

CENTRE FOR TAX SYSTEM INTEGRITY



When tax collectors become collectors for child support and student loans: Jeopardizing the revenue base?

Eliza Ahmed & Valerie Braithwaite



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JEOPARDIZING THE REVENUE BASE?**

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THE CENTRE FOR TAX SYSTEM INTEGRITY WORKING PAPERS

The Centre for Tax System Integrity (CTSI) is a specialised research unit set up as a partnership between the Australian National University (ANU) and the Australian Taxation Office (Tax Office) to extend our understanding of how and why cooperation and contestation occur within the tax system.

This series of working papers is designed to bring the research of the Centre for Tax System Integrity to as wide an audience as possible and to promote discussion among researchers, academics and practitioners both nationally and internationally on taxation compliance.

The working papers are selected with three criteria in mind: (1) to share knowledge, experience and preliminary findings from research projects; (2) to provide an outlet for policy focused research and discussion papers; and (3) to give ready access to previews of papers destined for publication in academic journals, edited collections, or research monographs.

Abstract

This paper investigates the relationship between making additional payments to the state for student loan (via the Higher Education Contribution Scheme) and child support (via the Child Support Scheme) and compliance with tax law. Data are taken from the Community Hopes, Fears, and Actions Survey based on a random sample of 2040 individuals. Additional payments were found to pose a compliance problem for tax authorities. At the same time, this study demonstrated that perceived deterrence, moral obligation and possible trustworthiness play significant roles in reducing tax evasion. An important finding to emerge from this study is that tax evasion is more likely to accompany additional payments when personal income and belief in trust norms are low. The finding of greater tax evasion among economically marginalized groups has been demonstrated in other contexts, but the adverse effects of becoming irreconcilably socially marginalized from legal authority has tended to be both undervalued and under-theorized in the taxation compliance literature.

When tax collectors become collectors for child support and student loans: Jeopardizing the revenue base?

Eliza Ahmed and Valerie Braithwaite

I. Introduction

Tax authorities are increasingly becoming involved in the administration of social policy (Vehorn & Brondolo, 1999). At times this involves making payments to segments of the population who need assistance, but at other times, tax offices assume the less popular responsibility of collecting money, as in the case of child support or student loans. There have been suggestions that unpaid civil and criminal penalties are also potentially collectible through the tax system. Such developments provide an efficient solution to serious compliance problems in the community. The Tax Office can extract payments along with income tax at source for wage and salary earners, or issue tax assessments that take account of money owed to other branches of government. While administrators dwell on the logistics of such schemes and policy makers estimate the additional dollars brought into the system, tax researchers need to ask the question, how does such policy impact on the efforts of tax authorities to promote a voluntary taxpaying culture? Finding ways to promote a voluntary taxpaying culture has emerged as a priority for countries that rely on a self-assessment tax system (James & Alley, 1999). As James and Alley point out (1999), when tax systems are used as instruments of policy, compliance changes in meaning: It is no longer 'just compliance with tax law' but 'compliance with government policy in the wider sense' (p. 9). This paper investigates the relationship between making payments through the Tax Office for extra items such as higher education and child support, and complying with tax law when completing one's income tax return.

The paper is divided into 6 sections. The next section presents an argument for why making additional payments through the Tax Office might affect the way in which key variables impact on tax compliance, and furthermore, affect compliance directly. Section III then briefly reviews the tax compliance literature, justifying the key variables for inclusion in this study of taxation compliance, and sets out the research hypotheses. Section IV outlines the survey design and describes the measures used to test the

hypotheses. Section V presents the results of the regression analyses, and the conclusions are in Section VI.

II. Making additional payments through the Tax Office

The payment of child support and the repayment of a government loan for higher education both represent additional payments made by some Australian citizens through the Australian federal tax system. It is important to note that the two government programs being considered here, the Child Support Scheme (CSS)¹ and the Higher Education Contribution Scheme (HECS) are not directly associated with taxation. The reason that the taxation authority became involved in collection was implementation efficiency. The contribution that individuals make under each scheme is income-dependent, and the tax records provide the best database for assessing level of payment required.

Both the HECS and CSS were politically controversial when introduced and remain so. They were a means of shifting costs from the Australian government to individuals who were beneficiaries (in the case of higher education) and who were responsible for sharing in the costs (non-custodial parents in the case of child support). In the 1970's, the Australian government provided free tertiary education and support for children from broken homes. Policy changes that shifted the costs of education and family maintenance from government to individuals therefore threatened the established state-citizen relationship (Chapman & Ryan 2002; Joint Select Committee on Certain Family Law Issues, 1994; for more on disillusionment with Australian democracy, see Rawlings & Braithwaite, 2003).

Many individuals caught up in making payments through the HECS and CSS are resentful at being caught in this web: They see themselves as the 'unlucky' ones, paying their way twice – first paying for particular kinds of services that others have had free of charge, and second, paying the same amount that others do into the communal pot for the benefit of all (Ahmed 2003; Sutton, 1996). Furthermore, research supported by the Australian Taxation

¹ In 1998, the Child Support Agency was organizationally transferred to the Department of Family and Community Services. Nevertheless, the Agency continues to be located within the tax authority so that data can be shared on child support cases.

Office suggests that the HECS and CSS have tested the authority's bid to improve the voluntary taxpaying culture in Australia (Australian Taxation Office 2002-03; Blaker et al., 2000; Williams, 2001).

The HECS: In 1989, the Higher Education Contribution Scheme was introduced by the Australian federal government to assist students who were pursuing tertiary education and could not afford to pay fees prior to enrolling in their course of study (<http://www.hecs.gov.au>). The scheme allows tertiary students to accumulate a debt, repayable through the tax system once the student enters the workforce and earns more than a certain amount per year. At the time of this research, repayments were not required until a person earned more than \$21 985. The rate of repayment of the loan increased from 3% to 6% (based on salary) with the highest rate coming into effect when personal income exceeded \$39 573². This income range mapped onto the same tax bracket (\$20 000 to \$50 000, marginal tax rate 30%). Income tax is paid independently of HECS and CSS³.

The CSS: In 1988, the Child Support Scheme was introduced by the Australian Government amidst concern that non-custodial parents were failing to provide financial support for their children and were relying instead on the government's social welfare system. The purpose of the CSS was to ensure that 'parents share in the cost of supporting their children according to their capacity' [and] 'adequate support is available to all children not living with both parents' (www.csa.gov.au/agency/plans). The payment formula is complex, taking into account not only the income of the non-custodial parent, but also the number of children, and the personal income of the custodial parent.

It is of note that not all parents choose to use the government as an intermediary for child support payments. It is possible, and indeed encouraged by the Child Support Agency, for non-custodial parents to make their support payment directly to their family. This system,

² At the time of this research, the income thresholds and HECS repayment rates for income earned during the 1999-2000 income year were: 0% for income below AU\$21 984, 3.0% for AU\$21 984 - AU\$23 183, 3.5% for AU\$23 184 - AU\$24 982, 4.0% for AU\$24 983 - AU\$28 980, 4.5% for AU\$28 981 - AU\$34 976, 5.0% for AU\$34 977 - AU\$36 814, 5.5% for AU\$36 815 - AU\$39 572, and 6.0% for AU\$39 573 and above (<http://www.hecs.gov.au/faqs.htm>).

however, operates within a policy framework that allows the custodial parent to request intervention by the Agency if the payment is not received or if it is inadequate. In this sense, the government remains a player in child support, although its role can be indirect as an ‘overseer’ that things are working as they should.

Both the HECS and CSS affect wage and salary earners in a similar way. Employers deduct any HECS payment or CSS payment through the payroll system along with other compulsory payments such as income tax. Those who do not have the money they owe deducted automatically through a workplace payroll system are required to make special payments through the Tax Office (Ahmed, 2000). In this respect, economists may argue that those involved in making HECS and CSS payments are, in effect, paying higher marginal tax rates. If this is the case, there is not a strong argument for predicting a follow-on effect in the form of increased tax evasion, at least not from empirical research (for a review, see Andreoni et al., 1998; Jackson & Milliron, 1986)⁴. As we show in the next section, *perceptions* of events surrounding taxpaying are considerably more important in explaining individuals’ non-compliance than the actual events themselves. Whether or not individuals *perceive* additional payments as an increase in their marginal tax rates remains untested at this point in time. Depending on how the payment is framed, individuals may interpret HECS or CSS contributions as a ‘marginal burden’ imposed by the state, or alternatively as a debt or a living expense that has to be paid anyway. In the latter case, situational variables are likely to shape judgments about payment, particularly judgments about whether the payment represents value for money or not. In survey work with new graduates, Ahmed (2003) has found that tax cheating increases among those who were dissatisfied with their tertiary education. While the notion of resentment over HECS and CSS frames the approach taken in this paper, there nevertheless remains a need for further research to test the empirical robustness of a marginal tax rate argument. Needless to say, these arguments are not mutually exclusive.

³ The individual tax rates during the 2002-2003 income year were as follows: 0% for taxable income of AU\$0 - AU\$6000, 17% for AU\$6001 - AU\$20 000, 30% for AU\$20 001 - AU\$50 000, 42% for AU\$50 001 - AU\$60 000, and 47% for over AU\$60 000.

III. Brief overview – Explaining tax compliance

Traditionally, tax compliance has been understood in terms of the benefits of successful evasion weighed against the risk of detection and punishment (Allingham & Sandmo, 1972). Punishment has been most deeply institutionalised in the tax context through systems of fines and penalties (Freiberg, 1990), although some researchers have extended the deterrence model in the tax area to include social sanctions (Grasmick & Bursik, 1990). A degree of support has been found for the hypothesis that compliance is likely to be higher when taxpayers perceive there to be a higher probability of *being caught* along with anticipated *adverse consequences* (Grasmick & Bursik, 1990; Lewis, 1982; Richardson & Sawyer, 2001).

While deterrence theory continues to be popular as a framework for understanding tax compliance, few tax researchers now accept that the fear associated with non-compliance is sufficient to explain why people pay tax (Alm et al., 1995; Andreoni et al., 1998; Lewis, 1982). Another influential body of work has pursued the issue of *moral obligation*: People pay tax because they believe it is the right thing to do (Schwartz & Orleans, 1967; McGraw & Scholz, 1991; Richardson & Sawyer, 2001). Community norms about how one should behave, particularly when internalised as personal norms, are likely to constrain taxpayers as they review their taxpaying options (Cullis & Lewis, 1997; Smith & Kinsey, 1987; Weigel et al., 1987). Recently, there has been a surge of interest in the concept of tax morale (Frey, 1997) defined as the ‘intrinsic motivation to pay taxes’ (Torgler, 2003, p. 5). Torgler (2003) carried out a series of studies on international data sets and concluded that high tax morale is associated with higher levels of tax compliance.

Associated with high tax morale is the internal regulation provided not only through *knowing* the right thing to do, but also *feeling* that to do the wrong thing is intolerable. Ahmed (2001) has analysed emotional reactions to wrongdoing and concluded that certain responses to shame increase compliance in two ways. First, individuals who are able to feel shame and yet refrain from blaming others for their mistakes are more likely to link such

⁴ Typically, experimental studies have produced results showing an association between higher tax rates and higher tax evasion. Such a notion of positive association, however, has not been consistently supported in population surveys of this kind.

feelings to their actions. They have not succumbed to the commonly encountered path of shame displacement (for example, 'It's not my fault'). Second, individuals who move on to engage in shame acknowledgment recognize feelings of guilt, and feel the need to take action that makes amends. In this way, shame feelings that represent low displacement and high acknowledgment prompt future compliance by boosting moral obligation.

Deterrence and moral obligation supposedly keep taxpayers on the path of compliance, but what happens when social change disrupts the relationship between the citizen paying the tax and the state collecting the tax? Within the tax compliance literature, the perceived fairness of the exchange between citizens and government has emerged as an important consideration (Kinsey & Grasmick, 1993; Kinsey et al., 1991; Mason & Calvin, 1984; Scholz & Lubell, 1998; Thurman et al., 1984; Richardson & Sawyer, 2001; Wenzel 2001); as has the reactance of taxpayers who oppose government interference in their livelihood (Kirchler, 1999). Within the context of fair exchange, Scholz and Lubell (1998) have pointed to the importance of trust in government as it relates to taxation compliance. They have interpreted trust as a 'rough measure of the net benefits from governing institutions' (1998, p. 411). Thus, while sanctions and obligation are constraints in keeping people in the tax system doing the right thing, unfairness or a breach of trust may be seen as an instigator of non-compliance (see Weigel et al., 1987). When government behaves in a way that is not in accordance with expectations, citizens can retaliate by cheating on the tax system. Levi (1998) has referred to this form of citizen responsiveness as contingent consent.

The idea of fairness in the exchange and contingent consent conjure up images of a dynamic relationship between citizens and their government. Trust goes up and down depending upon how one side acts towards the other. But can citizens reach a point where trust is no longer possible – an irreconcilable breach emerges between the citizen and government and its authorities? Braithwaite (1998) describes this state of affairs as the loss of belief in trust norms. Trust norms are coherent sets of beliefs that are used to gauge the trustworthiness of others. As norms, they are shared by the community: Citizens and government authorities know what each needs to do to earn the trust of the other and judge each other accordingly. When citizens no longer believe in trust norms in relation to a tax

authority, that is, when they are of the view that there is nothing that the authority can do to establish its *trustworthiness*, they are less likely to defer to the demands of that authority (Braithwaite, 2004).

A question

The question that is being posed in the present research is whether government jeopardizes its capacity to collect tax when it changes the rules of engagement with the public. Deterrence, moral obligation and trustworthiness are expected ‘to hold’ citizens in the system, but will these controlling influences remain in place when new schemes are introduced that are controversial and which shift costs from the government coffers to the citizens’ pockets? Research on reactance (Kirschler, 1999), defiance (Sherman, 1993), and neutralization techniques to break free of Tax Office constraint (Thurman et al., 1984) all point to a propensity for taxpayers to hit back at the tax authority when they are dissatisfied with the nature of the tax deal.

Theoretically, asking the tax authority to collect payments on behalf of other government functionaries can jeopardize the revenue base in two ways. First, making additional payments (specific people pay for specific things on top of their standard tax contribution) could be an instigator of non-compliance in its own right, and exert a negative influence over and above the constraints that are normally imposed by deterrence, moral obligation and trustworthiness (the main effect hypothesis a). The rationale for the main effect hypothesis is that some people may resent ‘paying twice’ (Ahmed, 2003) – Paying their tax like every one else so that the government can provide goods and services for the benefit of all, and then paying extra for particular goods and services that government will no longer provide.

Second, making additional payments could interact with the constraints of deterrence, moral obligation and trustworthiness, reducing effectiveness in each case (the interaction hypotheses b, c and d). The basis for the interaction hypotheses is that there may be a ‘reactance’ point beyond which the constraints of the system no longer work. People required to make additional HECS or CSS payments, in effect, place themselves

psychologically outside the control of the system such that deterrence (hypothesis b), moral obligation (hypothesis c) and trustworthiness (hypothesis c) no longer are effective in exerting a positive influence on compliance.

Underlying both the main effect and the interaction hypotheses about the way in which additional payments might jeopardize the tax base is the following condition that is justified in the next section: The additional payments being considered here are those that signify departure from the status quo with respect to the government-citizen relationship, in particular, a change involving the transfer of costs from the government to the citizen without substantive change in income tax rates.

Finally, the inclusion of a set of control variables that are known to influence taxation compliance (age, sex and personal income: see Jackson & Milliron, 1986) prompted consideration of the interaction between additional payments and personal income. Personal income is a variable that in the past has influenced tax evasion in unpredictable ways. In this particular context, we wish to test for a possible interaction: Those who make additional payments may be more likely to cheat on their tax when their personal income is low. The basis for this hypothesis is contextualized within a series of analyses and reports that have been released in Australia, culminating in a parliamentary inquiry that has concluded that there are unacceptable levels of financial hardship among Australians, particularly those on lower incomes (Senate, Parliament of Australia 2004)⁵. Cheating on tax may be one way in which those with additional payments make ends meet.

IV. Survey design and method

1. The Community Hopes, Fears and Actions Survey

Between June and December 2000, a national survey was conducted by the Centre for Tax System Integrity at the Australian National University (for details see Braithwaite 2001; Braithwaite et al., 2001). A stratified random sample of 7754 persons was selected from the publicly available electoral rolls. A lengthy questionnaire on tax matters was sent to

⁵ The Senate Inquiry found that 21% of Australians were surviving on less than \$400 per week. The minimum wage is \$431.

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 & 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 (Pope et al., 1993; Kirchler, 1999; Wallschutzky, 1996; Webley et al., 2002). Citizens seem less interested in filling out questionnaires related to tax than they are with most other topics. A series of diagnostic analyses (see Mearns & 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-intensive questionnaire, and an under-representation of younger age groups (18 to 25 years) who traditionally are difficult to recruit for self-completion surveys.

The Community Hopes, Fears and Actions Survey was designed to yield measures of a range of tax behaviours and attitudes through sets of multi-item scales (Braithwaite, 2001). Psychometricians (Cronbach & Meehl, 1955; Hinkin & Schriesheim, 1989; Nunnally, 1976) have long warned of the dangers of assuming that single item measures of complex phenomena are reliable or valid. Fluctuations in attention, slight differences in interpretations of words, particularly across sub-groups within a population, along with the different contexts surrounding people's taxpaying experiences, means that it is preferable, where possible, to use multiple measures of complex phenomenon such as tax evasion, moral obligation, trustworthiness, and even deterrence. The method used for assessing the internal consistency of multi-item scales described below is to use a principal components analysis to check for the unidimensionality of each scale in conjunction with an alpha reliability analysis (Robinson et al., 1991). Alpha reliability coefficients are reported to

indicate how coherent the items of the scale are in representing the concept that is being measured. In all cases, the scales described below have been used in other research contexts.

2. *Measures: Dependent variable*

The dependent variable, *tax evasion*, was a composite of three scales developed from the Community Hopes, Fears and Actions Survey (Braithwaite 2001, 2003).

The first, *under-reporting income*, was measured through aggregating responses to the following questions: In your 1998-99 income tax return, did you declare none (scored 4), some (scored 3), most (scored 2) or all (scored 1) of the following: (a) salary, wages; (b) honorariums, allowances, tips, bonuses, director's fees; (c) eligible termination payments; (d) Australian government allowances like Youth Allowance, Austudy, Newstart; (e) Australian government pension, superannuation pensions, and other pensions and annuities; (f) interest; and (g) dividends. A special category allowed respondents to indicate that no income was received from this source. A response in this category was scored the same as declaring all income. The eighth and final item was 'As far as you know, did you report all the money you earned in your 1998-99 income tax return?' (yes scored 1, no scored 2). The correlations between the 8 items were positive and significant, suggesting that they were all contributing to the measurement of a common construct, under-reporting income. In order to give each measure equal weight in the overall measure, each of the 8 scores was standardized before being summed to form an under-reporting income score ($M = 0.00$, $SD = 0.67$, alpha reliability coefficient = 0.80).

The second tax evasion measure, *engaging in the cash economy* was measured by 1 item, asking respondents if they had worked for cash-in-hand payments in the last 12 months (no scored 1, yes scored 2). Cash-in-hand was defined for them as cash money that tax is not paid on. Six per cent of respondents were working in the cash economy.

The third tax evasion measure, *exaggerating deductions*, was measured by two items: (a) As far as you know, did you exaggerate the amount of deductions or rebates in your

1998-99 income tax return a lot (scored 5), quite a bit (scored 4), somewhat (scored 3), a little (scored 2), not at all (scored 1); and (b) Think of the deductions and rebates you claimed in your 1998-99 income tax return. Would you say you were absolutely confident that they were all legitimate (scored 1), a bit unsure about some of them (scored 2), or pretty unsure or haven't a clue (scored 3). Scores were standardized before being aggregated ($M = 0.00$, $SD = 0.79$, alpha reliability coefficient = 0.51).

Scores on the three evasion measures, *under-reporting income*, *engaging in the cash economy*, and *exaggerating deductions* correlated positively with each other, ranging from 0.11 ($p < 0.001$) to 0.35 ($p < 0.001$). Following Braithwaite (2003) they were combined into one composite *tax evasion* measure.

3. Measures: Independent variables

a. *Additional payments*: Making payments under the HECS or CSS was assessed using two separate questions: (a) Do you pay HECS for yourself? (8% replied yes); and (b) Do you pay child support? (4% replied yes). Additional regressions were carried out, predicting tax evasion separately with a HECS payment and a CSS payment. Findings revealed that these two variables behaved in a comparable way in relation to the dependent variable. Because of the small number of respondents making such payments, these two variables were combined into one variable in which a payment of at least one kind was scored as 2 (11%) and payment of neither kind was scored as 1 (89%).

b. *Deterrence*: These measures were based on those used by Varma and Doob (1998) and Braithwaite and Makkai (1991) which represented perceptions of the likelihood and severity of a set of events occurring as a result of not declaring income (Scenario 1) and falsely claiming work deductions (Scenario 2). The events involved the perceived likelihood of being caught, the perceived likelihood of sanctioning, and the perceived severity of the sanctioning. Details of the measures are given in the Appendix. Following Braithwaite and Makkai (1991), one overall deterrence term⁶ ($M = 189.6891$; $SD = 104.72$) was computed as follows:

⁶ The correlation between the deterrence term for Scenario 1 and the deterrence term for Scenario 2 is 0.74.

$$\text{Deterrence} = \alpha + (C * P_t * S_t) + (C * P_p * S_p) + (C * P_{ct} * S_{ct}) + (C * P_{cp} * S_{cp}) + \varepsilon$$

where α = constant

C = likelihood of being caught

P_t = likelihood of having to pay tax with interest

S_t = severity of the problem created by having to pay tax with interest

P_p = likelihood of having to pay tax with interest + penalty

S_p = severity of the problem created by having to pay tax with interest + penalty

P_{ct} = likelihood of being taken to court and having to pay tax with interest

S_{ct} = severity of the problem created by being taken to court and having to pay tax with interest

P_{cp} = likelihood of being taken to court and having to pay tax with interest + penalty

S_{cp} = severity of the problem created by being taken to court and having to pay tax with interest + penalty

ε = disturbance (error term)

c. *Personal norm of tax honesty*: A three-item scale to measure the personal norm of tax honesty was used to capture the belief component of moral obligation (see Braithwaite, 2001; Wenzel in press). Respondents were asked to rate each of the following statements on a five-point Likert scale: (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 score); and (c) Do YOU think working for cash-in-hand payments without paying tax is a trivial offence (reverse score). Responses were averaged to produce scale scores for each individual ($M = 3.65$, $SD = 0.73$, alpha reliability coefficient = 0.56).

d. *Shame displacement and acknowledgment*: Ahmed's scales of shame displacement and acknowledgment were used to capture the emotional component of moral obligation (for details, Ahmed et al., 2001; Braithwaite, 2001). Shame displacement represents an inability to manage shame without blaming and hitting out at others and making excuses for what has gone wrong. Shame acknowledgment represents adaptive shame management whereby a person acknowledges wrongdoing, feels guilt and seeks to make amends. Shame acknowledgment is comparable to what is commonly understood by the phrases 'feelings of guilt' and 'feelings of remorse.'

The shame measures were contextualized by using the deterrence scenarios. After answering the deterrence questions described above, first, for not declaring income, and second, for falsely claiming work deductions, respondents were asked to imagine how they

would feel if they had been caught and fined. The shame displacement scale comprised 3 items: (a) feel angry with the Tax Office; (b) feel bothered by thoughts that you were being unfairly treated; and (3) feel that you wanted to get even with the Tax Office ($M = 1.87$, $SD = 0.66$, alpha reliability coefficient = 0.90). The shame acknowledgment scale was formed through averaging the four-point Likert scale ratings on the following 9 items: (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; and (i) feel guilty ($M = 3.06$, $SD = 0.81$, alpha reliability coefficient = 0.95).

e. *Trustworthiness*: The belief that if the tax authority acted in certain ways it could be regarded by citizens as trustworthy was measured using the exchange and communal trust norm scales developed by Braithwaite (Braithwaite 1998, 2004; Braithwaite and Reinhart 2000). Respondents used a six-point rating scale from not at all important to essential to reveal how important it was to them for the Tax Office to meet these exchange and communal standards if they were to be regarded as a trustworthy institution. The six exchange trustworthiness criteria were: (a) not take risks; (b) have a proven track record; (c) be efficient in its operations; (d) be consistent in its decision making; (e) be accountable for its actions; and (f) be predictable in the way it responds to citizens. To compute a score on this variable, responses to these six items were averaged ($M = 5.02$; $SD = 0.75$; alpha reliability coefficient = 0.82). The communal trustworthiness scale comprised the following 8 items: (1) share the goals of the people; (2) be able to anticipate problems in the tax system before they arise; (3) keep citizens informed; (4) consult widely with different groups; (5) understand the position of taxpayers; (6) treat taxpayers with respect; (7) be on top of the games of those who get out of paying tax; and (8) have interest in the well-being of ordinary Australians ($M = 5.21$; $SD = 0.71$; alpha reliability coefficient = 0.88). The exchange and communal trust norm scales were highly correlated ($r = 0.66$, $p < 0.001$), and following Braithwaite (2004), were combined into one composite scale representing belief in possible trustworthiness (abbreviated as trustworthiness in Table 1).

f. *Social demographic variables*: Three variables were used as controls in the analyses in this paper: the respondent's sex, age, and personal income. Sex and age have consistently emerged as correlates of tax evasion with women and older taxpayers being more compliant (Jackson & Milliron, 1986; Richardson & Sawyer, 2001). Findings in relation to income have been ambiguous in the literature. In the present context, however, including personal income as a control was important because it was the determinant of how much people were required to pay in additional payments, and how much people were required to pay was expected to influence their willingness to engage in tax evasion. The focus of attention in this paper, however, was not on estimating the dollars evaded as a function of size of additional payment (far more detailed information would be required for this kind of analysis), but whether or not those making additional payments were involved in tax evasion once a set of standard predictors of evasion had been controlled (age, sex, personal income, deterrence, moral obligation, trustworthiness).

In the analyses that follow, male respondents were scored 1 and female respondents 2. Age was measured in years. Personal income was measured in dollars per year. All data are aggregated for statistical analyses.

V. Results

Ordinary least squares (OLS) regression analyses were used to test the main effect hypothesis and the interaction hypotheses. The variables with significant B coefficients appear in Table 1.

Before describing the regression results, the bi-variate relationships (see Pearson product-moment correlation coefficients in first column of Table 1) are of note in so far as they support findings from previous research. Tax evasion was higher for men, younger respondents, and those on lower income (as expected in this context). Tax evasion was also less common among those who believed there to be a high probability of being caught and who feared the consequences (perceived deterrence), who espoused an honest taxpaying ethic (moral obligation), who were disinclined to displace shame and more likely to

acknowledge it, and who believed that the Tax Office could be regarded as trustworthy if it behaved in certain ways (trustworthiness).

Turning to the main effect hypothesis, at the bi-variate level, those making additional payments, either through HECS or CSS, were more likely to be evading tax.

When these variables were included together in an OLS regression model (see Model A in Table 1), they continued to perform as they had done in the bi-variate analysis, with one exception. Shame acknowledgment was no longer a significant predictor of evasion. Further analyses revealed that the importance of shame acknowledgment diminished once the personal norm of tax honesty was included in the equation. Shame acknowledgment and a personal norm of tax honesty were significantly and positively correlated ($r = 0.32$, $p < 0.001$).

Model B in Table 1 shows what happens to the regression model with the inclusion of a series of interaction terms. These terms were calculated by centering⁷ scores (the actual score minus the mean score; for details, see Cohen and Cohen, 1983) before multiplying the variable, making additional payments, by respondents' income and each of the constraint variables: (a) perceived deterrence; (b) personal norm of tax honesty; (c) shame management (shame displacement and shame acknowledgment); and (d) trustworthiness. As can be seen from Table 1, only 2 of these terms ('making additional payments * trustworthiness' and 'making additional payments * respondents' income') appeared significant. Changes in the coefficients associated with other predictors from Model A to Model B were minimal, demonstrating that all main effects – deterrence, moral obligation, possible trustworthiness and additional payments – maintained significant relationships in their own right with levels of taxation compliance.

⁷ Centering scores reduces the problem of multicollinearity that often accompanies the inclusion of main effects and interaction terms in the same model (see Cohen & Cohen, 1983). As centering has no effect on the substantive evaluation of the effect of the first predictor variable on the criterion variable at any given point of the second predictor variable, using centered scores provides the same overall relation between the variables as using actual scores (Cohen & Cohen, 1983).

Table 1: OLS regression results (unstandardised beta coefficients with t-value in parenthesis) predicting tax evasion from measures of additional payments, deterrence, personal norm, shame management, and trustworthiness (Column 1 reports Pearson product-moment correlation coefficients, Column 2 reports Main effects Model (A) and Column 3 reports Main effects and Interaction Model (B))

Variables	Correlation coefficients (minimum n = 1355)	B coefficients (t-values) ⁸	
	r	Model A	Model B
Intercept	na	0.42*** (4.82)	0.39*** (4.46)
Sex	-0.06*	-0.12*** (-3.51)	-0.11*** (-3.51)
Age	-0.17***	-0.003** (-2.77)	-0.003** (-2.23)
Personal income (PI)	-0.11***	-0.003*** (-5.01)	-0.003*** (-5.01)
Making additional payments	0.13***	0.17*** (3.35)	0.17*** (3.21)
Perceived deterrence (PD)	-0.16***	-0.001*** (-3.34)	-0.000** (-2.85)
Personal norm of tax honesty (PN)	-0.26***	-0.14*** (-5.68)	-0.14*** (-5.82)
Shame acknowledgment (SA)	-0.19***	-0.03 (-1.26)	-0.03 (-1.53)
Shame displacement (SD)	0.12***	0.06** (2.63)	0.05* (2.00)
Trustworthiness (TW)	-0.18***	-0.12*** (-4.80)	-0.12*** (-4.67)
Making additional payments * PD	na	na	-0.001 (-0.76)
Making additional payments * PN	na	na	0.09 (1.25)
Making additional payments * SA	na	na	0.02 (0.37)
Making additional payments * SD	na	na	0.014 (0.19)
Making additional payments * TW	na	na	-0.42*** (-4.90)
Making additional payments * PI	na	na	-0.006* (-2.28)
Adj R square	na	0.14	0.17

***p < 0.001 **p < 0.01 * p < 0.05

A separate second-order analysis was performed for each significant interaction term to diagnose the direction of the interaction effect. In order to graph the significant interaction, the variables comprising the interaction term were dichotomised using the mean-split method. In this method, respondents are placed either in a low group or a high group. When the two dichotomous variables (for example, making additional payments and trustworthiness) are cross-tabulated, respondents become a member of one of these four groups: high / high (making additional payments with high trustworthiness), high / low (making additional payments with low trustworthiness), low / high (not making additional payments with high trustworthiness), and low / low (not making additional payments with low trustworthiness). A similar procedure was followed to cross-tabulate the interaction term between additional payments and respondents' income. Figure 1 and Figure 2 show the directions of the interactional results for 'making additional payments * trustworthiness' and 'making additional payments * respondents' income', respectively.

The rationale for the hypothesized interaction for trustworthiness was that once the expectations regarding taxpaying and service provision were breached through new policy initiatives, adversely affected community members would not be constrained by trust norms: They would, in effect, be free of them. The results that were obtained and graphed in Figure 1, however, were not consistent with this prediction. Trust norm constraints worked reasonably well. Tax evasion increased disproportionately when trust norm constraints were not in place and when people were making additional payments.

The significant interaction involving personal income and additional payments conformed to expectations. Lower income earners who were making additional payments were engaged in higher levels of tax evasion.

⁸ We used listwise regression analysis (N = 1200).

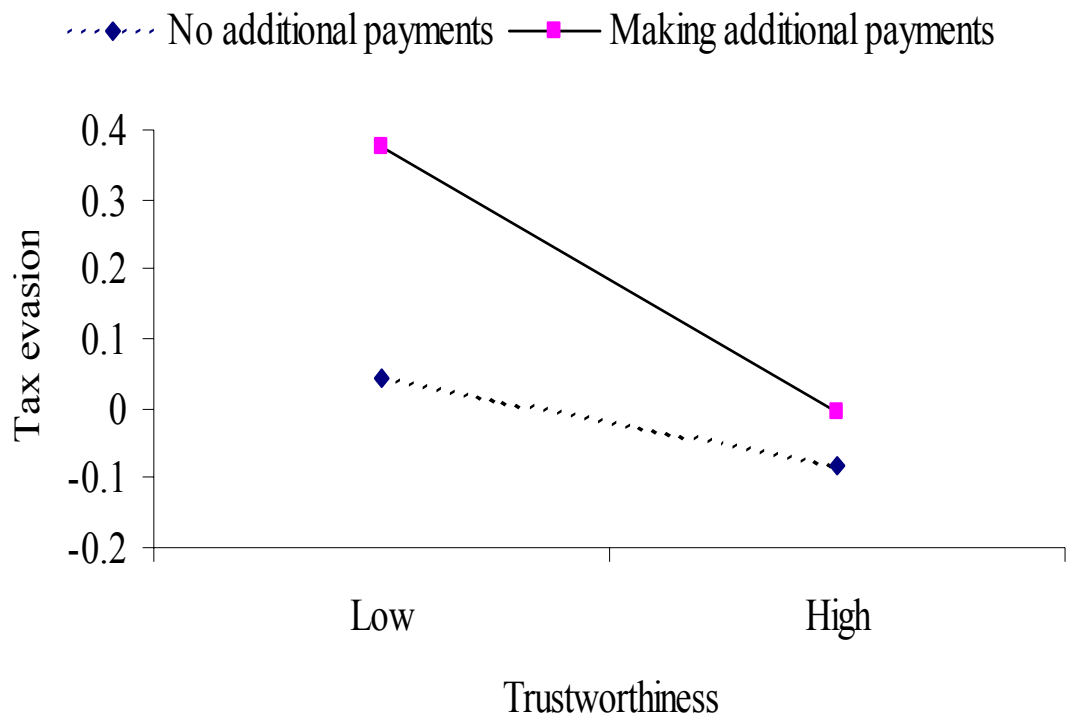


Figure 1: The role of trustworthiness of the tax authority in moderating the relationship between making additional payments and tax evasion

Thus, we have three main findings from this study. First, making additional payments through the HECS or CSS is associated with high levels of tax evasion, an effect that remains significant even after the control variables (sex, age, personal income) and the constraint variables (deterrence, moral obligation, trustworthiness) are entered into the equation. The main effect hypothesis is supported.

Second, while additional payments clearly create compliance problems for the Tax Office, it is noteworthy that all the constraints were found to operate in the direction expected to curb tax evasion in the population as a whole. Those who fear deterrence were more likely to comply, as were those who have a strong personal norm of tax honesty, who feel personally ashamed at the thought of being involved in tax evasion, and who believe that

the tax authority can be considered trustworthy providing they abide by shared trust norms. Thus, past research findings with regard to constraints has been confirmed.

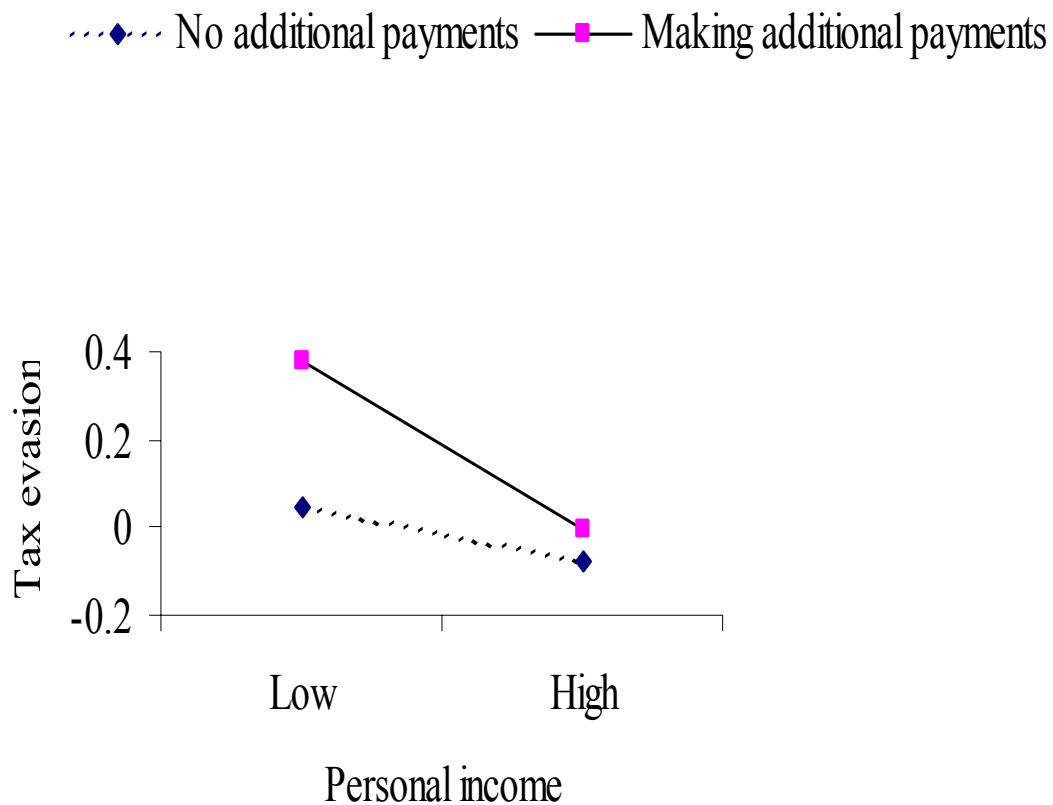


Figure 2: The role of personal income in moderating the relationship between making additional payments and tax evasion

Third, the adverse effect that additional payments have on the collection of income tax is exacerbated among those whose income is low and among those who do not endorse trust norms, that is, who do not believe that there is anything the Tax Office can do to make itself trustworthy in their eyes.

The effect sizes associated with the regression model shown in Table 1 were highest for the personal norm of tax honesty. Moving from the lowest to the highest scores on the personal ethic of tax honesty scale brings a reduction in tax evasion of 19.57% (once all

other variables are controlled). The next most important variable was making additional payments. Moving from the lowest to the highest scores on this variable reduces tax evasion by 14.89% (once all other variables are controlled). Measured in the same way, perceived possible trustworthiness of the tax authority scale reduces tax evasion by 13.46%.

VI. Conclusions

This paper demonstrates that in some contexts, authorities may be placing the collection of income tax revenue at risk by taking on debt collection functions. The debt collection functions investigated here were of a particular kind. They involved controversial social policy that changed the nature of the relationship between citizens and the state. In effect, when introduced just over 10 years ago, the HECS and CSS shifted responsibility for support of single parent families and tertiary education students from the collective level of the Australian community back to individuals. A second factor of which we need to be mindful in generalizing these results is the contextual effect of income, tax brackets and additional payments. As noted earlier, a recent parliamentary inquiry suggests that those with a personal income at the lower end of the \$20 000-50 000 tax bracket may be having difficulty paying government what they owe for higher education and child support because they are struggling to make ends meet⁹.

Because of these limiting factors, caution is required in generalizing these findings. If we consider other countries with similar collection systems (New Zealand, and more recently the United Kingdom in the case of higher education), important differences stand out. In New Zealand and the United Kingdom, most people do not need to lodge a tax return, and as a result do not have the opportunity to over-claim deductions and omit income from their return. But while these countries are unlikely to encounter the same level of taxpayers 'fiddling' with their tax contributions, they are not without their problems. Bankruptcy rates have risen among those carrying a debt in relation to their university fees in Britain (Financial Times, 4 February 2003). New Zealand, like Australia, has a high incidence of

⁹ It is important to note that the situation for graduates with lower incomes is expected to improve because of a recent change in the minimum repayment threshold from \$24 365 to \$30 000 in the 2005-2006 financial year.

non-repayment (Annual Report: Student Loan Scheme, 2003; One News, 2003), and compliance problems in relation to child support payments (Scoop, 2003). While the manifestations of non-compliance differ, it does not seem rash to conclude that debt repayment through the tax system can be expensive if the scheme is not in accord with the democratic will of the people (Braithwaite, 2003).

The importance of the relationship between citizens and their government becomes particularly apparent in the interaction effects found in this study. Non-compliance among the economically marginalized is not a new finding. Non-compliance among those who have lost hope that the tax authority can ever be a trustworthy authority is, however, a finding that warrants serious consideration and further research.

If we were to return to the point of departure for this article, however, it is appropriate to acknowledge that in one respect, the adverse consequences of making additional payments for tax compliance were not as dramatic as predicted. Specifically, there was little evidence of additional payments driving people outside the system in a psychological sense. If this had been the case the interaction terms for all constraint variables would have been significant, and when graphed, would have shown a downward sloping line for the non-additional payment group (constraint lowering non-compliance) and a line parallel to the X-axis for the additional payment group (constraint having no effect on compliance whatsoever). The graph in Figure 1 suggests an alternative interpretation: One has to be outside the system already (that is, given up all hope that the tax system is worthy of trust; see Braithwaite, 2004), for additional payments to adversely affect compliance. This means that where the standard mechanisms of social control (deterrence, moral obligation, and trustworthiness) are in place, they can be relied upon to exert a constraining influence on the increase in non-compliance that may accompany additional payments.

Bearing in mind the caveats already mentioned in relation to this study, further research on the impact of additional payment schemes is to be encouraged. The argument that such schemes affect tax evasion in the same way as marginal tax rates cannot be completely discounted from the results presented here. Certainly the finding from supplementary analyses that the effect of additional payments was not reduced in any way after personal

income and marginal tax income brackets were controlled suggests that increased tax evasion is not simply a response to an effective increase in marginal tax rates. The relationship is far more complex. Further research is needed into whether (a) those paying HECS and CSS, particularly those who are poor and who have lost all trust in government, *perceive* their payment as an effective increase in marginal tax that has been imposed by the state; and whether (b) such a *perception* triggers heightened feelings of unfair treatment compared with others in the population who do not make such payments.

The findings of this paper have three important implications for tax authorities concerned about keeping their voluntary compliance rates high. Debt collection schemes through the Tax Office may be an attractive option for a whole of government approach to issues of compliance, but there may be a hidden cost to the tax system itself. Depending on the nature of the scheme, individuals making additional payments to the Tax Office may engage in more tax evasion of the standard kind – under-declaring income and over-claiming deductions.

The positive news is that the institutions that tax authorities have in place to discourage non-compliance, or to phrase it more positively, encourage compliance, work equally well for the most part among those who are part of a debt collection program. In other words, when policy changes, citizens may protest, but the relationship between citizen and the state acts as a protector, ensuring that non-compliance does not spin out of control.

The story, however, changes when there is no workable relationship between the citizen and the tax authority. Protest becomes far more damaging, seriously threatening compliance when it involves those individuals who have abandoned hope for a trusting relationship with their tax authority. In a global world where individuals can so easily step outside their tax system, not only psychologically, but also geographically, the implications of substantial numbers of citizens regarding their tax authorities as hopelessly untrustworthy are disturbing. As Frey (1994) has been arguing in recent years, being responsive to the democratic will and promoting the integrity of democratic institutions is at the heart of strengthening voluntary taxpaying systems in democracies.

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Appendix

Deterrence variables

The deterrence term, in this study, combines information about detection probability, sanction probability, and perceived problem of the severity of sanction. It uses two scenarios related to tax evasion. The scenarios are:

1. Imagine yourself in this situation. 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.
2. Imagine yourself in this situation. You have claimed \$5000 as work deductions when the expenses have nothing to do with work.

Detection probability was measured by the following question on two scenarios: 'What do you think the chance are that you will get caught?' (1 = about zero [0%], 2 = about 25%, 3 = about 50%, 4 = about 75%, 5 = almost certain [100%]).

Sanction probability was measured by the following four items on two scenarios: 'If you did get caught, what are the chances that you would have to face the following legal consequences? (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' (with the same percentage scale for each item).

Problem of legal sanction was measured by the following four items on two scenarios: 'Look at these legal consequences again. How much of a problem would they be for you? (a)... (b)... (c)... (d)...' (1 = no, 2 = small, 3 = medium, 4 = large).

The deterrence term is calculated as a multiplicative function (the equation was given in an earlier section) to ensure that even small differences in ratings on individual items are adequately reflected in the overall deterrence score. More importantly, the argument has been made that being caught has no deterrence effect unless some negative consequence

follows, and a negative consequence carries no weight if one is convinced that it is impossible to get caught (Braithwaite, 2003).

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