Brehm,

1981; Rokeach, 1973). Such feelings trigger an appraisal of their taxpaying situation: What does the loss of money and the threat to freedom mean to them? Coping styles come into play to make sense of the situation. Coping styles then frame engagement with the tax authority and the tax system.

## 2.2. Coping Styles

A considerable body of work has been undertaken in the biological and social sciences around how individuals cope with threat. Physiological changes to stress have been associated with responses of “fight” or “flight” (Cannon, 1932) or “tend and befriend” (Taylor et al., 2000). Cognitive strategies for coping with stress take a variety of forms, but three more general styles of coping are particularly interesting because they reflect the way in which the fight/flight/befriend typology can play out in taxation: (a) problem-focused coping, (b) emotion-focused coping and (c) cognitive reframing (Lazarus and Folkman, 1984; Pearlin and Schooler, 1978).

Problem-focused coping means that the individual faces and fights off the threat. A problem-focused coping style would involve actively reducing the tax bill presented by government. The individual copes with taxation through *taking control* of their financial affairs and minimizing tax. When deterrence is introduced into this situation, risks of loss increase. Those who take control may re-consider their situation as they assess the prospects of being identified as a tax offender. The fear of being caught for tax non-compliance reins in their behavior: deterrence is a check on taking control.

The “flight” response to threat typically involves escape from threat, a not uncommon desire when faced with possible sanctions from a tax authority (Cartwright, 2011). For those targeted by a tax authority, however, there is usually no ready escape. Unsuccessful flight can lead to emotion-focused coping in which individuals express grievance and persevere on their suffering. In the taxation context, emotion-focused coping is likely to take the form of *feeling oppressed* by taxation. Add to this mix a set of deterrence measures and taxpayers are likely to become even more emotional about the hopelessness of their situation: deterrence is predicted to heighten feeling oppressed.

Cognitive reframing does not alter the existence of the threat but rather reinterprets the threat so that it is no longer a danger. Within the tax context this is likely to involve telling oneself that the law requires individuals to pay tax and that being law abiding is right and proper. Coping by *thinking morally* about taxation enables the individual to reach out and befriend the tax authority and be part of the group of good citizens for whom taxation poses no threat. Deterrence should strengthen the taxpayer’s resolve to be a good citizen, to think morally.

### 2.3. Deterrence and Coping Styles: How this Impacts on Tax Authorities

Deterrent actions by tax authorities are expected to affect coping styles of taking control or feeling oppressed or thinking morally. These coping styles are likely to produce behavioural outcomes. Most importantly, coping styles should be related to how much social distance a taxpayer places between self and authority. Social distances are communicated through signals of liking for authority and its systems, and willingness to defer to the authority's power (Bogardus, 1928). In the compliance context, these signals are termed motivational postures (Braithwaite, 1995, 2003, 2009; Braithwaite et al., 1994).

Five motivational postures have been identified empirically with some consistency across the domains of different regulatory authorities (Braithwaite in press). *Commitment* and *capitulation* are postures that represent willingness to go along with authority. *Commitment* conveys a belief that the authority's purpose is sound and that, in principle, the authority and its goals should be valued and supported by everyone. *Capitulation* is the posture of doing what is asked, without necessarily understanding or caring about purpose and goals. Similar to McBarnet's (2003) usage, capitulation reflects acquiescence to the powers that be.

The three remaining postures describe greater wariness and negativity to authority. *Resistance* is an expression of hostility toward an authority and a desire to withdraw cooperation. Resistance is a posture that focuses on the unreasonable and unfair way in which the authority treats people. In contrast, the posture of *disengagement* communicates rejection of both the authority's goals and processes. Individuals withdraw from having any relationship with the authority and take no notice of what the authority says or does. The fifth and final posture of *game playing* has a combative agenda. The objective is to outsmart the authority and assert independence over the authority while technically playing within the rules. It is the posture that gives rise to creative compliance (McBarnet, 2003).

In the taxation context, postures work together in consistent ways (Braithwaite, 2003, 2009). Factor analysis has been used to replicate the structure of the five motivational postures on the basis of survey responses to 24 individual items. Subsequently, the scores on the five scales to measure the five motivational postures were factor analyzed to reveal two underlying second-order factors. These second-order factors represent two types of defiance, resistance and dismissiveness.

The first, resistance (resistant defiance), reflects dislike for tax authority, but not necessarily refusal to defer. Resistant defiance is defined by the domination of the motivational posture of resistance to authority over the motivational postures of commitment and capitulation. Resistant defiance describes a set of signals that communicate dissatisfaction with how the tax

authority is going about its business and uses its power. Resistant defiance, particularly when taken up by special interest groups or a critical mass of citizens, creates disruption for tax authorities.

Resistant defiance is a poor predictor of non-compliance, although it may be a precursor of dismissive defiance.

The second dimension, dismissiveness (dismissive defiance), is linked with tax non-compliance and tax avoidance. Dismissiveness reflects a desire to challenge and win against the system. Dismissive defiance involves the postures of disengagement and game playing. It signals the belief that the tax authority does not warrant deference and should have no power over them. Individuals high on disengagement have withdrawn and operate with little regard to what the tax authority says and does. Disengagement and game playing signal a severed relationship with authority.

### 3. Research Question and Hypotheses for Study 1

The question addressed in study 1 is whether deterrence can give rise to different coping styles that can fuel defiance or dampen it.

This paper tests the following hypotheses:

**Hypothesis 1** The higher perceived deterrence, the higher the coping style of thinking morally.

**Hypothesis 2** The higher perceived deterrence, the higher the coping style of feeling oppressed.

**Hypothesis 3** The higher perceived deterrence, the lower the coping style of taking control.

**Hypothesis 4** Perceived deterrence is expected to decrease resistant and dismissive defiance through increasing the coping style of thinking morally.

**Hypothesis 5** Perceived deterrence is expected to increase resistant and dismissive defiance through increasing the coping style of feeling oppressed.

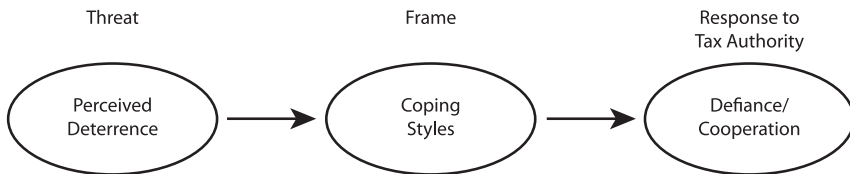
**Hypothesis 6** Perceived deterrence is expected to decrease resistant and dismissive defiance through decreasing the coping style of taking control.

The general theoretical model underpinning the testing of hypotheses 4 to 6 is one where coping styles mediate between deterrence and defiance as depicted in figure 1. Deterrence strengthens some coping styles (thinking morally, feeling oppressed) and weakens others (taking control). Thinking morally weakens defiance, while feeling oppressed and taking control strengthen it.

Different hypotheses are not specified for resistant and dismissive defiance although separate analyses for these two types of defiance are undertaken for two reasons. First, resistant defiance and dismissive defiance have been shown to lead to different compliance outcomes in this and other regulatory domains (Braithwaite, 2003; Braithwaite et al., 1994), suggesting that psychologically they may be constituted differently. Second, the two kinds of defiance are theoretically differentiated by the fact that those high on resistance dislike authority but are not necessarily non-deferential, while those high on dismissiveness are non-deferential, having severed their connections with authority. Therefore, it is possible that the pathways in figure 1 linking deterrence to coping styles, and in turn, to defiance may differ in strength for resistant and dismissive defiance.

**Figure 1**

*Theoretical Model of Coping Styles Mediating the Relationship between Deterrence and Defiance*



### 3.1. Method

#### 3.1.1. Survey Design

The hypotheses were tested using data collected as part of the “Community Hopes, Fears and Actions Survey” administered to a random sample of Australian citizens between June and December 2000 (for details see Braithwaite et al., 2001). This national survey preceded the introduction of Australia’s goods-and-services tax for which the government had won electoral support in the 1998 federal election.

A stratified random sample of 7,754 persons was selected from the electoral rolls. A lengthy questionnaire on tax matters was sent to each person who had been randomly selected, together with a letter explaining the intent of the study and a stamped addressed envelope for the return of the completed questionnaire. Two reminder cards were sent at two to three week intervals. After 5 weeks, an identical questionnaire was posted to non-respondents, again followed by two reminder cards (Details of the methodology of the survey are available in Mearns and Braithwaite, 2001).

Of the households contacted, 29 per cent completed and returned the survey, providing 2040 cases for further analysis. This response rate, while low in absolute terms, compares favourably with rates reported for other tax surveys (Kirchler, 1999; Pope et al., 1993; Tan, 2009; Wallschutzky, 1996; Wibley et al., 2002; Wurth, 2012). A series of diagnostic analyses (see Mearns and Braithwaite, 2001) suggested that the sample provided a relatively representative cross-section of the views of Australians about their tax system. Furthermore, the sample was relatively representative of the population with regard to sex, ethnicity, education, age, occupation, and marital status. The biases that were detected pointed to an over-representation of those in scribing occupations who would have been more comfortable with a detailed response intense questionnaire, and an under-representation of younger age groups (18 to 25 years) who traditionally are difficult to recruit for self-completion surveys. The data provided by the sample were confidential and stored securely without personal identifiers.

### 3.1.2. Measures

*Perceived deterrence:* The deterrence measure was adapted from previously used measures (Braithwaite and Makkai, 1991; Makkai and Braithwaite, 1994) and involved combining sets of responses to two vignettes, one in which income had not been declared and one in which deductions had been over-claimed. The perceived deterrence variable comprised a multiplicative term comprising perceptions of the likelihood of getting caught, likelihood of receiving punishments of different severity, and should detection and punishment come to pass, the magnitude of the problems created for the individual. Details of the overall perceived deterrence variable can be found in the Appendix, along with measures of the components – being caught, being sanctioned and seriousness of consequences.

*Coping style of thinking morally:* Based on an earlier principal components analysis (Braithwaite et al., 2007), the following multi-item measures were combined to produce the thinking morally index: (a) having an honest taxpayer identity; (b) holding an ethical taxpaying norm; (c) disapproving of tax cheating; and (d) shame acknowledgment or feeling guilt and shame at the prospect of being caught for tax cheating. Details of the items comprising the thinking morally index appear in the Appendix.

*Coping style of feeling oppressed:* Based on an earlier principal components analysis (Braithwaite et al., 2007), the following four measures were combined to produce the feeling oppressed index: (a) being economically deprived due to taxpaying (multi-item scale); (b) paying more than one's fair share of tax (single item); (c) receiving unfavourable decisions from the tax authority, that is, being unsuccessful in protecting one's financial interests



(multi-item scale); and (d) shame displacement or feeling anger and blaming others at the prospect of being sanctioned by the tax authority (multi-item scale). Details of the items comprising the feeling oppressed index appear in the Appendix.

*Coping style of taking control:* Based on an earlier principal components analysis (Braithwaite et al., 2007), the following two measures were combined to represent the coping style of taking control: (a) the amount of effort expended on financial planning to minimize tax; and (b) whether or not one has tried different ways of organizing one's finances to find the most tax effective outcome. Details of the items in the taking control index appear in the Appendix.

*Resistant defiance:* Resistant defiance was measured through aggregating responses to 19 items that covered the motivational postures of (a) resistance, (b) capitulation, and (c) commitment. Capitulation and commitment were reverse scored so that a high score reflected high resistant defiance, that is, high on the motivational posture of resistance and low on the motivational postures of commitment and capitulation. Details of the items comprising the *resistant defiance* scale appear in the Appendix.

*Dismissive defiance:* Dismissive defiance was measured through combining responses to 10 items comprising the motivational posture scales of disengagement and game playing. High scores represented high dismissive defiance, that is, high disengagement and game playing. Details of the items comprising the *dismissive defiance* scale appear in the Appendix.

### 3.2. Results

The analyses were conducted in two stages. Hypotheses 1 to 3 were tested in the first stage, hypotheses 4 to 6 in the second stage.

First, Pearson product moment correlation coefficients were calculated among the variables used to test the hypotheses: perceived deterrence, thinking morally, feeling oppressed, taking control, resistant and dismissive defiance.

In the second stage, structural equation models were used to test the mediation model that perceived deterrence: (a) strengthens the coping style of thinking morally, which in turn, weakens defiance; (b) strengthens the coping style of feeling oppressed, which, in turn, increases defiance; and (c) (b) weakens the coping style of taking control, which, in turn, weakens defiance.

#### 3.2.1. Bivariate Relationships

From table 1, perceived deterrence was significantly and positively correlated with the coping styles of thinking morally and to a lesser extent feeling

oppressed. A low significant negative correlation was found with taking control. Hypotheses 1, 2 and 3 were supported. Taxpayers who perceived a tax authority as actively deterring those involved in tax evasion were more likely to align with the tax authority through thinking morally. They were also more likely to respond to the tax authority through feeling oppressed. At the same time, perception of an authority that actively deters taxpayers from cheating was associated with lower use of the coping style of taking control, that is, manipulating one's financial affairs to reduce taxation.

**Table 1**  
*Pearson Product-Moment Correlation Coefficients among Variables Measuring Deterrence, Coping Styles and Defiance*

Measures	1.	2.	3.	4.	5.
1. Perceived deterrence					
2. Think morally	.336***				
3. Feel oppressed	.069**	-.252***			
4. Take control	-.079**	-.049*	.124***		
5. Resistant defiance	-.097***	-.422***	.567***	.145***	
6. Dismissive defiance	-.081***	-.228***	.209***	.226***	.254***

Note: \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

No causal inferences can be made from these data. The only conclusion that can be drawn is that perceived deterrence accompanies coping styles that can assist a tax authority and that also can damage a tax authority. Thinking morally assists a tax authority. So too does reluctance to use the coping style of taking control. Attraction to the coping style of feeling oppressed, however, is potentially harmful to a tax authority.

Table 1 also shows how deterrence, thinking morally, feeling oppressed, and taking control are correlated with the outcome variables of resistant and dismissive defiance. Of note is that all correlations were statistically significant. Perceived deterrence was negatively correlated with resistant and dismissive defiance: The higher perceptions of deterrence, the lower were both kinds of defiance at the bivariate level.

The coping styles that were unfavourable to taxation were associated with greater defiance: Feeling oppressed and taking control were positively correlated with resistant and dismissive defiance. In contrast, the coping style of thinking morally was negatively correlated with resistant and dismissive defiance.

The correlations show a pattern of relationships that at a bivariate level are at least consistent with the causal theoretical model in figure 1, even though correlations do not convey information on causality. Perceived deterrence is linked with higher scores on thinking morally, which is linked to weaker defiance. Perceived deterrence is linked with lower scores on taking control, which is linked to weaker defiance. On the other hand, perceived deterrence is linked with higher scores on feeling oppressed, which is linked to stronger defiance.

The next step is to look further into the plausibility of the causal model postulated in figure 1. In preparation for this process, the non-hypothesised, yet significant correlations in table 1 are worthy of comment. Resistant and dismissive defiance were positively correlated. One possible hypothesis that awaits exploration is that resistant defiance, if not managed well, can progress to dismissive defiance. The question, however, is not dealt with in this paper. Instead resistant defiance and dismissive defiance are treated separately as outcome variables in two distinct SEM models.

Also intercorrelated in table 1 are the coping styles. Thinking morally was negatively correlated with taking control and feeling oppressed, and taking control was positively correlated with feeling oppressed.

These non-hypothesized correlations among coping styles will be statistically controlled in the structural equation modelling. Without such control, they may mask the hypothesized relationships. The focus of this paper is how perceptions of a tax authority's deterrence measures flow through to affect different coping styles, some of which may lead to defiance and non-compliance. But this more specific question is examined within a broader political question regarding how people who hold attitudes of the left or right express their politics in terms of being pro or anti tax (Braithwaite, 2009). Progressive values underpin support for paying tax for redistribution to those who need government support. Conservative values underpin opposition to this idea. Pro and anti tax attitudes, with links to more basic social values, are relatively stable and cognitively consistent and will account for portions of the correlations represented in table 1. The argument of this paper, however, is that once the correlations that are due to pro- or anti-tax attitudes arising from political ideology are statistically controlled, deterrence can be seen to have its own more nuanced effects on defiance.

### 3.2.2. Structural Equation Modelling

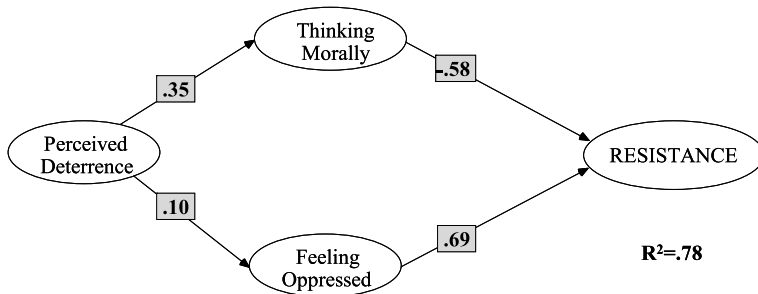
SEM models were developed using Analysis of Moment Structures (AMOS) version 6.00 with maximum likelihood estimation (Arbuckle, 2005). Missing data were managed through Expectation Maximization (Byrne, 2001, p. 296–297). This procedure allowed for the retention of as many cases as possible.

The composite variables used in this paper were developed through earlier research. SEM provided a means of checking the suitability of the measures through confirmatory factor analysis. Confirmatory factor analyses delivered a set of variables in which component measures were weighted to reflect their contribution to the hypothesized latent variables.

Models were constructed for resistant defiance (resistance) and dismissive defiance (dismissiveness) separately. The relationships among the coping styles were taken into account through allowing for covariation among the coping styles in the proposed SEM models. Modification indices indicated the need to take account of covariation among error terms for coping styles. These covariation coefficients, described in the notes associated with each of the models under figure 2 and figure 3, are consistent with the correlation coefficients presented in table 2. This, in effect, controlled the shared variance among coping styles associated with political attitudes to tax and allowed the effects of perceived deterrence on coping styles to be tested independently in accordance with the hypotheses.

**Figure 2**

*A Structural Equation Model Linking Deterrence, Coping Styles and Resistant Defiance (Resistance)*



Note: The model also featured the following bi-directional covariances between error terms, informed by modification indices: feeling oppressed and thinking morally (-.14), and feeling oppressed and resistance (.04).

A model linking perceived deterrence, coping styles and resistant defiance is presented in figure 2. Perceived deterrence strengthened the coping style of thinking morally, and thinking morally in turn reduced resistant defiance. Less marked, but nevertheless significant, was perceived deterrence strengthening the coping style of feeling oppressed, which in turn increased resistant defiance. The coping style of taking control did not contribute to the variance in resistant defiance and was therefore dropped from the SEM

model. This was consistent with the weak correlation between taking control and resistance in table 2. Hypothesis 6, therefore, was not supported in this model of resistant defiance. Hypotheses 4 and 5 were supported. The model in figure 2 explained a substantial 76 per cent of the variance in resistance. All indices of fit of the data to the model were satisfactory (see table 2).

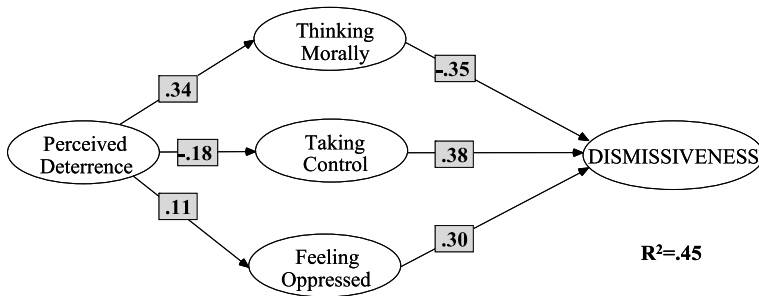
**Table 2**

*Indicators of Fit for Model Predicting Resistant Defiance and Squared Multiple Correlations for Variables in the Model*

Indicator of fit	Variable	Est. $R^2$
Chi-square ( $\chi^2$ ) = 2.114, $df = 1$ , $p = .146$	Think morally	.123
Goodness-of-Fit Index (GFI) = .999	Feel oppressed	.009
Adjusted Goodness-of-Fit Index (AGFI) = .994	Resistant defiance	.779
Root Mean-Square Error of Approximation (RMSEA) = .025		

**Figure 3**

*A Structural Equation Model Linking Deterrence, Coping Styles and Dismissive Defiance (Dismissiveness)*



Note: The model also featured the following bi-directional covariances between error terms, informed by modification indices: feeling oppressed and thinking morally (-.13), and taking control and thinking morally (-.03).

In sum, when individuals believed that tax evasion would lead to negative consequences (being caught and punished, and suffering as a consequence), their interest in expressing defiance through resistant posturing was torn in two directions; the coping style of feeling oppressed pulled them in a resistant direction, while the coping style of thinking morally reined in their resistance.

The SEM model representing the prediction of dismissive defiance from perceived deterrence and coping styles is depicted in figure 3. Again, covari-

ations among the coping styles were introduced into the model as described in the note below figure 3.

Deterrence strengthened the coping styles of thinking morally and feeling oppressed as occurred in the model of resistant defiance. At the same time, perceived deterrence weakened the coping style of taking control.

All three coping styles of thinking morally, taking control and feeling oppressed contributed to explaining dismissive defiance. Thinking morally reined in dismissiveness. Feeling oppressed strengthened dismissiveness. Taking control also strengthened dismissiveness.

For dismissive defiance, perceived deterrence looks like it might work for a tax authority wanting to assert control: Deterrence dampened the taxpayer's taking control coping style and thereby curtailed dismissive defiance. It also strengthened thinking morally and curtailed dismissiveness in this way. But figure 3 also shows the unintended consequence of a tax authority proceeding down this path. Individuals who were aware of tax authorities exercising deterrence were more inclined to cope through feeling oppressed. And perceived oppression strengthened dismissive defiance, just as it strengthened resistant defiance.

The variance accounted for in dismissive defiance was 45 per cent, much lower than in the case of resistant defiance. Nevertheless, hypotheses 4 to 6 describing how perceived deterrence privileges certain coping styles over others, and in turn affects dismissive defiance were confirmed. Goodness of fit indices for the model were satisfactory (see table 3).

**Table 3**  
*Indicators of Fit for Model Predicting Dismissive Defiance and Squared Multiple Correlations for Variables in the Model*

Indicator of fit	Variable	Est. $R^2$
Chi-square ( $\chi^2$ ) = .051, $df = 1$ , $p = .820$	Think morally	.114
Goodness-of-Fit Index (GFI) = 1.000	Feel oppressed	.012
Adjusted Goodness-of-Fit Index (AGFI) = .1000	Taking control	.033
Root Mean-Square Error of Approximation (RMSEA) = .000	Dismissive Defiance	.449

#### 4. Research Question for Study 2

Study 1 showed how perceived deterrence can have both positive and negative effects on defiance through its influence on coping styles. But what implications do these findings have for taxpaying compliance? If deterrence

can be shown to have a direct and positive impact on compliance, above and beyond the effect that defiance has on compliance, the argument may swing in favour of deterrence. Deterrence may not be perfect, but on balance it may be a better option for eliciting compliance than a tax authority investing resources in managing defiance.

In order to answer this question, an hierarchical regression model was tested using perceived deterrence and resistant and dismissive defiance from 2000 to predict taxpayers' reports of their tax evasion 18 months later in 2002. Two models were tested. The models differed in terms of order of entry of the predictive variables. In model 1, perceived deterrence was entered first, followed by resistant and dismissive defiance to predict 2002 tax evasion. In model 2, resistant and dismissive defiance were entered first, followed by perceived deterrence.

These analyses provided insight into the relative importance of deterrence and defiance in shaping later tax evading behaviour. Some might argue that it is the behaviour that matters to a tax authority, and if deterrence produces the behaviour a tax authority wants, it does not matter if defiance is collateral damage. If perceived deterrence dominated defiance in the regression models, tax authorities might consider it cost effective to focus on deterrence rather than manage defiance. If defiance dominated perceived deterrence, however, tax authorities would be wise to consider both their deterrence policy as well as their policy for managing defiance.

#### **4.1. Method**

The "Community Hopes, Fears and Actions Survey" was followed up eighteen months later in 2002 by the "The Australian Tax System – Fair or Not Survey". The survey was mailed to those who had agreed to provide their name and address for further research. This second survey contained a module of questions that matched those used in 2000, including questions on tax evasion. The questions related to knowingly not meeting legal obligations for declaring cash income, declaring all sources of income, and correctly claiming only those deductions to which the taxpayer was entitled under the self-assessment system. Tax evasion was measured in a way that was compatible with the scenarios on which the deterrence measure was based. The question, therefore, became whether perceptions of deterrence around not declaring income and over-claiming deductions at the time of the first survey would predict self-reported tax evasion behaviour 18 months later.

##### **4.1.1. Sample**

The 2002 follow-up survey comprised 1036 respondents who had taken part in the earlier survey in 2000. In addition, the survey design involved contact with

a new sample of citizens as well as contact with a sample of non-respondents from 2000. Comparisons among these groups were used to assess whether or not the follow-up sample provided access to a good cross section of the community (see Braithwaite and Reinhart, 2005 for analyses and summary of the small biases found). While differences were small and did not challenge the validity of the sample for longitudinal analysis, it is of note that the panel sample on average had a more positive attitude to paying tax than other comparison groups. The data provided by the sample were confidential and stored securely without personal identifiers.

For purposes of analysis for this paper, the possible sample of 1036 was reduced to 848. The sample was restricted to those taxpayers who had completed a tax return for the financial year leading up to the 2002 survey.

#### **4.1.2. Measure of Tax Evasion**

Tax evasion was measured as a composite of three modules of questions around (a) cash (shadow) economy; (b) failure to declare taxable income; and (c) over-claiming deductions. First, participation in the cash economy was measured through a single question (responses of 'yes' or 'no') asking "Have you worked for cash-in-hand payments in the last 12 months? By cash in hand we mean cash money that tax is not paid on."

Second, respondents were asked to think about 7 sources of income and indicate how much of their income they declared in their last tax return: (1) salary and wages, (2) honorariums, allowances, tips, bonuses, director's fees, (3) eligible termination fees, (4) Australian Government allowances like Youth Allowance, Austudy, Newstart, (5) Australian Government pensions, superannuation pensions, and other pensions and annuities, (6) interest, and (7) dividends. In addition, taxpayers were asked if they reported all the income they earned in the last income tax year. Responses were scored as 'declared totally' versus 'other' and summed over the 8 items to represent undeclared income from sources that in theory would have a 'paper trail' (in contrast to cash economy activity).

The third component of the tax evasion measure was over-claiming deductions assessed through combining the responses to two questions: (1) "As far as you know, did you exaggerate the amount of deductions or rebates in your last income tax return?" with answers provided on a graduated 5 point scale; and (b) "Think of the deductions and rebates you claimed in your last income tax return. Would you say you were absolutely confident that they were all legitimate, a bit unsure about some, pretty unsure about quite a lot and haven't a clue or someone else did it." Responses to both items were coded as 'claim is correct' versus 'other' and were summed to form the over-claiming deductions index.



Scores on cash economy participation, failing to declare all income and over-claiming deductions were standardized and combined into a composite tax evasion index.

## 4.2. Results

The correlations among the 2000 predictor variables (perceived deterrence, resistant defiance, and dismissive defiance) and the 2002 outcome variable of self-reported tax evasion appear in table 4. Perceived deterrence was significantly and negatively related to tax evasion: those who believed that tax cheating was likely to be detected and punished were less likely to report actions involving tax evasion 18 months later. Defiance was associated with higher levels of self-reported tax evasion 18 months later, with dismissive defiance showing the stronger relationship. Those who were resistantly defiant in 2000 were only slightly more likely to be reporting tax evasion in 2002.

As expected from study 1, deterrence was negatively correlated with defiance. The correlation coefficient was strongest between dismissive defiance and deterrence. The negative correlation between deterrence and resistant defiance just failed to reach statistical significance ( $p = .06$ ).

**Table 4**  
*Pearson Product-Moment Correlation Coefficients among Variables Measuring 2000 Perceived Deterrence, 2000 Resistant Defiance, 2000 Dismissive Defiance and 2002 Tax Evasion*

Measures	1.	2.	3.
1. Perceived deterrence			
2. Resistant defiance	-.065		
3. Dismissive defiance	-.097**	.330***	
4. Tax evasion	-.180***	.080*	.237***

Note: \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ .

The hierarchical regression models appear in table 5. When deterrence was added to the regression model after the defiance measures, an additional and significant 2.5% of variance in tax evasion was accounted for. Over time, deterrence was predictive of lower levels of self-reported tax evasion. When resistant and dismissive defiance were added to the model after deterrence, an additional and significant 4.9% of variance in tax evasion was accounted for. Dismissive defiance was predictive of higher levels of self-reported tax evasion. Resistant defiance was not significant when entered alongside dismissive defiance.

**Table 5**  
*Ordinary Least Squares Regression Analysis Predicting Self-Reported Tax Evasion in 2002 from Perceived Deterrence in 2000, and Resistant and Dismissive Defiance in 2000*

Predictors 2000	Predicting tax evasion 2002			
	Model 1		Model 2	
	Step 1 Beta (B, Std Err)	Step 2 Beta (B, Std Err)	Step 1 Beta (B, Std Err)	Step 2 Beta (B, Std Err)
Resistant defiance	.003 (.005, .059)	-.003 (-.005, .059)		-.003 (-.005, .059)
Dismissive defiance	.236*** (.364, .055)	.222*** (.343, .054)		.222*** (.343, .054)
Perceived deterrence		-.159*** (-.001, .000)	-.180*** (-.001, .000)	-.159*** (-.001, .000)
Adjusted $R^2$	.054	.078	.031	.078
$F$ change ( $df$ )	25.103*** (2,845)	22.953*** (1,844)	28.430*** (1,846)	22.301*** (2,844)

Note: \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ .

This analysis points to the value of tax authorities engaging in further analysis of defiance and recognizing it as a significant form of collateral damage when they use deterrence measures. As collateral damage, dismissive defiance can have the unwanted effect of undermining the prime objective of deterrence, that is, to rein in tax evasion. Attending to dismissive defiance, however, is not to suggest that deterrence should be discounted as a mechanism for discouraging tax evasion. Both deterrence and defiance appear to be important for an authority wishing to reduce tax evasion.

## 5. Discussion

### 5.1. Interpretation and Implication of Findings

This paper answers two questions: How does deterrence impact on defiance against tax authorities? (study 1); and how do deterrence and defiance work together to predict self-reported tax evasion? (study 2). The answer is not simple for either defiance or evasion.

Deterrence may increase defiance if it strengthens a coping style of feeling oppressed. Otherwise deterrence may decrease defiance: first, through affirming the tax authority's brief to elicit moral obligation from taxpayers; and second, through controlling illegitimate opportunities that lure taxpayers into taking over control of how much tax they will pay.

In the case of tax evasion, perceptions of deterrence are shown to temper evasion 18 months later, but defiance of the dismissive kind has the opposite effect, predicting higher evasion 18 months later. We know from study 1 that deterrence can inflame or dampen defiance. Thus, we are left with the conclusion that a tax authority has to engage in a fine balancing act to get its deterrence levels right.

Deterrence if perceived as *credible, but not overly oppressive* (fair and reasonable) will assist in reducing tax evasion, first directly through warning against future tax evasion, and second, indirectly through dampening defiance, particularly dismissive defiance, that can under certain circumstances increase tax evasion. In this scenario, the authority balances control with respect for taxpayers' freedom.

Deterrence, if perceived as *not credible*, can directly increase tax evasion and indirectly increase tax evasion through increasing dismissive defiance. This would occur if deterrence signalled to taxpayers that they were entitled to take control of how much tax they would pay and that taxpaying was not a serious obligation that they should meet. Here the authority is passive and not exercising control.

Deterrence, if perceived as *credible and oppressive*, can seriously undermine a tax authority's intent through fuelling feelings of oppression, giving rise to such dismissive defiance that a challenge to a tax authority's power results, and tax evasion is increased. Here the authority has over-reached in its bid to control, and has, in effect, lost control.

These conclusions were derived through a theoretical model that differs from that traditionally used in tax research. First a distinction was made between defiance and tax evasion. Defiance was conceptualized as two kinds, defined in terms of motivational postures. Resistant defiance signals dislike for tax authority. Dismissive defiance signals a stronger form of opposition, a refusal to defer to tax authority. Dismissive defiance is the more dangerous for tax authorities in so far as it is a predictor of evasion. That said, it is theoretically important to note that words of opposition are not necessarily matched by acts of evasion particularly if a tax authority threatens to use its powers: Taxpayers may not listen to a tax authority, may not cooperate, and routinely may question tax authority judgment, but nevertheless, they may pay their tax within the requirements of the law if they believe there are consequences for not doing so. This paper contends that both defiance and tax evasion matter to a tax authority. Both adversely affect the efficiency

of a tax authority; evasion in terms of reducing the revenue collected and defiance in terms of consuming resources that are better directed to detecting evasion. Defiance can also undermine an authority's credibility, and in turn, undermine its capacity to collect tax as discussed below.

This paper used the concept of coping styles from the stress and coping literature to show how deterrence affects taxpayers in different ways, strengthening defiance in some cases, weakening defiance in others. A taxpayer can respond to the threat of a tax authority through aligning with the authority and thinking morally about tax, or through feeling oppressed or victimized, or through fighting back by taking control from the authority. Each taxpayer potentially has access to all of these coping styles; there is no reason to believe that they cling exclusively to one style in their bid to adapt to tax authority pressure. What is perceived as reasonable and fair deterrence may lead Taxpayer A to cope mainly through thinking morally. Unreasonable and unfair deterrence may arouse in Taxpayer A feelings of oppression that dominate thinking morally. And ineffective deterrence that is disrespected by the community at large may entice Taxpayer A into allowing taking control to dominate over thinking morally or feeling oppressed.

The strength of these different coping styles will pull taxpayers in different directions but they will play out to unveil levels of resistant and dismissive defiance, an amalgam of beliefs, feeling and attitudes that express taxpayers' willingness to cooperate and/or defer to tax authority. When feelings of oppression trump thinking morally, resistant defiance results. When oppression and taking control dominate thinking morally, dismissive defiance results. High scores on feeling oppressed and taking control can coexist: Taxpayers see the tax authority as being oppressive but taxpayers can also take advantage of tax avoidance, that is, finding ways around the law.

In sum, the findings and the theoretical lens through which the findings are interpreted provide a warning about the use of deterrence by a tax authority. Deterrence is clearly necessary: Tax authorities would suffer an outburst of evasion without credible deterrence. But deterrence that creates legitimate grievance is dangerous. Deterrence must be perceived as not only credible, but also reasonable and fair.

## **5.2. Policy Connections: Responsive Regulation and the ATO Compliance Model**

If deterrence is destined to have mixed outcomes, how can a tax authority keep control of how deterrence is being perceived and interpreted in the community so that it will do the work it is supposed to do and change the behaviour of those targeted effectively?

Murphy's study of ordinary Australian taxpayers who had been accused by the Australian Taxation Office of tax evasion because of involvement in mass marketed 'tax minimization' schemes is instructive on how the deterring actions of a tax authority can go very wrong (see Murphy, 2003, 2004, 2005). Deterrence was used harshly and from the perspective of taxpayers, without sufficient warning. The strategy backfired with dire consequences for the tax authority.

Murphy's study identified two sources of opposition to the tax office's assault to deter mass marketed scheme activity. The first comprised "mom-and-pop" investors. They had received severe penalties that potentially extended back over six years of tax returns. Behind the taxpayers who had been penalized for participating in the schemes were sophisticated financial planners and promoters. They had made considerable profits out of selling the schemes to unsuspecting and trusting consumers and their business model was at risk through the tax office's highly publicized actions. As taxpayers protested the penalties that the tax office imposed as well as the label of "tax cheat", taxpayer fighting funds were set up. The complaints were that the tax authority had been slow to declare the schemes illegal and were treating taxpayers unfairly.

Murphy's study confirmed that most of the taxpayers by this stage were resistantly defiant – they were feeling victimized and oppressed by taxation. They convincingly denied being clever tax avoiders. After a turbulent period of challenge and counterchallenge in the courts, the Australian Taxation Office was forced into a humiliating back down which served neither the tax authority nor the tax system well. In the meantime, the promoters of the schemes were untouched. Interestingly, taxpayers were more likely to blame the Australian Taxation Office for their misfortune, rather than the promoters.

So how can tax authorities be confident that their efforts to deter through penalties and sanctions will steer the population in the direction of moral obligation and honest taxpaying and not in the direction of resistant or dismissive defiance? One approach that has been developed in the regulation literature and has underpinned the Australian Taxation Office's compliance model is responsive regulation (Ayres and Braithwaite, 1992; Braithwaite and Braithwaite, 2001; Job et al., 2007). Responsive regulation sits comfortably alongside the findings of this paper.

Responsive regulation means that the tax authority should be responsive to the taxpayer in how it approaches non-compliance. If the non-complying taxpayer is prepared to come into compliance through education and persuasion, that is what the tax authority should do. The principle is to use only as much pressure as is required to elicit compliance. Responsive regulation advocates keeping the actual threat as low as is necessary (and legally per-

missible) to turn around the actions of the non-compliant taxpayer, although there is widespread knowledge that the authority has a credible escalating set of sanctions that can be used should compliance not be forthcoming voluntarily.

The responsive regulatory approach is often communicated through a regulatory pyramid. At lower levels of the pyramid, those not complying are given a chance to make amends of their own accord. If they do not, the tax authority makes its presence felt through an increasing set of demands that transition through sanctions and end at the peak of the pyramid in incapacitation. The logic of the responsive regulatory approach is that when it is known that an authority is not going to give up, it is better to settle differences further down the pyramid than wait until the costs of non-compliance have accumulated to the point where non-compliance proves very costly for the taxpayer.

The responsive regulatory approach answers the problem of unpredictability over the outcome of deterrence, that is, the problem posed by individuals choosing different coping styles in response to deterrence. Deterrence purposefully is not delivered in the same way in response to the same offence. It is delivered to elicit the coping style most amenable to winning cooperation. Through starting with persuasion, education and opportunity to correct one's errors, the responsive regulatory approach makes its first appeal to thinking morally. If the non-compliant taxpayer cooperates, the tax authority has opportunity to consolidate a moral frame for taxpaying.

Should that fail, and many times it will, a more interventionist approach is required. This will aggravate the coping style of feeling oppressed. But those who are feeling oppressed find themselves in a surprising situation. They can relieve the stress on themselves by moving to the bottom of the pyramid, to the level of education and persuasion, and they can settle differences. If instead they choose to pursue their grievance and escalate their dispute with the tax authority, they know what to expect. Further levels of tax office intrusiveness will come into play, as they take the conflict to the next level of contestation on the pyramid. In a small number of cases, tax authorities will have to proceed to take action at the top of the pyramid. It is of note, that while the taxpayer can always return to the bottom of the pyramid to settle the dispute, so too can the tax authority, if they judge their original interpretation of the law to be at fault.

### 5.3. Limitations of Study

The main limitations of this study are in part methodological and in part due to linking two previously unlinked theoretical literatures (coping styles and regulation). First, a survey methodology at best captures what people

think they do most of the time. The actual attitudes and behaviours they show in particular contexts, sometimes unknown even to themselves, escape the lens of the survey researcher. Thus, deterrence, coping styles and motivational postures (defiance) are not measured within the context of dynamic action involving the tax authority: they are measured when people are quietly sitting with paper and pencil reflecting on their past activities, remembering, and in a sense talking to themselves about why they did what they did and how they are feeling about it all. They may wish to impress the survey researcher with an image of “goodness” and “self-worth”. More likely with an unidentified paper and pencil survey is the desire to be consistent and make sense of their actions to themselves. This presents a challenge for researchers who analyze survey data looking for connections between thoughts and actions. They do not want those connections to be “concocted” by respondents. Taking measures at different times, as in study 2 (surveys completed 18 months apart), partially assists alleviate this problem, but not entirely.

More importantly, mental events need to be anchored in more objective events in order to provide convincing evidence for authorities making decisions on how to use deterrence to reduce defiance and evasion. Actual tax returns assessed by tax authorities, defiance assessed by observers, and deterrence set at varying levels by authority would anchor these self-report surveys in objective indicators. Multiple sets of field experiments are an essential extension of survey research for policy formulation and implementation around the use of deterrence.

A second limitation is oversimplification, evident at a number of levels. First, the theoretical causal model postulated in study 1 is a simplified and rational account of how people’s minds work when dealing with threat. Most times, as in study 1, the responses to threat are happening instantaneously and iteratively. Feelings, appraisals and answers to why the threat, and what to do about it whirl around in people’s heads. The postulated causal model in study 1 belies the complexity of mental processing that is likely to be going on. The rationale for the model is related to its purpose in this paper. A tax authority introduces deterrence and taxpayers respond first to the immediate threat – the deterrent measure, and then to the power behind the deterrent threat – the tax authority.

Oversimplification might also be applied to the “psycho-logic” underpinning the theory in this paper whereby individuals act on the basis of knowledge and beliefs. Only 45 % of the variance in dismissive defiance was accounted for. Dismissive defiance, which seems to be at the heart of much aggressive tax planning, needs to be theorized perhaps along the lines of financial contagion sweeping people up in the excitement of making a financial killing (Braithwaite J., 2005; Braithwaite, 2009). Dismissive defiance

may be more about role models and opportunity than a thoughtful analysis of moral obligation, oppression and taking control.

Readers will also note the unexplained variance in tax evasion. While this finding is in keeping with research findings in the field, it is of note that acts of tax evasion are due to factors other than deterrence and defiance. There is every reason to believe that in some cases tax evasion is a more spontaneous, emotive, perhaps even impulsive response to opportunity (Murphy, 2003, 2004, 2005). There is already evidence that lack of knowledge leads to greater non-compliance (McKerchar, 1995).

Also on the low side were the percentages of variance accounted for in the coping styles by the deterrence variable. Deterrence was measured in a way that was highly compatible with tax evasion – the measures focused on specific actions, behavioural intentions and feelings associated with particular contexts of cash economy participation, failing to declare taxable income and claiming illegitimate tax deductions. In contrast, the coping styles and motivational postures were not context sensitive in the way they were measured. The questions took the general form of “overall, would you say you felt ...?” The different levels of abstraction in measuring context-sensitive deterrence and general coping strategies undoubtedly accounts in part for the lower relationships between deterrence and coping styles than expected. The reactivity of mass marketed scheme participants in the Murphy (2003, 2004, 2005) study further suggests that heavy handed deterrence and feelings of oppression are more tightly interconnected than the SEM analysis presented here suggests.

In spite of limitations, this research, through applying the stress and coping model to taxpayers dealing with the demands of a tax authority, takes a step forward in appreciating the psychological complexity that accompanies deterrence and why deterrence does not always work as policy makers would like. Together the findings underline the importance of deterrence as part of a tax authority’s law enforcing activity. But just as important are efforts to ensure deterrence is regarded as fair and reasonable by the public (so grievance is not felt) and taxpayers see merit in honest taxpaying. A way for the future is to examine deterrence and subsequent actions contextually to see how a tax authority’s responsiveness to individual circumstances, through both specific acts of help and warnings of deterrence, can turn around non-compliant activity (see for example Braga and Weisburd, 2012). Focused deterrence of this kind (reflecting power), combined with providing a legitimate path forward to meet tax obligations (building trust), may contribute to realizing the dual model of voluntary compliance that Kirchler (2007) advocates: a tax authority through demonstrating good faith earns trustworthiness, while judiciously using power to promote law-abidingness.



## 6. Appendix

Deterrence index: The following two questions were asked of respondents: (a) Imagine you have been paid \$5000 in cash for work that you have done outside your regular job. You don't declare it on your income tax return. What do you think the chances are that you will get caught?; (b) Imagine you have claimed \$5000 as work deductions when the expenses have nothing to do with work. What do you think the chances are that you will get caught? First, respondents were required to estimate the chances of being caught in each case. Responses were made along a horizontal line with the following five points marked – 0% (about zero), 25%, 50/50, 75%, 100% (almost certain). Estimates were averaged across the two scenarios to produce an index for probability of getting caught ( $M = 3.42$ ,  $SD = 1.05$ ).

Second, respondents rated the chance of four legal consequences occurring on the same five-point scale used above: (a) taken to court + pay a substantial fine + pay the tax you owe with interest; (b) taken to court + pay the tax you owe with interest; (c) pay a substantial fine + pay the tax you owe with interest; (d) pay the tax you owe with interest. Estimates were averaged across the two scenarios to produce the probability of being sanctioned index ( $M = 3.78$ ,  $SD = .93$ ).

Third, the magnitude of the problem associated with each of these legal consequences was measured. Ratings were made on a four-point scale from 1 (no problem) through 4 (large problem). Scores on the magnitude of the problem created by sanctions were obtained by averaging these ratings over the two scenarios ( $M = 3.46$ ,  $SD = .65$ ).

The overall deterrence term was the average of the deterrence scores for the two scenarios. The deterrence term for each scenario was calculated as follows:  $Deterrence = (C \times P1 \times S1) + (C \times P2 \times S2) + (C \times P3 \times S3) + (C \times P4 \times S4)$  where  $C$  = likelihood of being caught;  $P1$  = likelihood of having to pay tax with interest;  $S1$  = severity of the problem created by having to pay tax with interest;  $P2$  = likelihood of having to pay tax with interest + penalty;  $S2$  = severity of the problem created by having to pay tax with interest + penalty;  $P3$  = likelihood of being taken to court and having to pay tax with interest;  $S3$  = severity of the problem created by being taken to court and having to pay tax with interest;  $P4$  = likelihood of being taken to court and having to pay tax with interest + penalty;  $S4$  = severity of the problem created by being taken to court and having to pay tax with interest + penalty. The mean of the overall deterrence measure was 189.13, standard deviation 105.09.

Thinking morally coping style index: having an honest taxpayer identity was measured through ratings on 7-point “do not agree at all” (1) to “agree completely” (7) scales in response to two statements: (a) Being an honest

taxpayer is important to me and (b) I feel a sense of pride in being an honest taxpayer.

An ethical taxpaying norm was measured on 5-point rating scales (no!! (1) through yes!! (5)) in response to four questions: (a) Do YOU think you should honestly declare cash earnings on your tax return?; (b) Do YOU think it is acceptable to overstate tax deductions on your tax return? (reverse scored); (c) Do YOU think working for cash-in-hand payments without paying tax is a trivial offence? (reverse scored); (d) Do YOU think the government should actively discourage participation in the cash economy?

Disapproving of, reporting on and confronting tax cheating was measured with 5-point highly unlikely (1) to highly likely (5) rating scales in response to five questions: If you found out that an acquaintance was working for cash-in-hand payments, how likely is it that you would respond in the following ways – (a) I'd think they were clever (reverse scored); (b) I would not care (reverse scored); (c) I'd think it was wrong; (d) I'd let them know I disapproved; (e) I'd report them to the Tax Office.

The 11 items were standardized to a mean of 0 and standard deviation of 1 before being combined to form the thinking morally index. The alpha reliability coefficient for the 11 items was .77 ( $M = .00$ ,  $SD = .55$ ).

Shame acknowledgement (shame-guilt) was added to this index on the basis of subsequent analyses. Respondents were asked to imagine how they would feel after being caught and given a substantial fine in the two deterrence scenarios. They responded to the following shame acknowledgment items using a four-point rating scale to indicate likelihood: (a) feel that you had let down your family; (b) feel ashamed of yourself; (c) feel angry with yourself for what you did; (d) feel concerned to put matters right and put it behind you; (e) feel that what you had done was wrong; (f) feel bad about the harm and trouble you'd caused; (g) feel humiliated; (h) feel embarrassed; (i) feel guilty. Responses were summed for acknowledgment over the items in each scenario and then an average score was calculated. The acknowledgment scale had an alpha reliability coefficient of .95 in scenario 1 and .95 in scenario 2. The scale correlation between scenarios was .91. The mean for the combined shame acknowledgment scale was 3.06 ( $SD = 0.81$ ). Shame acknowledgment correlated .42 with thinking morally and was therefore standardized and included in the thinking morally index ( $M = .00$ ,  $SD = .67$ ).

Feeling oppressed coping style index: Economic disadvantage was measured on 5-point strongly disagree (1) to strongly agree (5) rating scales in response to the following three items: (a) I would be better off if I worked less given the rate at which I am taxed; (b) Paying tax removes the incentive to earn more income; (c) Paying tax means that I just can't get ahead.

Paying more than one's fair share was measured on a 5-point rating scale ranging from much less than my fair share to much more than my fair share.

Decisions going against one's interests was measured on 5-point almost never (5) to almost always (1) rating scales in response to the following two items: (a) How often do you agree with the decisions made by the tax office? (b) How often are the decisions of the tax office favourable to you?

The six items were standardized to a mean of 0 and standard deviation of 1 before being combined to form the feeling oppressed index. The alpha reliability coefficient for the 6 items was .72 ( $M = .00$ ,  $SD = .64$ ).

Shame displacement (blaming the tax office for deterrence) was subsequently added to this measure. Respondents were asked to imagine how they would feel after being caught and given a substantial fine in the two deterrence scenarios. They responded to the following shame displacement items using a four-point rating scale to indicate likelihood: (a) feel unable to decide, in your own mind, whether or not you had done the wrong thing; (b) feel angry with the tax office; (c) feel bothered by thoughts that you were treated unfairly; (d) feel that you wanted to get even with the tax office. Responses were summed over the items in each scenario and then an average score was calculated. The displacement scale had an alpha reliability coefficient of .71 in scenario 1 and .75 in scenario 2. The scale correlation between scenarios was .83. The mean for the combined shame displacement scale was 1.87 ( $SD = .66$ ). Shame displacement correlated .30 with feeling oppressed and was therefore standardized and included in the feeling oppressed index ( $M = .00$ ,  $SD = .66$ ).

Taking control coping style index: Effort to plan financial affairs in order to legally pay as little tax as possible was measured on a 5-point scale from "none" (1) to "a lot" (5). Trying several different ways of arranging finances to minimize tax was measured dichotomously as "yes" (2) or "no" (1). The items were standardized to a mean of 0 and standard deviation of 1 before being combined to form the taking control index. The correlation between the items was .50 ( $M = .00$ ,  $SD = .87$ ).

Resistant defiance scale: Resistant defiance comprised support for the motivational posture of resistance and rejection of the motivational postures of commitment and capitulation.

The motivational posture of resistance was measured through 5-point strongly disagree (1) to strongly agree (5) rating scales in response to the following items: (a) As a society, we need more people willing to take a stand against the Tax Office; (b) It's important not to let the Tax Office push you around; (c) The Tax Office is more interested in catching you for doing the wrong thing, than helping you do the right thing; (d) It's impossible to satisfy the Tax Office completely; (e) Once the Tax Office has you branded as a non-compliant taxpayer, they will never change their mind; (f) If you don't cooperate with the Tax Office, they will get tough with you.

The motivational posture of commitment was measured through 5-point strongly disagree (1) to strongly agree (5) rating scales in response to the following items: (a) Paying tax is the right thing to do; (b) Paying tax is a responsibility that should be willingly accepted by all Australians; (c) I feel a moral obligation to pay my tax; (d) I think of tax paying as helping the government do worthwhile things; (e) Overall, I pay my tax with good will; (f) I resent paying tax. (reversed); (g) I accept responsibility for paying my fair share of tax; (h) Paying my tax ultimately advantages everyone.

The motivational posture of capitulation was measured through 5-point strongly disagree (1) to strongly agree (5) rating scales in response to the following items: (a) If you cooperate with the Tax Office, they are likely to be cooperative with you; (b) Even if the Tax office finds that I am doing something wrong, they will respect me in the long run as long as I admit my mistakes; (c) The Tax Office is encouraging to those who have difficulty meeting their obligations through no fault of their own; (d) The tax system may not be perfect, but it works well enough for most of us; (e) No matter how cooperative or uncooperative the Tax Office is, the best policy is to always be cooperative with them.

Commitment and capitulation were reverse scored before being combined with resistance. Scores were averaged to form a resistant defiance scale. The alpha reliability coefficient for the 19 items was .82 ( $M = 2.64$ ,  $SD = .41$ ).

Dismissive defiance scale: Dismissive defiance comprised the motivational postures of disengagement and game playing.

The motivational posture of disengagement was measured through 5-point strongly disagree (1) to strongly agree (5) rating scales in response to the following items: (a) If I find out that I am not doing what the Tax Office wants, I'm not going to lose any sleep over it; (b) I personally don't think that there is much the Tax Office can do to me to make me pay tax if I don't want to; (c) I don't care if I am not doing the right thing by the Tax Office; (d) If the Tax Office gets tough with me, I will become uncooperative with them; (e) I don't really know what the Tax Office expects of me and I'm not about to ask.

The motivational posture of game playing was measured through 5-point strongly disagree (1) to strongly agree (5) rating scales in response to the following items: (a) I enjoy talking to friends about loopholes in the tax system; (b) I like the game of finding the grey area of tax law; (c) I enjoy the challenge of minimizing the tax I have to pay; (d) I enjoy spending time working out how changes in the tax system will affect me; (e) The Tax Office respects taxpayers who can give them a run for their money.

Disengagement and game playing were combined and scores averaged to form a dismissive defiance scale. The alpha reliability coefficient for the 10 items was .72 ( $M = 2.37$ ,  $SD = .47$ ).

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