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# A threat to tax morale: The case of Australian higher education policy

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## Abstract

This study investigated tax morale among a sample of 447 Australian graduates who completed the Graduates' Hopes, Visions and Actions Survey shortly after receiving their higher education degrees. Using structural equation modeling (AMOS), pathways are mapped out showing linkages from (a) the values that individuals hold concerning the kind of society they want to live in, through (b) satisfaction with government policy requiring students to pay fees financed through a government loan (HECS or the Higher Education Contribution Scheme), to (c) HECS morale, that is, an internalized obligation to repay the loan, and finally to (d) tax morale, that is, an internalized obligation to pay income tax. Also affecting tax morale indirectly are the personal experiences of the new graduates. Those who were dissatisfied with their university course and those who were in the process of repaying their loan were more opposed to HECS and had lower levels of HECS morale, which in turn, adversely affected tax morale. © 2004 Elsevier B.V. All rights reserved.

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## 1. Introduction

A common theme that has run through the tax literature is acknowledgment of an internalized willingness to pay tax in the developed democracies of the world, captured in this paper through the concept of “tax morale” (Frey, 2003; Lewis, 1982; Schmolders, 1970; Strümpel, 1969; Torgler, 2001; Vogel, 1974). Tax morale has been defined as the intrinsic motivation to pay tax (Frey, 2002) and has been linked by Orviska and Hudson (2002) to “civic duty”. Torgler and Murphy (2004) ground the concept further by linking it to tax ethics defined by Song and Yarbrough (1978) as “the norms of behaviour governing citizens as taxpayers in their relationship with government”. Torgler (2003) has shown that nations with lower levels of tax morale have higher rates of evasion and avoidance. Other researchers have reported that individuals who have low tax ethics and low tax morale have a greater propensity to cheat on their tax (for reviews, see Jackson & Milliron, 1986; Richardson & Sawyer, 2001). The recurring theme among researchers interested in tax morale is that governments and authorities need to cultivate tax morale in their taxpaying populations. But how is this done, and more particularly in the context of this paper, how is tax morale “undone”? Controversial government policy is often linked to the fortunes of politicians. This paper argues that the fortunes of the tax system may also suffer as tax morale is eroded by the implementation of policies that never make it over the hurdle to win popular support.

### 1.1. Theoretical background

Despite the fact that tax morale is frequently acknowledged as relevant to tax compliance, little is known about how it comes into being and how it is best nurtured (Feld & Frey, 2002). Frey and his colleagues (Frey, 2003; Frey & Feld, 2002) have used Crowding Theory to explain how the quality of the exchange between citizens and their government shapes tax morale. Policy formulation that is inclusive and respectful of citizens (for example, the direct democracy processes found among Swiss cantons) is likely to elicit higher levels of tax morale because the individual is recognized as part of the deliberative process of deciding how taxes should be spent. The notion of governments “crowding out the internal motivation to pay tax” describes the exclusion of citizens from the deliberative process and the imposition of outside force to ensure that taxes are paid.

The significance of the citizen–government relationship in shaping compliance has always occupied a central place in tax compliance research (for example, Lewis, 1982; Webley, Robben, Elffers, & Hessing, 1991), sometimes with a focus on trust in government (Scholz & Lubell, 1998), at other times, fairness in the tax system (Kinsey & Grasmick, 1993; Smith & Stalans, 1991). Tyler (1997, 2001) has argued that perceptions of justice, particularly procedural justice, are important in ensuring that authorities have legitimacy in the eyes of the community. Loss of legitimacy accompanies less moral obligation to comply, in this case reduced tax morale.

But what the government does and how it engages with citizens is unlikely to be the only determinant of tax morale. Values, in particular broad social goals about

how society should be organized and how resources should be distributed are likely to be important in explaining individual differences in tax morale within a community (Kirchler, 1997; Lewis, 1982). So too are experiential variables. Individuals who feel personally disadvantaged and regard the tax system as responsible for their experiences of hardship are more likely to have depleted levels of tax morale (Kirchler, 1997; Scholz & Lubell, 1998; Wärneryd & Walerud, 1982).

### *1.2. Purpose and context of the current study*

In broad terms, this paper engages with the issue of how aspects of the macro-economic system shape the behaviours of citizens. This paper purports that tax morale is influenced by economic conditions created by government policy, specifically Australia's higher education policy. In particular, we aim to examine the extent to which values, opposition to government policy and experiential variables work in concert to shape tax morale among Australian graduates.

In 1989, the federal Labor Government introduced HECS, a scheme that replaced tertiary education with a user-pays system subsidized by government. For the most part, Australian higher education institutions are dependent on public funding, and successive governments have remained vigilant, keen to reduce the sector's reliance on the public purse wherever possible. Australian students who obtain a satisfactory tertiary entrance score can pay their fee contribution up-front and receive a 25% discount or they can take out a student loan varying between disciplines, repayable through the Australian Taxation Office when their income exceeds a specified threshold level.<sup>2</sup> Wage and salary earners declare their HECS debt to their employers and the repayment is extracted at source along with income tax. Those who are self-employed make their own arrangements for repayment with the tax office.

#### *1.2.1. Explaining tax morale: Opposition to HECS*

On the basis of the arguments of Frey and his colleagues (Frey, 2003; Frey & Feld, 2002), it might be expected that government policies that are controversial and unpopular run the risk of undermining the tax morale of the disaffected population. In other words, if a segment of the population is opposed to the HECS, that segment might be expected to register a lower level of tax morale than those who are not opposed to the scheme. This relationship should exist independent of whether or not the person is carrying a HECS debt or has benefited from their tertiary education experience.

#### *1.2.2. Explaining tax morale: Basic value orientations*

Support for the policy and support for a tax system, however, do not occur in a social and political vacuum (Lewis, 1982). Basic value orientations that outline our hopes for the society are going to shape attitudes to policy as well as to the tax system (Braithwaite, 2003). Two value orientations that have been found to underlie the ways

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<sup>2</sup> The threshold for repayment shifted from \$28,495 (1996–97) to \$20,701 (1997–98), and again to \$25,348 (2003–04). At the time of this research, the threshold was \$21,984 (1999–2000).

in which we respond to social–political issues, policies and interventions are the security and harmony value orientations (Blamey & Braithwaite, 1997; Braithwaite, 1982, 1994, 1998). This two value model, derived from the work of Rokeach (1973), and in accord with the conceptual models proposed by others (Katz & Hass, 1988; Lipset, 1963; Rasinski, 1987; Scott, 1960), brings together shared social values describing (a) principles for allocating resources and regulating human conduct (security value orientation) and (b) principles that describe the ways in which we should be connecting and engaging with others and our world (harmony value orientation). Security values at the societal level espouse the virtue of the rule of law, the desirability of national greatness, national economic development and national security, and the role of reward for individual effort as a principle of good governance. Harmony values at the societal level revolve around the desirability of a peaceful world, where human dignity is valued and respected, equal opportunity and greater economic equality are advanced, and rule by the people and international cooperation are the mainstays of social evolution. Also comprising the harmony value constellation are values reflecting the preservation of the natural environment and support for the arts.

Both value orientations are expected to increase tax morale (Braithwaite, 2003, 2004). Or conversely, when citizens have lost interest in social goals of either a security or harmony kind, tax morale can be expected to plummet. In such cases, cynicism has taken the place of hope and individuals lack the conviction that paying tax is the way to achieve a better society (Braithwaite, 2004).

Because HECS is a user-pays system replacing one in which access to higher education was merit based, the harmony and security values are likely to be associated not only with tax morale, but also opposition to HECS. Those with a strong allegiance to harmony values would be expected to oppose HECS because it undermines the principle of equality of opportunity for all. Those strongly supporting security values are likely to be more comfortable with a user-pays system and support HECS. Whether it is welfare or higher education, those who are security oriented have doubts about the desirability of making goods and services freely available without requiring the input of initiative or effort. It is of particular interest that while the security value orientation is predicted to boost support for HECS policy as well as the tax system, the harmony value orientation is predicted to be at odds with HECS policy, but to boost tax system support. How this cognitive dissonance is resolved is a question addressed in this research.

### *1.2.3. Explaining tax morale: A spill-over from HECS to tax?*

At one level, cognitive dissonance between attitudes to government policy and attitudes to tax are common events. In a simple two party democratic political system, a substantial proportion of citizens spend a substantial proportion of their lives living with policies that they do not particularly like. The question then is what are the strategies that individuals use to ensure that disaffection with policy does not spill over into disaffection with the democratic system, and more particularly the tax system. One possibility is psychological containment or segmentation. Opposition to HECS might lead to the feeling that one is not obligated to pay one's HECS debt, but the loss of morale does not extend beyond the HECS domain. In such circum-

stances, tax morale might be expected to be robust, protected against domain discontent and low morale in relation to paying HECS.

Alternatively, opposition to a policy might not only lower one's feelings of obligation to the authority in that domain, but in other domains as well. Nadler (2002) refers to this as the "flouting" hypothesis. When individuals perceive one law to be unjust, the resulting resistance extends beyond this specific law to other laws as well. Thus, if law A is regarded as unjust, citizens will be less willing to cooperate with law B. The injustice of the first law taints the second to such an extent that individuals will develop a flouting response to law more broadly.

### 1.3. *Testing a research model*

The model that is tested in this paper therefore has three theoretically important elements: (a) values, (b) HECS related attitudes and (c) tax morale. First, the question asked is how do security and harmony values frame the attitudes and cognitions that individuals hold in relation to HECS. These attitudes and cognitions are conceptualized in terms of two dimensions. The first is opposition to HECS as the government policy that has been implemented to fund higher education. The second is HECS morale, or the degree to which people have internalized their formal obligation to pay HECS, accepting this as a responsibility and the right thing to do.

The next stage of the model involves linking *opposition to HECS* and *HECS morale* with *tax morale*. Of critical importance from a cognitive dissonance perspective is whether low HECS morale "spills over" into low tax morale or whether psychologically speaking, there is a mental divide between the university and the government.

In addition to testing this model, we have the capacity to address three alternative explanations as to why HECS morale and tax morale might be correlated. Value orientations represent one possible source of confounding as already discussed. A second is personal hardship. HECS morale and tax morale may both be low because a person is struggling financially. Any financial outlay – whether for HECS or tax – diminishes an individual's disposable income. Thus, personal experiences that may sour relationships with the university and the state (e.g., being financially constrained in what one studied, being dissatisfied with one's course, paying more for one's course, paying a HECS debt, receiving a low income after graduation) are included in the model to be tested. The third possible confounding variable is age. Those who are older tend to report higher tax morale (see reviews of Jackson & Milliron, 1986; Richardson & Sawyer, 2001). It seems plausible that older Australians also will have a more secure financial situation and feel less threatened and disadvantaged by the HECS system.

## 2. Method

### 2.1. *Sample*

The data used in this paper are collected from 447 Australian graduates who completed the Graduates' Hopes, Visions and Actions Survey in 2000 (GHVA Survey;

Ahmed, 2000; Ahmed, 2004). New graduates whose degrees were conferred in either 1998 or 1999 were selected for this study as they were expected to have commenced employment by the time the survey was mailed out. The sample was stratified in terms of students graduating from each discipline in two universities in the Australian Capital Territory.

Of the 1500 questionnaires distributed, 447 were returned after several reminders, giving a response rate of 33% (after allowing for undelivered questionnaires and ineligible respondents). This response rate, while low in absolute terms, is comparable with rates reported for other tax based surveys (Kirchler, 1999; Pope, Fayle, & Chen, 1993; Wallschutzky, 1996; Webley, Adams, & Elffers, 2002). Wallschutzky (1996) has argued that tax surveys of the general population cannot be expected to yield higher than a 30–40% response rate.

## 2.2. Procedure

The participants were initially sent an introductory letter explaining the intent of the survey and guaranteeing strict confidentiality of responses. The introductory letter explained that the purpose of the survey was to understand how graduates viewed the HECS, how they felt about their tertiary education experiences, and how they would describe their taxpaying behaviour.

After one week, the survey questionnaire was sent along with an accompanying letter and a postage-paid return envelope. The accompanying letter emphasized the research purpose, reiterated the guarantee of respondent anonymity, and encouraged respondents to return the completed questionnaire in a sealed envelope. A two-week return date was requested. An identification number appeared in the questionnaire to allow follow-up reminders of non-respondents asking them to complete and mail the survey if they had not already done so. As recommended by Dillman (1991), a reminder postcard was sent out one week after the initial mailing. Three weeks later, an identical packet was sent out to those participants who had not returned the questionnaire.

## 2.3. Measures

The GHVA Survey was based largely on the Community Hopes, Fears, and Actions Survey (CHFA Survey; Braithwaite, 2001) with some additional items included to assess moral obligation in relation to paying tax as well as repaying a HECS debt, perception of the desirability and practicability of HECS program, and an evaluation of university courses. The measures which provide the data base for the current analyses are described below.

### 2.3.1. Tax morale

The tax morale scale comprised eight items measuring the extent to which graduates expressed commitment to the tax system and a belief that taxpaying is socially responsible: (a) Paying tax is the right thing to do; (b) Paying tax is a responsibility that should be willingly accepted by all Australians; (c) Citizenship carries with it a

duty to pay tax; (d) Citizenship carries with it a shared responsibility between Government and citizen; (e) I believe paying tax is good for our society, and therefore it is good for each of us; (f) It's disappointing that some people do not pay their tax; (g) It makes it difficult to govern the country when people don't pay their tax; and (h) The harm to the community through people not paying tax is regretful.

There were five response categories: 1 = strongly disagree, 2 = disagree, 3 = neither, 4 = agree, 5 = strongly agree ( $M = 4.10$ ;  $SD = 0.54$ ;  $\alpha = 0.86$ ). A higher score on this scale indicates higher tax morale.

### 2.3.2. *HECS opposition*

This scale comprised nine items measuring the extent to which graduates regarded HECS as an undesirable way of funding higher education: (a) The HECS should be abolished; (b) People are not satisfied with the HECS; (c) The HECS favors the rich over the poor; (d) The HECS is functioning very well as it is (reverse coded); (e) In general, the HECS is a fair system (reverse coded); (f) People are very resentful about repaying a HECS debt; (g) There are more negatives than positives in the HECS; (h) When I think about repaying a HECS debt, I feel as if I am losing out; and (i) In general, I don't think of the benefits – I just see the HECS as taking money from my pocket.

There were six response categories: 1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = slightly agree, 5 = agree, 6 = strongly agree ( $M = 3.40$ ;  $SD = 1.21$ ;  $\alpha = 0.94$ ). A higher score on this scale indicates higher opposition to HECS.

### 2.3.3. *HECS morale*

The HECS morale scale comprised eight items measuring the extent to which graduates expressed commitment to repaying HECS and a belief that it was the socially responsible thing to do: (a) Repaying a HECS debt is the right thing to do; (b) Repaying a HECS debt is a responsibility; (c) Repaying one's HECS debt ultimately advantages future students; (d) One should repay the HECS debt and share in the cost of providing education; (e) Not repaying the HECS debt is violating the right of future students; (f) It's disappointing that some graduates do not repay their HECS debt; (g) The community loses benefit because some graduates do not repay their HECS debt; and (h) Graduates who do not repay their HECS debt spoil things for future students.

There were six response categories: 1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = slightly agree, 5 = agree, 6 = strongly agree ( $M = 4.28$ ;  $SD = 1.07$ ;  $\alpha = 0.92$ ).<sup>3</sup> A higher score on this scale indicates higher HECS morale.

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<sup>3</sup> The tax morale scale was based on work from the CHFA Survey in the general population while the HECS morale scale was developed specifically for use in the graduate population. The different metrics of the tax morale scale and the HECS morale scale reflect the fact that the scales were developed in different research contexts.

#### 2.3.4. *Security and harmony scales*

These scales are taken from the Goal, Mode and Social Values Inventories (Braithwaite & Law, 1985). Respondents were asked: "... Please indicate the extent to which you accept or reject each of the following as principles that guide your judgments and actions. Do this by circling the number that comes closest to the way you feel about each goal."

The security scale (Braithwaite, 2001) comprised the following five items: (a) National greatness (being a united, strong, independent, and powerful nation); (b) Reward for individual effort (letting individuals prosper through gains made by initiative and hard work); (c) National security (protection of your nation from enemies); (d) The rule of law (punishing the guilty and protecting the innocent); and (e) National economic development (having greater economic progress and prosperity for the nation).

The harmony scale (Braithwaite, 2001) comprised the following 11 items: (a) A good life for others (improving the welfare of all people in need); (b) Rule by the people (involvement by all citizens in making decisions that affect their community); (c) International cooperation (having all nations working together to help each other); (d) Social progress and reform (readiness to change our way of life for the better); (e) A world at peace (being free from war and conflict); (f) A world of beauty (having the beauty of nature and the arts: music, literature, art, etc.); (g) Human dignity (allowing each individual to be treated as someone of worth); (h) Equal opportunity for all (giving everyone an equal chance in life); (i) Greater economic equality (lessening the gap between the rich and the poor); (j) Preserving the natural environment (preventing the destruction of nature's beauty and resources); and (k) Freedom (being able to live as you choose whilst respecting the freedom of others).

There were seven response categories: 1 = reject, 2 = inclined to reject, 3 = neither reject nor accept, 4 = inclined to accept, 5 = accept as important, 6 = accept as very important, 7 = accept as of utmost importance. The descriptive statistics for the security scale ( $M = 5.16$ ;  $SD = 0.94$ ;  $\alpha = 0.79$ ) and harmony scale ( $M = 5.89$ ;  $SD = 0.76$ ;  $\alpha = 0.90$ ) were comparable to the statistics obtained from the general tax-paying population [ $(M = 5.64$ ;  $SD = 0.97$ ;  $\alpha = 0.83$ ) and  $(M = 5.72$ ;  $SD = 0.84$ ;  $\alpha = 0.87$ ), respectively].

#### 2.3.5. *Having a HECS liability*

This was assessed using a single item: "Do you have a HECS debt?" (yes = 1, no = 2; reverse coded for analyses). Of the total sample, 65% had a HECS debt and 35% had paid their tuition fees upfront.<sup>4</sup> Among those who claimed to pay upfront, 67% made the full payment and 33% chose the partial upfront payment option. Of those who had paid upfront, 65% reported that they were self-funding, 25% that their parents paid for them, and 10% that employers paid for them. Readers should be cautious in interpreting these figures because the categories are not

<sup>4</sup> This survey seems to over-represent those who had paid upfront fees (35%) compared to the 26% in the study by Kim (1997).

mutually exclusive. For example, a respondent's upfront payment can be made by parents at first, then by the student, and finally by the employer (for further details, see Ahmed, 2004).

### 2.3.6. *Course satisfaction*

The majority of items used in this scale were adapted from the Graduate Experience Questionnaire (Long & Hillman, 2000).

Seventeen items comprising the measure covered four aspects of the university experience: (a) Skill acquisition (four items; a sample item: "The course helped me develop the ability to plan my own work";  $M = 4.62$ ;  $SD = 0.79$ ;  $\alpha = 0.81$ ); (b) Professional development<sup>5</sup> (seven items; a sample item: "The course helped me to grow professionally";  $M = 4.17$ ;  $SD = 0.92$ ;  $\alpha = 0.86$ ); (c) Quality teaching (four items; a sample item: "My lecturers were extremely good at explaining things";  $M = 3.62$ ;  $SD = 1.06$ ;  $\alpha = 0.89$ ); and (d) clear course goals (two items; a sample item: "It was often hard to discover what was expected of me in this course" (reverse coded);  $M = 3.73$ ;  $SD = 1.09$ ;  $\alpha = 0.68$ ).

There were six response categories for all items in this measure: 1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = slightly agree, 5 = agree, 6 = strongly agree.

Because these four scales were significantly and positively interrelated (the correlation coefficients ranged from 0.26 to 0.51,  $p < 0.001$ ), they were combined into one scale to measure respondents' *satisfaction with higher education* (see Appendix A for full listing of items).

### 2.3.7. *Cost salience*

To assess the salience of the cost of university courses for respondents, the following two questions were asked: Did your financial circumstances influence your (a) choice of course? and (b) choice of university? (yes = 1, no = 2). Responses to these two items were reverse scored so that a higher score indicates cost was an issue influencing students' enrolment and/or choice of university. Because scores on these two items were significantly and positively correlated ( $r = 0.35$ ;  $p < 0.001$ ), they were averaged to produce one score ( $M = 1.21$ ;  $SD = 0.32$ ;  $\alpha = 0.50$ ).

### 2.3.8. *Personal income*

Personal income was measured by asking respondents to tick the income range to which they belonged: (a) less than \$20,000 (covered 8.7% of the sample); (b) \$20,001–30,000 (covered 9.7% of the sample); (c) \$30,001–\$50,000 (covered 55.8% of the sample); (d) \$50,001–\$75,000 (covered 20.3% of the sample); (e) \$75,001–\$100,000 (covered 3.4% of the sample); and (f) more than \$100,000 (covered 2.2% of the sample). To reduce skewness in the scale, two response categories ("\$75,001–\$100,000" and "more than \$100,000") were collapsed into one category.

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<sup>5</sup> This aspect was developed for the present study.

### 2.3.9. Age, sex and field of study

Respondents' age was measured in years. Sex was scored 1 for male and 2 for female. To measure respondents' field of study<sup>6</sup> at the undergraduate level, they were asked: Which out of the following broad disciplines best describes your area of study? (1 = Arts, education, nursing; 2 = Science, engineering, agriculture, architecture, business/economics; 3 = Law, medicine, veterinary science; 4 = Combined degree; 5 = Other). Field of study was transformed into four dummy variables: (a) Arts, education, nursing (Band 1); (b) Science, engineering, agriculture, architecture, business/economics (Band 2); (c) Law, medicine, veterinary science (Band 3); and (d) combined degree. Responses to category 'Other' were coded into the above categories.

## 3. Results

### 3.1. Correlational analyses

In order to examine the relationships among the key variables at a bivariate level, two sets of Pearson-product moment correlations were calculated. In Table 1, social demographic variables and financial hardship variables were correlated with opposition to HECS, HECS morale and tax morale.

Older respondents were more opposed to HECS but had higher tax morale than younger respondents. Sex and field of study were not important correlates of either HECS attitudes or HECS morale or tax morale, although those doing basic Arts courses (the cheapest courses) were more opposed to HECS policy than others. Those who had lower personal income also were more opposed to HECS policy. Respondents who were carrying a HECS debt had significantly lower HECS morale. HECS morale was also notably lower among those who evaluated their university course negatively. Most notably, those who evaluated their university course negatively were more opposed to HECS policy, had lower HECS morale and lower tax morale.

In Table 2, the intercorrelations for the security and harmony value scales, the HECS opposition scale, the HECS morale scale and the tax morale scale are provided. These coefficients support the hypothesized relationships at the bivariate level:

- (a) Security values were negatively related to opposition to HECS and positively related to both HECS morale and tax morale.
- (b) Harmony values were positively related to opposition to HECS, negatively related to HECS morale and positively related to tax morale.

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<sup>6</sup> This was included as a control variable in the analyses below. HECS charges can vary across field of study, and the size of the HECS debt may also affect respondents' perceptions of HECS policy.

Table 1

Correlation coefficients between “Social demographic characteristics and hardship variables”, and opposition to HECS, HECS morale and tax morale

Social demographic characteristics and hardship variables	Opposition to HECS	HECS morale	Tax morale
Age	0.18***	−0.05 (ns)	0.16***
Sex	−0.01 (ns)	0.01 (ns)	−0.04 (ns)
Field of study			
Arts, education, nursing	0.14**	−0.07 (ns)	0.02 (ns)
Science, engineering, business	−0.07 (ns)	0.06 (ns)	0.04 (ns)
Law, medicine	−0.06 (ns)	0.03 (ns)	0.00 (ns)
Combined degree	−0.05 (ns)	−0.01 (ns)	−0.07 (ns)
Cost salience	0.09 (ns)	−0.07 (ns)	0.00 (ns)
Personal income	−0.10*	0.07 (ns)	0.04 (ns)
HECS liability	0.06 (ns)	−0.17***	−0.04 (ns)
Course satisfaction	−0.12**	0.20***	0.09*

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

Table 2

Intercorrelations among value scales, HECS opposition, HECS morale and tax morale

Variables	1	2	3	4
1. Harmony values	–			
2. Security values	0.25***	–		
3. HECS opposition	0.24***	−0.15**	–	
4. HECS morale	−0.13**	0.28***	−0.64***	–
5. Tax morale	0.16***	0.20***	0.05	0.27***

\*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ .

Also of importance are the relationships among the three variables – opposition to HECS, HECS morale and tax morale. Understanding what these relationships mean, however, is impossible at the bivariate level because of the influence of other variables. To tease out these interrelationships further, a multivariate procedure is required. Therefore, a path analysis – which belongs to the family of statistical techniques referred to as structural equation modeling (SEM) – was used to take account of the interrelationships among all the variables that were significantly related to tax morale and/or HECS morale in the preceding bivariate analyses.

### 3.2. Path analysis

Fig. 1 shows the diagrammatic representation of the results of the path analysis<sup>7</sup> using AMOS version 4.0 with maximum likelihood estimation (Arbuckle & Wothke, 1999).

<sup>7</sup> Social demographic variables that did not play a significant role in the path analysis were excluded from the final model. These were sex, field of study (coded Band 1 versus others), cost salience, and personal income. Their exclusion did not affect the magnitude of the coefficients of the variables included in the model.

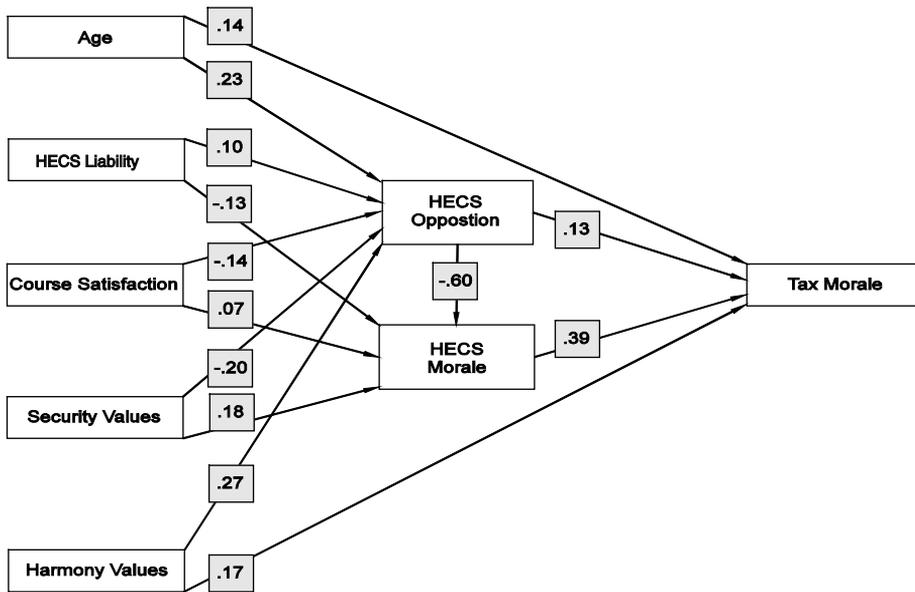


Fig. 1. Results of a path analysis showing the interrelationships among relevant variables.

As evident from Fig. 1, the path analysis shows four variables having direct effects on tax morale. Those who are older and those who support harmony values have higher levels of tax morale. Tax morale surprisingly is also strengthened by HECS opposition. This finding, which was not hypothesized, most likely reflects the position that a significant proportion of Australians (and others) espouse: Education should be available to all and paid for by higher taxes if necessary (Evatt Foundation Group, 1999; Johnstone, 2003; Marginson, 1997; Wilson & Breusch, 2003). Thus, opposition to HECS can strengthen commitment to the tax system.

The major variable lowering tax morale in Fig. 1 is HECS morale. This model provides evidence of Nadler's (2002) flaunting response: Once individuals free themselves of an internal obligation to repay their HECS, their internal motivation to pay taxes is also weakened.

The other aspect of the path diagram in Fig. 1 that is of significance is the central role played by opposition to HECS policy. Such opposition arises out of personal circumstance and social values. Those who have a HECS debt, who are not satisfied with their university course, and those who are older<sup>8</sup> are more strongly opposed to HECS than others. Also fueling opposition are harmony values. Security values act in the opposite direction, engendering support for the HECS program.

<sup>8</sup> This relationship was not anticipated. Possibly older respondents compare the present with the past when a university education did not require a payment of tuition fees. Younger respondents have no experience with a tuition-free university education system.

Table 3

Paths in the final model with their standardized beta coefficients including the overall fit indices for the model

Paths in the final model	Standardized beta coefficients
HECS morale → Tax morale	0.39***
HECS opposition → Tax morale	0.13*
Harmony value orientation → Tax morale	0.17***
Age → Tax morale	0.14**
HECS opposition → HECS morale	−0.60***
HECS liability → HECS morale	−0.13***
Security value orientation → HECS morale	0.18***
Course satisfaction → HECS morale	0.07*
Security value orientation → HECS opposition	−0.20***
Harmony value orientation → HECS opposition	0.27***
Course satisfaction → HECS opposition	−0.14**
HECS liability → HECS opposition	0.10*
Age → HECS opposition	0.23***
Chi-square ( $\chi^2$ )	11.21 (df = 9; $p < 0.26$ )
Chi-square/df ratio	1.25
GFI (goodness of fit index)	0.994
AGFI (adjusted goodness of fit index)	0.975
CFI (comparative fit index)	0.996
TLI (Tucker Lewis index)	0.988
RMSEA (root mean square error of approximation)	0.024

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

This somewhat pivotal variable of opposition to HECS policy maintains its very strong link to HECS morale in the path diagram. Opposition to HECS weakens the internalized responsibility to pay HECS. HECS morale also is adversely affected by having a HECS debt and course dissatisfaction. And HECS morale, or the loss of HECS morale, appears to be the greatest threat to tax morale in Fig. 1.

Overall, the final model provided an excellent fit to the empirical data as shown by seven different goodness-of-fit indices.<sup>9</sup> All fit statistics are presented in Table 3 including the significant paths in the final model with their standardized beta coefficients. From Table 3, the  $\chi^2$  was non-significant [ $\chi^2(9, N = 442) = 11.21, p < 0.26$ ], the  $\chi^2$ /df ratio was 1.25, the GFI was 0.994, the AGFI was 0.975, the CFI was

<sup>9</sup> The traditional goodness-of-fit index is the  $\chi^2$  which is smaller and non-significant for better-fitting models. Because  $\chi^2$  is likely to increase with the degrees of freedom and the sample size even when the model fit is imperfect, we have utilized 6 additional indices of model fit to evaluate the model (for discussion of their relative merits, see Byrne, 1994; Loehlin, 1998). These are  $\chi^2$ /df ratio, Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Comparative Fit Index (CFI), a Tucker Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA). A  $\chi^2$ /df ratio of less than 2 is considered as acceptable. Values greater than 0.95 for GFI, AGFI, GFI, and TLI are considered to indicate good model fit (Byrne, 1994; Hu & Bentler, 1999; Loehlin, 1998). An RMSEA of 0.05 or less is suggested as an indicator of acceptable fit (Arbuckle & Wothke, 1999; Bollen, 1989).

0.996, the TLI was 0.988, and the RMSEA was 0.024. The modification indices indicated no potential improvement in the model fit with either the elimination or addition of paths.

In the path analysis, moderate levels of variance were explained in policy discontent ( $R^2 = 0.16$ ) and tax morale ( $R^2 = 0.15$ ) while a substantial amount of variance was explained in HECS morale ( $R^2 = 0.47$ ).

#### 4. Discussion

This paper addresses the issue of tax morale and how it can be jeopardized by controversial government policy. The context is specific and should be acknowledged as such at the outset. The context sets limitations on the generalizability of the findings. A further caveat is warranted at this point. While the HECS morale and tax morale relationship continues to be significant after controlling for the effects of values, personal hardship and age, it should not be construed as the last word on the matter. No claim can be made that there are no alternative explanations for the spill-over effect. All that can be claimed is that progress has been made toward rigorously ruling out some alternative explanations and showing that the spill-over effect remains significant.

In spite of these limitations, the centrally important result that dissatisfaction with HECS policy undermines an obligation to pay HECS, which, in the present research, undermines an obligation to pay tax gives rise to a substantively important further research question for economic psychology. The question involves the yet poorly theorized link between macro-economic policy and micro-behaviour, mediated by legal institutions. The challenge in advancing this research agenda is in theorizing the interaction between the individual's psychology of flouting or reacting against the law or government or both, and designing institutions that permit or prevent this behaviour. The issue is complex. For instance, in the present context, it is quite difficult for those respondents who are wage and salary earners to escape paying HECS. Perhaps if they were "free" in Kirchler's (1999) reactance terms to escape the HECS net, low HECS morale would be dissipated, and there would be less spill-over to lower tax morale. There would also be less HECS paid, of course. But under which institutional set-up is the tax system healthier, not only in the short-term but also in the long-term? We cannot answer this question. The current research findings, however, challenge the growing popularity and presumed desirability of HECS-like schemes and hypothecated taxes among tax administrators and scholars around the world. Specifically, what we need to understand in theory and practice is what are the institutional arrangements that lubricate a flouting response, what arrangements will defuse it, and what is the best we can do to contain its spread. If Frey and his colleagues (Frey, 2002, 2003; Frey & Feld, 2002) are right, the answer is discursive, and involves government winning over the hearts and minds of the people. Most tax administrators, however, would prefer a technical solution since they have no control over the political process as such. It is an empirical question, however, whether or not technology can quell flouting. To the extent that flouting is associated

with reactance (Kirchler, 1999), attempted control may aggravate rather than alleviate threats to tax morale.

While the link between HECS morale and tax morale is of central importance because of its policy relevance, other findings in this paper demonstrate the principles by which economic and psychological variables work together to shape tax morale. Values, in the form of shared goals about the kind of society we consider desirable, play an important part in influencing views of policies such as HECS and taxation more generally, and these influences prevail after controlling for variables that reflect self-interest. By the same token, self-interest is important. Those who were not satisfied with their university course and who have a HECS debt not only oppose HECS but also feel less willing to meet their obligations to pay HECS. Together these findings show that neither HECS morale, nor tax morale can be explained satisfactorily in either self-interested or collective terms. Both kinds of influence are at work. Because they endure over time, values act as a stabilizing influence, giving tax morale a certain kind of robustness against controversy and upheaval. Personal circumstances and opposition to particular government policies, in contrast, are destabilizing influences, causing tax morale to fluctuate. As such, tax morale may not only be an important determinant of compliance, but also a useful barometer for judging how the tax system is going. Tax morale will build up in good times, be eroded in bad times, but withstand policy controversy as long as adjustments are made to restore morale to the level necessary for a well-functioning democracy.

## **Appendix A. Course satisfaction**

The *skill acquisition* scale items:

(1) The course developed my problem-solving skills; (2) The course sharpened my analytic skills; (3) The course improved my skills in written communication; and (4) The course developed the ability to plan my own work.

The *professional development* scale items:

(1) The course helped me to develop a well-defined career goal; (2) The course brought a sense of achievement; (3) The skills I achieved during my course are now useless (reverse coded); (4) The course helped me to grow professionally; (5) The course helped me to get the best kind of job easily; (6) The course facilitated my employment level; and (7) The course helped me to relate knowledge with practice.

The *quality teaching* scale items:

(1) My lecturers were extremely good at explaining things; (2) The teaching staff of this course motivated me to do my best work; (3) The staff put a lot of time into commenting on my work; and (4) The teaching staff normally gave me helpful feedback on how I was going.

The *clear course goals* scale items:

(1) It was often hard to discover what was expected of me in this course (reverse coded); and (2) It was always easy to know the standard of work expected.

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