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An Investigation Into Australian Personal Tax Evaders- Their Attitudes Towards Compliance And The Penalties For Non-Compliance

Abstract

The tax compliance literature indicates that many factors - economic, social, psychological and demographic - impact upon the compliance behaviour of taxpayers. This study investigates the relationship that exists between selected tax compliance variables and the attitudes and behaviour of Australian personal 'tax evaders' towards compliance and the penalties. The study employed a survey and interviews. It investigated the deterrent effect of penalties and the probability of detection, and assessed the impact on compliance of the general tax awareness of taxpayers.

Keywords

tax evaders, tax evasion, tax avoidance, taxation compliance, taxation penalties

AN INVESTIGATION INTO AUSTRALIAN PERSONAL 'TAX EVADERS'- THEIR ATTITUDES TOWARDS COMPLIANCE AND THE PENALTIES FOR NON-COMPLIANCE

KEN DEVOS*

The tax compliance literature indicates that many factors - economic, social, psychological and demographic - impact upon the compliance behaviour of taxpayers. This study investigates the relationship that exists between selected tax compliance variables and the attitudes and behaviour of Australian personal 'tax evaders' towards compliance and the penalties. The study employed a survey and interviews. It investigated the deterrent effect of penalties and the probability of detection, and assessed the impact on compliance of the general tax awareness of taxpayers.

INTRODUCTION AND BACKGROUND

An important issue for any government and revenue collecting authority is to obtain knowledge and understanding of the reasons for taxpayer non-compliance in order to maximize voluntary compliance in a self-assessment environment. However, measurement of the magnitude of intentional and unintentional non-compliance can be difficult as it involves estimating levels of uncollected tax, which by its nature is not detected by the revenue authority. The amount of tax lost through evasion is potentially enormous. (The Inland Revenue Service estimated it to be \$US 345 billion¹ in 2006 which amounted to 16.3 percent of estimated actual paid plus unpaid tax liability). In Australia an estimate of the underground economy was 10 billion or 1.2% of the level of GDP in 2002-03.² Consequently in order to manage risk and improve the efficiency of government collections, further research is required into understanding taxpayer behaviour and attitudes.

There is evidence of a multi-disciplinary approach with respect to research into tax compliance. Contributions have come from a variety of academic fields including, accounting, law, economics, sociology and psychology. Several comprehensive literature reviews have also been conducted including, for example, Jackson and

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¹ J Slemrod, 'Cheating Ourselves: The Economics of Tax Evasion' (Winter 2007) 21(1) *Journal of Economic Perspectives* 25.

² See *Australian Economic Indicators*, ABS Publication, October (2003).

Milliron³, Andreoni et al,⁴ and Richardson and Sawyer.⁵ The reviews indicate that there are mainly two schools of thought, or drivers, for greater or lesser compliance by taxpayers. These are known as the 'economic' school and 'psychology' school. Models developed by proponents of the latter school have fallen into a number of sub categories. The studies in these sub categories are many and varied in terms of methodologies employed and compliance factors examined. (See for example, Kinsey,⁶ Ajzen and Fishbein,⁷ Alm Sanchez and De Juan⁸). Importantly the psychology model can take the form of either a social psychology model (purely behavioural) or fiscal psychology model, which is a combination of both the social psychology and economic models.

Social psychology models inductively examine the attitudes and beliefs of taxpayers in order to understand and predict human behaviour. Fiscal psychology models draw on both the economic deterrence and the social psychology models and generally view tax enforcement as a behavioural problem and one that can be resolved by co-operation between taxpayers and tax collectors.⁹ A study by Ajzen and Fisbein¹⁰ found that taxpayers' behaviour is directly determined by their intentions, which are a function of their attitude towards behaviour and perception of social norms. This research indicated that people's compliance behaviour is influenced by their peers and community standards, which thereby impact upon their thinking and actions.

Aim and overview of the Study

The focus of this study was upon six compliance variables which have been predominant throughout the review of the literature. They are the economic variable of deterrence, which includes the likelihood of being caught and the range of penalties

³ B R Jackson and V C Milliron 'Tax Compliance Research: Findings, Problems, and Prospects' (1986) 5 *Journal of Accounting Literature* 125, 142.

⁴ J Adreoni, B Erard and J Feinstein, 'Tax Compliance' (1998) 36(2) *Journal of Economic Literature* 818.

⁵ M Richardson and A J Sawyer, 'A Taxonomy of the Tax Compliance Literature: Further Findings Problems and Prospects' (2001) 16 *Australian Tax Forum* 137, 149.

⁶ K A Kinsey, 'Theories and Models of Tax Cheating' (Working Paper No 8717, American Bar Foundation, 1988).

⁷ I Ajzen and M Fishbein, *Understanding Attitudes and Predicting Social Behaviour* (1980).

⁸ J Alm, I Sanchez and A De Juan, 'Economic and Non-Economic Factors in Tax Compliance' (1995) 48(1) *Kyklos* 3.

⁹ M McKerchar and C Evans, 'Sustaining Growth in Developing Economies through Improved Taxpayer Compliance: Challenges for Policy makers and Revenue Authorities' (Paper presented at the 21st Australasian Tax Teachers Annual Conference, University of Canterbury, 20-22 January 2009) 27.

¹⁰ Ajzen and Fishbein, above n 7.

applied to those who are caught and enforcement measures; and the psychology variables of moral values, tax awareness/knowledge and the perceptions of equity and fairness held by taxpayers. The first three of these variables have been identified by scholars of the economic school of compliance, whereas the latter three variables come from the psychology school of compliance. Consequently, the study adopts the fiscal psychology model approach into investigating taxpayer compliance so as to focus specifically on tax evaders' beliefs and attitudes with regards to penalties.

This research expands upon prior studies into taxpayer compliance conducted by Ian Wallschutzky¹¹ over 20 years ago which also investigated the behaviours and attitudes of tax evaders. Significantly however, this study has obtained original data of non-compliant personal taxpayers sourced via the Australian Taxation Office (ATO). Consequently, the validity and strength of the results can potentially produce information on community attitudes that will be of interest not only to taxation specialists but also political leaders, sociologists, psychologists and welfare workers.

The remainder of this article is structured in the following manner: section two defines taxpayer compliance in terms of this analysis and briefly summarises some of the findings of tax evasion studies undertaken to date that incorporate the selected compliance variables which are the focus of this investigation. Section three will then outline the research objectives and questions to be addressed and the hypotheses to be tested in the study. This is followed by a description of the research methodology in section four. A discussion and analysis of the research findings including statistical significance is provided in section five. Finally, section six summarises and concludes the study by providing some tax policy considerations, identifies limitations, and makes suggestions for future research.

LITERATURE REVIEW

Definition of taxpayer compliance

There is no standard all embracing definition of compliance adopted across all tax compliance studies. For example taxpayer compliance has been defined as compliance with reporting requirements, meaning that the taxpayer files all required tax returns at the proper time and that the returns accurately report tax liability in accordance with the internal revenue code, regulations and court decisions applicable at the time the return is filed.¹² An alternative definition has been offered by James and Alley¹³

¹¹ I G Wallschutzky, 'Possible causes of Tax Evasion' (1984) 5(4) *Journal of Economic Psychology* 371.

¹² J A Roth, J T Scholz and A D Witte, (eds), *Taxpayer Compliance an Agenda for Research* Volume 1 (1989) 21. See also B R Jackson and V C Milliron, 'Tax Compliance Research: Findings Problems and Prospects' (1986) 5 *Journal of Accounting Literature* 125; M

that considers tax compliance in terms of the tax gap. This is the difference between 'true' individual income tax liability and that which is finally collected on a voluntary basis or by enforcement action. However, this latter definition has also been viewed as somewhat simplistic. For the purposes of this study, the former definition of tax compliance has been adopted.

Compliance variables

The following comprises a review of other studies which have examined tax evasion/non-compliance at the micro level and employed similar compliance factors.

Penalties

Researchers have found that taxpayers are more sensitive to the magnitude of the penalty than to the probability of detection when the probability is very low (ie, 4 % or less).¹⁴ This could have implications for Anglo-Saxon countries that have moved to a self-assessment environment.¹⁵ A particular study observed that there was a significant relationship between the severity of the criminal sanctions and compliance by one group of taxpayers - high-income, self-employed individuals.¹⁶ Within each of the groups this study covered, legal sanctions were most effective for the higher class and the better educated (not the best). This study did indicate however, that the threat of guilt feelings was a greater deterrent to tax evasion than the threats or stigma of legal sanctions. This finding has been supported by similar work on sanctions.¹⁷

Richardson and A J Sawyer, 'A Taxonomy of the Tax Compliance Literature: Further Findings, Problems and Prospects' (2001) 16 *Australian Tax Forum* 137 and L M Tan and A J Sawyer, 'A Synopsis of Taxpayer Compliance Studies – Overview Vis-à-Vis New Zealand' (2003) 9(4) *New Zealand Journal of Taxation Law and Policy* 431.

¹³ S James and C Alley, 'Tax Compliance, Self Assessment and Tax Administration in New Zealand - Is the Carrot or Stick More Appropriate to Encourage Compliance?' (1999) 5(1) *New Zealand Journal of Taxation Law and Policy* 3, 11.

¹⁴ B Jackson and S Jones, 'Salience of Tax Evasion Penalties Versus Detection Risk' (*Spring*) (1985), *Journal of the American Taxation Association* 7. This research also added credence to congressional efforts to raise the magnitude of legal penalties a taxpayer faces for non-compliance. US Internal Revenue Code section 6661.

¹⁵ In a self-assessment environment tax returns are accepted on face value and then subject to potential audit.

¹⁶ A Witte and D Woodbury, 'The effect of Tax Laws and Tax Administration on Tax Compliance' (Working Paper 83-100, Department of Economics, University of North Carolina, Chapel Hill, North Carolina, USA, 1983).

¹⁷ R Schwartz and S Orleans, 'On Legal Sanctions' (*Winter*) (1967) 34 *University of Chicago Law Review* 274.

However, the positive effect of increased sanction levels on taxpayer compliance has been found even where relatively low (and realistic) penalty levels are used.¹⁸ What is of major concern though has been that taxpayers' perceptions of the true penalty levels are higher than what the penalties actually are. This has tended to skew research findings. Other research evidence suggested that a tax system that combines both penalties and rewards is more effective in maximizing compliance than a system that focuses solely on sanctions.¹⁹ Consequently, positive inducements for compliance may also have a key role to play and should be subject to further investigation.

Enforcement/detection

On the other hand, studies of criminal behaviour in general have found that the probability of apprehension is more important than the sanctions actually imposed.²⁰ Alternatively, another influence may just be the precision of information regarding the probability that punishment will be imposed. Consequently, vague information about the relatively low probability of detection and punishment enhances a low deterrent value.²¹

Overall, the economic man model proposes that increasing punishment by expanding criminal sanctions decreases non-compliance. This principle supports sentencing theory and the Courts' right to consider the maximum penalty for an offence in order to achieve general deterrence.²² However, this model, in its purist form, falls short and has been criticised for failing to consider the analysis of attitudes, perceptions and moral judgements on tax behaviour.²³ Consequently, while economic deterrence models are relevant in shaping compliance behaviour, other 'behavioural' factors have also been found to influence compliance decisions.²⁴

¹⁸ G A Carnes and T D Eglebrecht, 'An Investigation of the Effect of Detection Risk Perceptions, Penalty Sanctions and Income Visibility on Tax Compliance' (*Spring*) (1995) 17 *Journal of the American Taxation Association* 26.

¹⁹ J Falkinger and H Walther, 'Rewards versus Penalties: on a New Policy on Tax Evasion' (1991) 19(1) *Public Finance Quarterly* 67.

²⁰ C Tittle and C Logan, 'Sanctions and Deviance; Evidence and Remaining Questions' (*Spring*) (1973) *Law and Society Review* 371.

²¹ N Friedland, 'A Note on Tax Evasion as a Function of the Quality of Information about the Magnitude and Creditability of Threatened Fines: Some Preliminary Research' (1982) *Journal of Applied Social Psychology* 54.

²² Jackson and Milliron, above n 3.

²³ A Lewis, *The Psychology of Taxation* (1982) 127.

²⁴ McKerchar and Evans, above n 9.

Tax awareness

From a tax administration viewpoint, other researchers²⁵ have concluded that compliance could also be influenced by educating taxpayers of their social responsibility to pay and thus their intention would be to comply. Schmolders²⁶ suggests, as a behavioural problem, tax compliance depends on the cooperation of the public. Another study by Hite²⁷ also found that there are greater gains in assisting compliant taxpayers meet their fiscal obligations rather than spending more resources pursuing the minority of non-compliers. Assisting taxpayers by improving the flow and quality of information or educating them (eg, TV campaigns) into becoming more responsible citizens has the potential to yield greater revenue rather than if it were spent on enforcement activities. For instance, some researchers²⁸ have found that carefully tailored persuasive communication strategies can, in the short-term, also have a positive effect on taxpayer reporting. Likewise, it is evident that in New Zealand (NZ) and Australia the revenue authorities support taxpayers through a range of easily accessible explanatory leaflets and provide a useful site on the internet. Undertaking these courses of action has had the desired effect of improving taxpayer relations and consequently voluntary compliance.²⁹

The work of Hite³⁰ also suggests that both gender and education generally impact upon taxpayer compliance. Hite points to an example of where, in reducing the amount of litter in America, instead of the authorities increasing penalties, the real improvement came when there was the slogan uplifted to 'Keep America Beautiful.'³¹ Although Hite's study provided evidence of the impact of these demographic variables upon compliance behaviour, other studies have found it difficult to find direct associations between compliance and demographic variables. Nevertheless, this area continues to be an active area of research within taxpayer compliance.

²⁵ R B Cialdini, 'Social Motivations to Comply: Norms, Values and Principles' in J A Roth, J T Scholz, and A D Witte (eds), *Taxpayer Compliance Social Science Perspectives Volume 2* (1989) 200.

²⁶ G Schmolders, 'Fiscal Psychology: A New Branch of Public Finance' (1959) 12 *National Tax Journal* 340.

²⁷ P A Hite, 'Identifying and Mitigating Taxpayer Non-Compliance' (1997) 13 *Australian Tax Forum* 155.

²⁸ J Hasseldine, P Hite, S James and M Toumi, 'Persuasive Communications: Tax Compliance Enforcement Strategies for Sole Proprietors' (Spring) (2007) 24(1) *Contemporary Accounting Research* 171.

²⁹ See *Commissioner of Taxation Annual Report 2005-06*, Commonwealth of Australia, Part 3.6 Compliance Assurance and Support for Revenue Collection, 108-114.

³⁰ Hite, above n 27.

³¹ Hite, above n 27, 161.

A further study conducted by Coleman and Wilkins³² revealed that there was a diversity in opinions and attitudes towards the tax system and compliance issues amongst the Australian public. One of the likely factors that could impede attitude change is the uneven level of comprehension or involvement in the tax system. This raises the issue of tax knowledge/awareness and the impact of this variable in improving overall taxpayer compliance. Evidence regarding the importance of education in improving voluntary compliance in Malaysia, and the impact of tax knowledge during the introduction of self assessment there, was produced in a study by Loo and Ho.³³ A study by Kornhauser³⁴ also supports the notion that educational efforts aimed at all segments of the population can improve taxpayer knowledge, which in turn influences voluntary compliance.

Tax fairness

Other social and psychology studies conducted overseas have found that the fairness and equity of a tax system also impacts upon compliance levels.³⁵ In particular, the notion of 'exchange equity' (where taxpayers believe they are not receiving the benefits from the government in exchange for taxes paid) affects compliance. Although tax fairness is only one factor in achieving overall compliance, the NZ Government, for example, has continuously placed great emphasis on this criterion.³⁶ In terms of having greater impact, the argument is that a fairer tax system will improve voluntary compliance. Consequently, fiscal psychologists maintain that a taxpayer's belief in the tax system rather than the penalty structure is more salient in generating compliance.³⁷

A number of other overseas studies have also examined the link between perceptions of fairness with tax evasion.³⁸ For instance, Spicer³⁹ found a significant association

³² C Coleman and M Wilkins, 'Chapter 22' in M Walpole and C Evans *Tax Administration in the 21st Century* (2001) 263.

³³ E C Loo and J K Ho, 'Competency of Malaysian Salaried Individuals in Relation to Tax Compliance Under Self Assessment' (2005) 3(1) *eJournal of Tax Research* 47. See also E C Loo, 'Tax knowledge, 'Tax Structure and Compliance: A Report on a Quasi Experiment' (2006) 12(2) *New Zealand Journal of Taxation Law and Policy* 117.

³⁴ M E Kornhauser, 'A Tax Morale Approach to Compliance: Recommendations For the IRS' (2007) 8(6) *Florida Tax Review* 599.

³⁵ L M Tan, 'Taxpayers Perceptions of the Fairness of the Tax System – A Preliminary Study' (1998) 4 *New Zealand Journal of Taxation Law and Policy* 59, 60.

³⁶ Ibid.

³⁷ Ibid 61.

³⁸ G Richardson, 'The Impact of Tax Fairness Dimensions on Tax Compliance Behaviour in an Asian Jurisdiction: The Case of Hong Kong' (Winter) (2006) *International Tax Journal* 29.

between fairness and tax evasion, while Song and Yarbrough's⁴⁰ study discovered a significant association, with 75% of the subjects stating that the ability to pay was more significant than the benefits. Hite and Roberts⁴¹ found that most taxpayers thought that mildly progressive tax rates were the most fair, and further, that tax fairness was significantly associated with perceptions of an improved tax system, concluding that tax fairness and tax evasion were related. Chan et al⁴² also found that taxpayer attitudes (fairness) had a positive relationship with tax compliance in both Hong Kong and the United States of America (USA). A related issue to fairness was that of procedural justice which was discovered in a major study conducted by Murphy⁴³ into mass marketed scheme investors. The treatment of taxpayers by the ATO in that particular case was found to be detrimental to their future compliance attitudes.

On the other hand, other overseas studies have found no association between tax fairness perceptions and tax compliance behaviour. (See Vogel,⁴⁴ Porcano,⁴⁵ and Antonides and Robben⁴⁶). A creditable reason for the inconsistency, as suggested by Jackson and Milliron⁴⁷ and Richardson and Sawyer,⁴⁸ is the multi-dimensional nature of tax fairness as a tax compliance variable. However, despite the inconsistent findings of various researchers, it is widely acknowledged that demographic variables such as age, gender, marital status, education, culture and occupation have an effect upon fairness perceptions which ultimately impacts upon compliance.

³⁹ M W Spicer, *A Behavioural Model of Income Tax Evasion* (Unpublished PhD Thesis, Ohio State University, 1974).

⁴⁰ Y Song and T Yarbrough, 'Tax Ethics and Tax Attitudes: A Survey' (1978) 38(5) *Public Administration Review* 442.

⁴¹ A Hite and M L Roberts, 'An Analysis of Tax Reform based on Taxpayers' Perceptions of Fairness and Self-Interest' (1992) 4 *Advances in Taxation* 115.

⁴² C W Chan, C S Troutman and D O'Bryan, 'An Expanded Model of Taxpayer Compliance: Empirical Evidence From The United States and Hong Kong' (2000) 9(2) *Journal of International Accounting, Auditing and Taxation* 83.

⁴³ K Murphy, 'The Role of Trust in Nurturing Compliance: A Study of Accused Tax Avoiders' (2004) 28(2) *Law and Human Behaviour* 187.

⁴⁴ J Vogel, 'Taxation and Public Opinion in Sweden: An Interpretation of Recent Survey Data' (1974) 27(4) *National Tax Journal* 499.

⁴⁵ T M Porcano, 'Correlates of Tax Evasion' (1988) 9(1) *Journal of Economic Psychology* 47.

⁴⁶ G Antonides and H S J Robben, 'True Positives and False Alarms in the Detection of Tax Evasion' (1995) 16 *Journal of Economic Psychology* 617.

⁴⁷ Jackson and Milliron, above n 3.

⁴⁸ Richardson and Sawyer, above n 5.

Previous Australian research into taxpayer compliance behaviour since the early 1980s included the work of Wallschutzky,⁴⁹ who found that the exchange relationship (exchange equity) was the most important hypothesis explaining why taxpayers who evaded tax felt justified in doing so. In Wallschutzky's study, a comparative analysis of the behaviours of tax evaders and those of the general population was conducted. Interestingly, the findings revealed that there was very little difference in the attitudes of both the evader group and the general population towards why people evade tax. In a later study by Wallschutzky⁵⁰ this notion was reinforced where findings revealed that some 86% of survey respondents considered that the level of income tax in relation to the level of government services was too high.⁵¹ Other findings from this study indicated that the burden of taxes was the main justification for increased levels of tax evasion and that tax advisers were perceived to have a significant impact upon taxpayers avoiding tax.

Tax morals

Other social psychology studies have also examined the impact of moral values upon taxpayer compliance. Indeed, much of the empirical work that has been carried out by social researchers in this area tends to refute the economic model of compliance (that is, that taxpayers are utility maximizing creatures that only weigh up the expected costs of non-compliance against the potential gains) in its basic form. For example, it has been demonstrated by means of laboratory experiments⁵² that even where the deterrence factor is so low that evasion makes obvious economic sense, some individuals will nevertheless comply. Consequently where random audits exist or where it is planned that only a small percentage of returns are selected for audit, a purely rational taxpayer would still be able to virtually discount audit as a serious deterrent factor.⁵³

It is in this environment that it has been found that some taxpayers nevertheless comply due to their high tax morals and values, and consequently this becomes an important variable to investigate. Overseas studies that have investigated tax morale have found that higher legitimacy for political institutions has led to higher tax morale⁵⁴. This was further evidenced in a study of 30 developed and developing

⁴⁹ Wallschutzky, above n 11.

⁵⁰ I G Wallschutzky, 'Taxpayer Attitudes to Tax Avoidance and Evasion' (Research Study No 1, Australian Tax Research Foundation, 1985).

⁵¹ Ibid 55.

⁵² Alm, Sanchez and De Juan, above n 8.

⁵³ C Pilkington, 'Taxation and Ethical Issues' in C Growthorpe and J Blake (eds), *Ethical Issues in Accounting* (1998).

⁵⁴ B Torgler and F Schneider, 'What shapes attitudes Toward Paying Taxes? – Evidence From Multicultural European Countries' 2007 88(2) *Social Science Quarterly* 443.

countries (although primarily non-African) that tax morale and compliance is highest in the countries characterised by high control of corruption and low size of bureaucracy.⁵⁵ A recommendation was also made by Kornhauser⁵⁶ to the IRS (Inland Revenue Service) that they endorse a tax morale approach to compliance that recognised the varying attitudes and behaviours of taxpayers.

However, Niemirowski, Baldwin and Wearing,⁵⁷ found overall that the results of tax evasion behavioural research over the last thirty years has remained contradictory and inconclusive. The researchers indicated that this was mainly due to the research addressing only a few variables at a time. The authors concluded that despite extensive research there was still a lack of consistent, reliable predictors or explanations of the causality of tax evasion.

Consequently, given that tax evasion occurs for a variety of reasons and that there are a number of factors which influence it, it would be naive to think that analysing a few compliance variables alone, as in this study, would produce all the answers. For instance, an analysis of mediating factors such as demographic variables and other descriptive and definitional issues were beyond the scope of this analysis. Instead this study investigates the relationship that exists, if any, between selected tax compliance variables and the attitudes and behaviour of Australian personal 'tax evaders' towards compliance and the penalties for non-compliance. In particular, the focus was on whether there was a link between the affect and impact of perceived and actual penalties upon taxpayers' compliance decisions. Further research in this area is warranted as evidenced by previous major tax compliance literature reviews including, Jackson and Milliron⁵⁸ and Richardson and Sawyer⁵⁹ who have also indicated that the effectiveness of the perceived severity of legal sanctions with respect to tax compliance is largely unresolved.

OBJECTIVE OF THE STUDY, RESEARCH QUESTIONS AND HYPOTHESES

Research objective

The overall objective of the study is to examine if a relationship exists between a number of selected tax compliance variables discussed above (excluding demographic variables) and the attitudes and behaviour of detected non-compliant Australian

⁵⁵ R Picur and A Riahi-Belkaoui, 'The Impact of Bureaucracy Corruption and Tax Compliance' (2006) 5(2) *Review of Accounting and Finance* 174.

⁵⁶ Kornhauser, above n 34.

⁵⁷ P Niemirowski, S Baldwin and A Wearing, 'Chapter 18' in M. Walpole and C. Evans (eds), *Tax Administration in the 21st Century* (2001) 211.

⁵⁸ Jackson and Milliron, above n 3.

⁵⁹ Richardson and Sawyer, above n 5.

personal taxpayers. As indicated, the selected compliance variables of interest in this study comprise of the fairness/equity of the tax system, the moral values of taxpayers', deterrence mechanisms such as penalties, detection and law enforcement measures and taxpayers' general tax awareness. Consequently, the purpose of this research is also to further elicit the reasons for taxpayer non-compliance and reveal some of the motives of tax evaders (eg, Were tax evaders' actions based on willingness to pay, legal contestation or aggression against the tax authority?)

Admittedly, in conducting research into taxpayer compliance, there are clearly many factors at play. Consequently, it should be initially acknowledged that other factors, such as complexity of the tax legislation, audit rates, tax rates and the opportunities for evasion, also impact upon compliance levels but are outside the scope of this study. Nevertheless, some indirect evidence of these other compliance factors has been discovered throughout the study.

In particular, the research will focus on the impact of penalties and sanctions as a key determinant upon taxpayer behaviour. The link between taxpayers' attitudes towards penalties and their consequential attitude towards evasion/non-compliant behaviour is one which has been subject to considerable research in the past.⁶⁰ The study of penalties is important given that it is also one of the factors which are within the control of tax authorities. An emphasis in the study was placed on how taxpayers felt penalties impacted as a deterrent measure and the appropriate use of penalties by the revenue authorities. Allowing for some expected inbuilt bias given the cohort of taxpayers being investigated, the study will nevertheless provide original information gathered from this alternative viewpoint.

Specific research questions and hypothesis

There were six relationships to be tested where non-compliance, per se, is the dependent variable. That is, the independent variables would include the perceptions of fairness, taxpayer morals and ethics, penalties/sanctions, tax law enforcement, the probability of detection and taxpayer awareness, as possible influences upon non-compliance. The testing of these relationships can be phrased as the main research questions (RQ) or hypotheses (H) or null hypotheses (H0). The possible relationship between these variables and taxpayers' compliance attitudes/behaviours was

⁶⁰ See for example, H G Grasmick and W J Scott, 'Tax Evasion and Mechanics of Social Control: A Comparison of Grand and Petty Theft' (1982) 2(3) *Journal of Economic Psychology* 213; D J Hasseldine and S E Kaplan, 'The Effect of Different Sanction Communications on Hypothetical Taxpayer Compliance: Policy Implications from New Zealand' (1992) 47(1) *Public Finance* 45; K A Kinsey, 'Theories and Models of Tax Cheating' (Working Paper No 8717, American Bar Foundation, 1988).

considered in the context of six main research questions (RQ) and their related hypotheses (H) which follows:

- RQ 1 Do taxpayers who have perceptions of severe penalties and sanctions for tax evasion engage in positive tax compliance behaviour?
H1 As taxpayers' perceive tax penalties to be severe, the level of taxpayer compliance will increase.
- RQ 2 Does taxpayers' perception of fairness affect their compliance behaviour?
H2 As taxpayers' perceptions of tax fairness increase, the level of tax compliance will also increase, while where perceptions of tax fairness decrease the level of tax compliance will also decrease.
- RQ 3 Do taxpayers with weak tax morals⁶¹ engage in negative tax compliance behaviour?
H3 Taxpayers who possess weak tax morals engage in negative tax compliance behaviour.
- RQ 4 Do taxpayers who have a perception of ineffective enforcement by the revenue authorities engage in negative tax compliance behaviour?
H4 Taxpayers who perceive the tax authorities' enforcement actions to be ineffective are less compliant.
- RQ 5 Do taxpayers who perceive a high probability of detection engage in positive tax compliance behaviour?
H5 Taxpayers who perceive the probability of being detected as low are less compliant than those who perceive the probability to be high.
- RQ 6 Do taxpayers who possess a poor awareness of tax penalties engage in negative tax compliance behaviour?
H6 Taxpayers who possess an awareness of the penalties for non-compliance are more compliant than those who do not possess such awareness.

RESEARCH METHODOLOGY

In addressing the objectives of the study, a survey instrument was developed to gather taxpayers' responses. Australian personal taxpayers derived from the data bases of the ATO were sampled. In conjunction with this quantitative research component was also a qualitative research component where interviews of a sample of those taxpayers surveyed were conducted to support the survey findings in the

⁶¹ Taxpayers' tax morals were linked to their attitudes and beliefs (See Kornhauser- A Tax Morale Approach to Compliance: Recommendations for the IRS). This was initially established by questioning the taxpayers as to their views on other important issues excluding tax, (e.g. being a good Australian citizen) within the survey instrument and making a comparison of responses thereof to questions on tax morals.

likelihood of a low response rate and provide another source of information for validation and cross checking purposes. Due to the sensitive nature of the topic and in order to maintain privacy, taxpayer interviews were conducted over the telephone.

Quantitative component

The population and survey sample

A mail survey (comprising 30 questions) was conducted for a selection of personal taxpayers labelled the 'evader group'. The sample frame was to be those personal taxpayers who, according to ATO records, had lodged tax returns for three income tax years, including 2004, 2005 and 2006, and had been audited and subjected to a penalty of \$5,000 or greater. In accordance with the researcher's specifications, tax evaders were selected⁶² based on the following criteria: age, gender, marital status, agent prepared or not, location (which Australian state/territory), occupation, and the level of income, all of which could be determined from their tax returns. The other important demographic variables relevant to this study were the educational level of those taxpayers given their occupational groups, nationality based on residence and also that they had lodged tax returns for the income-tax years in question.

The sample population was 700 records for this evader group. Given an expected response rate of 25 - 30%,⁶³ this resulted in a sample size of at least 150 - 200 respondents which would be sufficient in terms of the credibility of the results and providing a 95% confidence level in performing statistical tests. Names and addresses of those selected were only known to the ATO. Understandably due to the privacy provisions, the ATO was not willing to allow the researcher direct access to taxpayers' details. To satisfy this condition, the surveys were supplied by the researcher to the ATO who conducted the distribution to the evader sample. Then survey responses were received by the researcher directly at the University. Such an approach maintained taxpayers' privacy in that neither the researcher, nor the ATO, could match taxpayers' details to completed surveys. As the study was conducted in conjunction with the ATO, it was considered that this approach would also improve response rates. It should be noted that funding support for this phase of the research was provided by the Australian Tax Research Foundation (ATRF),⁶⁴ which assisted the researcher in gaining the co-operation of the ATO.

⁶² An Assistant Commissioner of Taxation was engaged to assist the researcher in this task.

⁶³ See K Murphy (2003) 30%, Hasseldine, J (1989) 22% and Oxley (1992) 29%.

⁶⁴ A research grant application to the Australian Tax Research Foundation (ATRF) for the study's funding was approved in October 2006.

Response rates

Response rates in respect of mail surveys are varied. As a guide, a mail survey in Australia on tax compliance costs generated a response rate of between 50.1% (for individuals) and 26.6% (for sole traders), with an overall response rate of 36.3%.⁶⁵ Further, another mail survey in Australia on taxpayer attitudes achieved an overall response rate of 34.6%.⁶⁶ Other previous tax compliance studies indicate that a response rate of anything between 25% and 30% is acceptable in tax surveys.⁶⁷ Therefore, based on the necessity to have somewhere between 150-300 usable responses in order to generate a reasonable degree of accuracy, and given estimated response rates in the range of 25-30%, the sample size selected needed to be 700 personal taxpayers in terms of this evader group. The actual response rate received for this study was (174/636 effective distributions = 27.4%).

Qualitative component

In terms of the qualitative component of the research method, the data ideally sought was the personal account of participants' attitudes to tax compliance issues gathered confidentially at an interview. This procedure would assist in confirming or denying issues which were raised initially in the surveys. Consequently, by undertaking systematic interviews (over the telephone), the researcher becomes the instrument for data collection and is in a better position to make meaning of the process from the taxpayer's perspective.

A semi-structured interview⁶⁸ posed questions around the major themes which were also explored in the survey instrument. Participants were encouraged to elaborate on their responses to the open-ended questions posed in the survey. Further, questions were asked to probe the taxpayer's intention and commitment to compliance; their perception of fairness; and the deterrent impact of tax penalties in influencing their behaviour. The source of evidence was a telephone interview (where the researcher formed a judgement based on the taxpayer's comments). Tax evader survey participants who voluntarily provided their contact details were interviewed over the

⁶⁵ Niemirowski, Baldwin, and Wearing, in Walpole and Evans (eds), above n 57.

⁶⁶ P Niemirowski, A Wearing and S Baldwin, 'Identifying the Determinants of Australian Taxpayer Compliance' in A Scott (ed), *XXVI IAREP Annual Colloquium on Economic Psychology: Environment and Wellbeing* (2001) 199.

⁶⁷ See above n 63.

⁶⁸ A Fontana and J H Frey, 'The Interview - From Neutral Stance to Political involvement' in Norman K Denzin and Yvonna S Lincoln (eds), *Handbook of Qualitative Research* (2005) 696, 705. Semi-structured interviews are formally held in the field, somewhat directive and have a phenomenological purpose.

telephone.⁶⁹ It was considered that the findings derived from these interviews would complement and support, to some degree, the results of the main quantitative component of the research study.

DISCUSSION AND ANALYSIS OF RESEARCH FINDINGS

Quantitative component

Demographic profile of the evader sample

Table 1: Summary of Demographic Data Preliminary Questions S1-S5 and 23-26

Q S1 What was the highest level of education completed?	Frequency	Percentage
Year 10 (or below)	12	7%
Year 11	6	3%
Year 12	12	7%
Certificate	16	9%
Advanced Diploma/Diploma	25	15%
Bachelor Degree	76	45%
Post Graduate Degree	24	14%
Total	n=171	100%
Q S2 What is your Occupational group?	Frequency	Percentage
Manager	31	18%
Professional	48	28%
Assoc Professional /Educational	21	12%
Tradesperson	10	6%
Clerical, Sales and Service	24	14%
Product and transport	16	9%
Labourer	13	8%
Not working	8	5%
Total	n=171	100%
QS3 Status- if not working	Frequency	Percentage
Unemployed	1	12%
Retired from paid work	5	64%
Full -time student	1	12%
Home duties	1	12%

⁶⁹ Ibid, which concluded that telephone interview can be used productively in qualitative research.

Other	0	0%
Total	n=8	100%
Q S4 Your Gender	Frequency	Percentage
Male	116	67%
Female	57	33%
Total	n =173	100%
Q S5 Where do you live?	Frequency	Percentage
NSW	56	32%
VIC	49	28%
QLD	33	19%
SA	14	8%
WA	15	9%
TAS	3	2%
NT	0	0%
ACT	3	2%
Total	n=173	100%
Q23 Age	Frequency	Percentage
18-19	4	2%
20-29	23	13%
30-39	31	18%
40-49	43	26%
50-59	50	29%
60 and over	20	12%
Total	n=171	100%
Q 24. Ethnicity	Frequency	Percentage
European Origin	34	20%
British Origin	24	14%
Asian Origin	18	10%
Australian	86	49%
Other	12	7%
Total	n=174	100%
Q 25 Personal Income	Frequency	Percentage
Less than \$10,000	2	1%
\$10,000	0	0%
\$20,000	8	5%
\$30,000	5	3%
\$40,000	13	7%
\$50,000	14	8%
\$60,000	13	7%
\$70,000	13	7%

\$80,000	14	8%
\$90,000	17	10%
\$100,000	16	9%
\$110,000	16	9%
\$120,000	15	8%
\$130,000	3	4%
\$140,000+	25	14%
Total	n= 174	100%
Q26 Last Tax Returned Lodged	Frequency	Percentage
2005/06 year	162	96%
2004/05 year	6	4%
2003/04 year	0	0%
2002/03 year	0	0%
2001/02 year	0	0%
Not lodged in last 5 years	0	0%
Total	n=168	100%

As indicated in Table 1 above the demographic profile of the evader sample was not representative of the Australian population as expected, given that evaders are a minority group; yet it produced useful data to assist in the analysis of the research questions posed. Some preliminary demographic questions were positioned at the beginning of the survey and served as a type of screening tool for potential respondents. For instance, question S1 regarding education level indicated that a large number of those surveyed had obtained an advanced diploma (namely 25, or 15% of respondents) or had completed a bachelor degree (namely 76, or 45% of respondents). This is higher than the average educational level of the Australian population which is more like the year 12 level.

Question S2 categorised occupational groupings according to figures derived from the Australian Bureau of Statistics (ABS).⁷⁰ The figures reveal that 24 (14%) fell into the clerical, sales and service industry. Interestingly, a further 48 (28%) indicated they were in the professional category, which would include the likes of doctors, lawyers and accountants. The sub-group of associate professionals/education with 21 respondents (12%) included the likes of teachers, academics and social workers. For the few respondents who indicated that they were not working in question S3, the main reason given was that they were retired from paid work, (namely 5, or 64% of respondents). Question S4, which indicated the gender breakdown of the sample, was also unrepresentative of the Australian population with 116 males (67%) and 57 females (33%) of respondents. Question S5 revealed where respondents were located

⁷⁰ See < <http://www.abs.gov.au/ausstats/abs@.nsf/web+pages/statistics>>.

in Australia and not surprisingly, the majority came from the more populated states of NSW (namely 56, or 32% of respondents) and Victoria (namely 49, or 28% of respondents).

The remaining demographic questions were posed at the end of the survey. In particular, the results of question 23 revealed that the majority (namely 147, or 86%) of respondents fell between the 20-59 year old age-bracket. Question 24 indicated that the sample was fairly representative of the Australian population with 86 (49%) of respondents indicating that they were born in Australia. Despite the fact that Australia is a very multi-cultural society, the figures are representative of the ABS statistics.⁷¹ On the other hand, in question 25 the majority of respondents (namely 106, or 62%) earned \$80,000 or more per annum with a large number (namely 25, or 14%) earning more than \$140,000 a year. This salary range is unrepresentative of the majority of the Australian population and clearly indicated that this sample of evaders tended to be in the higher income bracket and likely to show an indirect bias. Finally, question 26 indicated that the majority of respondents (namely 162, or 96%) lodged their 2005-06 tax return as expected.

Penalty/non-compliance relationship within the sample

Table 2: Q7 Personal Penalty/Offence

Respondents Reasons	Penalty imposed (Yes)	Penalty not imposed (No)
Q7 Have you ever been fined or penalized in some way by the ATOATO AATO and if so, for what type of offence?	150 (87%)	24 (13%)
1 By overstating deductions, rebates, tax offsets etc	31	
2. By understating income	42	
3. Defrauding or deceiving the Commonwealth	8	
4. Failing to withhold and remit tax	13	
5.Other	57	

In Table 2 above, question 7 asked respondents whether they had been fined or penalised in some way by the ATO and admitted evasion (ie, non-compliant) was confirmed in 150 cases (87%). For the majority of 42 cases, the main type of evasion was, not surprisingly, understating income. Whether this was intentional or inadvertent is unknown but it continues to be the most common type of evasion. Overstating deductions, rebates and offsets was also high with 31 cases, however there were 57 cases in the 'other' category which accounted for nearly one third of all cases. Interestingly, there were 8 cases of criminal offences of defrauding or deceiving

⁷¹ See <<http://www.abs.gov.au/ausstats/abs@.nsf/web+pages/statistics>>.

the Commonwealth while in 24 cases (13%) respondents denied that they were penalised by the ATO (ie, stated compliant). However, the fact that there was evidence of admitted evasion by the majority of participants (87% in this case) further supports the claim that evaders are prepared to reveal details of their non-compliance if they feel comfortable with the anonymity of the survey instrument.⁷²

Chi-square test analysis

Specifically in terms of a preliminary analysis and giving a snapshot of the data gathered, it was considered that employing chi-square tests was appropriate to explore the relationship between various categorical variables (ie, compliance behaviour against tax penalties, tax fairness, tax law enforcement, probability of detection, tax morals and tax awareness. Demographics were not subjected to further statistical testing). Chi-square, as a non-parametric technique, is ideal for situations where data are measured on nominal (categorical) scales and also where sample sizes are relatively small,⁷³ as is the case here. Chi-square is also a fairly robust test that does not have such stringent requirements and does not make assumptions about the underlying population distribution.⁷⁴

For the purpose of the preliminary analysis the chi-square statistical test was chosen to investigate the relationship between selected compliance variables and the compliance behaviour of the evader group. The specific independent variables investigated included survey Q2 taxpayers' awareness, Q4 tax penalties, Q11 probability of detection, Q12 tax law enforcement, Q15 tax fairness and Q17 tax morals and were statistically analysed against Q7 (See Table 2 above) compliance behaviour (ie, compliant/non-compliant). These questions represented the thrust of the study. The variables employed were tested for statistical significance at the 5% level. (ie, statistically significant at $p \leq 0.05$)

Chi-square test results

Penalties

Specifically in the case of question 4(b), 164 of the 174 respondents felt that a prison sentence was inappropriate (response = No) for the level of tax fraud illustrated. Chi-square tests reveal that there was a statistically significant relationship between Q4(b) prison sentence and Q7 compliance behaviour, ($X^2 = 47.071$, $df = 18$ $p = 0.000$). In question 4(c) the impact of community service upon compliance showed that 142

⁷² Kinsey, above n 6. Particularly as the process was independent of the ATO in that their survey responses were going directly to the University.

⁷³ J Pallant, *SPSS Survival Manual - A Step by Step Guide to data Analysis Using SPSS* (2nd ed, 2005).

⁷⁴ *Ibid* 286.

cases considered this course of action inappropriate. Chi-square tests reveal that there was a statistically significant relationship between Q4(c) community service and Q7 compliance behaviour, ($X^2 = 43.484$, $df = 18$ $p = 0.001$). In Q4(d) the impact of an educational program upon compliance indicated that 79 cases considered this course of action as inappropriate. Chi-square tests reveal that there was a statistically marginally significant relationship between Q4(d) education program and Q7 compliance behaviour ($X^2 = 43.155$, $df = 30$ $p = 0.057$). Overall statistical tests revealed that respondents did perceive some penalties and sanctions (eg, education courses and prison sentences) as having a significant impact upon compliance. However, the majority of taxpayers viewed more severe penalties as appropriate only in certain cases of tax fraud, and their own compliance behaviours were still poor. Consequently, the answer to (RQ1) was no and H1 was rejected.

Tax fairness

In Q 15(a) the majority (103 cases) strongly agreed to the horizontal inequity of the tax system. Chi-square tests reveal that there was a statistically significant relationship between Q15 (a) horizontal equity and Q7 compliance behaviour, ($X^2 = 31.652$, $df = 18$ $p = 0.024$). In Q 15(b) the majority (104 cases) strongly agreed to the vertical inequity of the tax system. Chi-square tests reveal that there was a statistically marginally significant relationship between Q15(b) vertical equity and Q7 compliance behaviour, ($X^2 = 25.735$, $df = 18$ $p = 0.106$). In Q 15(d) 84 cases strongly disagreed that government spending results in little waste. Chi-square tests reveal that there was a statistically significant relationship between Q15(d) government spending and Q7 compliance behaviour, ($X^2 = 30.132$, $df = 18$ $p = 0.036$). In Q15(f) the majority (118 cases) strongly disagreed that the level of taxation of individuals in Australia is about right. Chi-square tests reveal that there was a statistically marginally significant relationship between Q15(f) level of taxation and Q7 compliance behaviour, ($X^2 = 25.485$, $df = 18$ $p = 0.112$). Overall all statistical tests produced significant results with respect to the tax fairness variable. Clearly respondents did not perceive the tax system as fair and this directly impacted upon their compliance behaviour. Therefore, the answer to (RQ2) was yes and H2 was accepted.

Tax morals

In Q 17(a) 66 cases strongly agreed that one should declare all income. Chi-square tests reveal that there was a statistically significant relationship between Q17(a) level of taxation and Q7 compliance behaviour, ($X^2 = 47.285$, $df = 18$ $p = 0.000$). In Q17(b) 55 cases strongly disagreed that it is acceptable to overstate deductions. Chi-square tests reveal that there was a statistically significant relationship between Q17(b) overstating tax deductions and Q7 compliance behaviour, ($X^2 = 32.272$, $df = 18$ $p = 0.020$). In Q17(c) 53 cases strongly agreed that working for cash in hand payments without paying tax

is a trivial offence. Chi-square tests reveal that there was a statistically insignificant relationship between Q17(c) for cash in hand payments being a trivial offence and Q7 compliance behaviour, ($X^2 = 21.597$, $df = 18$ $p = 0.250$). In Q 17(d) 96 cases strongly agreed that the majority of Australians try to evade tax. Chi-square tests reveal that there was a statistically significant relationship between Q17(d) the majority of Australians try to evade tax and Q7 compliance behaviour, ($X^2 = 34.428$, $df = 18$ $p = 0.011$). Overall all statistical tests revealed that respondents in this non-compliant sample who possessed weaker tax morals did engage in negative compliance behaviour. On this basis, the answer to RQ3 was yes and H3 was accepted.

Tax law enforcement

In Q12(a) 84 cases strongly agreed with educating the public and improving taxpayer services. However, chi-square tests reveal that there was a statistically insignificant relationship between Q12(a) educating the public and improving taxpayer services and Q7 compliance behaviour, ($X^2 = 20.065$, $df = 18$ $p = 0.329$). In Q 12(c) 62 cases strongly disagreed to increasing civil and criminal penalties. Chi-square tests reveal that there was a statistically marginally significant relationship between Q12(c) increasing civil and criminal penalties and Q7 compliance behaviour, ($X^2 = 24.794$, $df = 18$ $p = 0.131$). In Q2(d) 117 cases strongly disagreed to exposing tax cheats. Chi-square tests reveal that there was a statistically significant relationship between Q12(d) exposing tax cheats and Q7 compliance behaviour, ($X^2 = 38.167$, $df = 18$ $p = 0.004$). Statistical tests revealed that respondents did perceive enforcement measures as having some effect on compliance behaviour. However the issues were generally marginally significant although exposing tax cheats was significant interestingly, given the cohort of taxpayers in this sample. On this basis overall, the answer to RQ4 is a qualified no and H4 is rejected.

Probability of detection

In Q11(a) 48 cases strongly disagreed with imposing tough penalties. Chi-square tests reveal that there was a statistically insignificant relationship between Q11(a) imposing tough penalties and Q7 compliance behaviour, ($X^2 = 21.759$, $df = 18$ $p = 0.243$). In Q11(b) 61 cases strongly agreed that the probability of detection is small. Chi-square tests reveal that there was a statistically insignificant relationship between Q11(b) probability of detection is small and Q7 compliance behaviour, ($X^2 = 19.375$, $df = 18$ $p = 0.369$). Overall statistical tests revealed that respondents did not perceive tough penalties or the probability of detection as having an impact upon compliance behaviour. Both issues were statistically insignificant. Consequently, the answer to RQ5 is no however H5 is accepted in part on the basis that taxpayers who perceive the probability of detection to be low were also less compliant.

Tax awareness

In Q2(a) 39 cases possessed information on their own tax rate. Chi-square tests reveal that there was a statistically insignificant relationship between Q2(a) knowledge of own tax rate and Q7 compliance behaviour, ($X^2 = 22.273$, $df = 18$ $p = 0.220$). In Q 2(b) 37 cases possessed a lot of information on the top marginal rate. Chi-square tests reveal that there was a statistically marginally significant relationship between Q2(b) knowledge of top marginal rate and Q7 compliance behaviour, ($X^2 = 28.037$, $df = 18$ $p = 0.061$). In Q 2(c) 77 cases possessed no knowledge on the likelihood of being audited. Chi-square tests reveal that there was a statistically insignificant relationship between Q2(c) knowledge of the likelihood of being audited and Q7 compliance behaviour, ($X^2 = 15.675$, $df = 18$ $p = 0.615$). In Q2(d) 89 cases had no knowledge or awareness of the penalties for tax evasion. Chi-square tests reveal that there was a statistically marginally significant relationship between Q2(d) knowledge of the penalties for tax evasion and Q7 compliance behaviour, ($X^2 = 23.730$, $df = 18$ $p = 0.164$).

In Q2(e) 146 cases had no knowledge of the number of people convicted for tax evasion. Chi-square tests reveal that there was a statistically insignificant relationship between Q2(e) knowledge of the number of people convicted for tax evasion and Q7 compliance behaviour, ($X^2 = 14.427$, $df = 18$ $p = 0.701$). In Q2(f) 141 cases had no knowledge of the number of people in Australia who try and evade tax. Chi-square tests reveal that there was a statistically marginally significant relationship between Q2(f) knowledge of the number of people in Australia who try and evade tax and Q7 compliance behaviour, ($X^2 = 26.322$, $df = 18$ $p = 0.093$). Overall statistical tests revealed that respondents did not possess a good knowledge or awareness of various tax issues. On this basis, the answer to RQ6 is yes and H6 is accepted in part, as taxpayers who do not have a good understanding or awareness of the penalties for non-compliance were less compliant.

Regression analysis

The parametric statistical techniques of factor analysis and logistic regressions were employed to explore the significance of relationships amongst variables in conjunction with the previous non-parametric technique of chi-square tests. This enhanced the rigor of the statistical analysis and provided further support in the validation of results.

Logistic regression

Given that the dependent variable being examined was a categorical variable (ie, compliance/non-compliance) logistic regression allowed models to be tested to predict categorical outcomes. In particular step wise procedures, (eg, forward and backward) allows a very large group of potential predictors to be specified. Employing the

Statistical Package for Social Sciences (SPSS), the subset that provided the best predictive power was chosen. Multinomial–logistic set of procedures were employed, as the dependent variable had two categories.

Specifically, in investigating the likelihood of respondents reporting they would be either tax compliant or non-compliant, the following variables were employed:

- One categorical (dichotomous) dependent variable (compliant/non-compliant – subject to penalty/no penalty)
- Two or more continuous and categorical predictor (independent) variables (eg, penalties, enforcement, morals, fairness, etc) (See Appendix- Formula 1)

Logistic analysis for binary outcomes attempt to model the odds of an event's occurrence (ie, compliant/non-compliant) and to estimate the effects of independent variables (ie, tax fairness, tax morals, tax enforcement and penalties) on these odds. The odds for an event are a quotient that conveniently compares the probability that an event occurs (referred to as a success – ie, complaint in this case) to the probability that it does not occur (referred to as a failure - ie, non-compliant in this case). Effectively by performing a multinomial logistic regression employing the evader data, the ATO could determine the strength of influence of penalties and enforcement, moral values and perception of tax fairness upon compliance behaviour. (See Appendix- Diagram 1 Multinomial logistic model and formulae).

Factor analysis

For each of the survey questions related to tax knowledge, penalties, detection/enforcement, fairness and morals, factor analysis was employed. In factor analysis the aim is to reduce the dimensions of the data. For example, the tax awareness question consisted of six sub-questions (a) to (f). The responses of these questions are correlated and by using factor analysis it was determined that most of the variants in the data were available in two dimensions only. That is, rather than use the response of the 6 questions (a) to (f) as an explanation of the variables in the regression it is useful to use the two dimensions as an explanation of the variables instead. This improves the interpretability of the logistic (multiple logistic) regression.

1. For each of the survey questions Q2, Q4, Q11, Q12, Q15, Q17, a factor analysis was employed. In particular, principal components with varimax rotation was used. The following results are displayed:

Table 3: Equation Chart – Results of the Factor Analysis

Survey Question	Compliance variable	Number of Factors	Factor Names in Output	Interpretation
Q2	Tax Knowledge	2	FAC1_3 FAC2_3	(a)+(b)+(c)+(d) (e)+(f)
Q4	Penalties	2	FAC1_5 FAC2_5	(a) vs (d) (b) +(c)
Q11/Q12	Probability of Detection/Enforcement	3	FAC1_1 FAC2_1 FAC3_1	11(a)+12(b)+12(c)+12(d) 12(a)+12(e) 11(b)
Q15	Fairness	2	FAC1_4 FAC2_4	(a)+(b) (d)+(f)
Q17	Morals	2	FAC1_2	(b)+(c)+(d)-(a)

- Estimated factor scores were saved (using regression method). Factor scores have a mean of (zero) 0 and standard deviation (one) 1.
- Multinomial logistic regression was employed to estimate the probability of different values for question 7 (tax compliance behaviour – see Table 2) given the factor scores. Stepwise regression was used with backwards elimination.

Variables in the equation chart

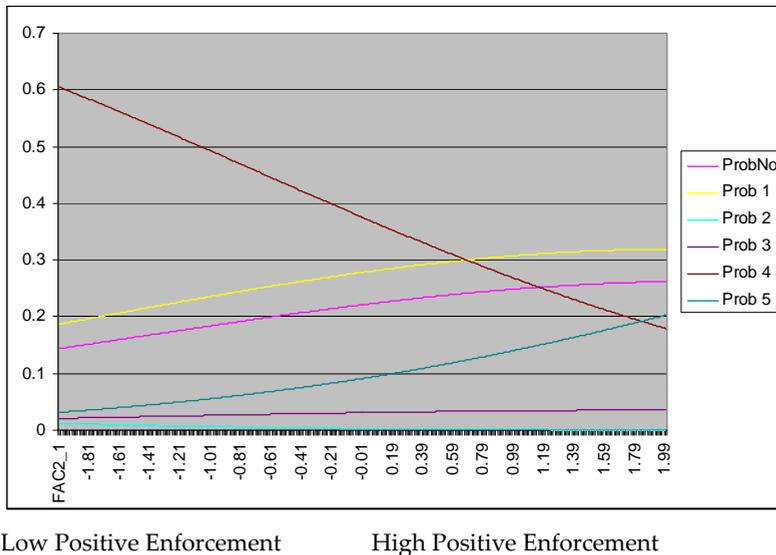
It was evident from the parameter estimates above, that only 5 factors were relevant in the analysis. (ie, FAC2_1 tax law enforcement, FAC3_1 probability of detection, FAC1_2 tax morals, FAC1_5 penalties and FAC2_5 penalties.)

There was a lack of evidence in the regression with respect to the impact of more severe penalties upon compliance while no results were generated with respect to tax fairness or tax awareness. Consequently, an analysis of the only significant factor in the regression (enforcement) along with two other less significant factors (tax morals and the probability of detection) follows.

Regression results

Factor 1: FAC2_1

Graph 1 Tax Law Enforcement - FAC2_1



Low Positive Enforcement

High Positive Enforcement

Coding: Question 7 -compliance:

If the survey response was 'Yes' then it fell into one of following five categories:

1. Survey Response (1) = overstating deductions, rebates and tax offsets
2. Survey Response (2) =understating income
3. Survey Response (3) = defrauding or deceiving the Commonwealth
4. Survey Response (4) = failing to withhold and remit tax
5. Survey Response (5) = other type of non-compliance

Otherwise survey response was 'No penalty'

With reference to Table 3 the Equation Chart above, FAC2_1 which involved positive tax law enforcement questions 12(a) (educating the public and improving taxpayer services) and 12(e), (providing incentives for paying the correct amount of tax), was tested for its impact upon compliance behaviour - question 7.

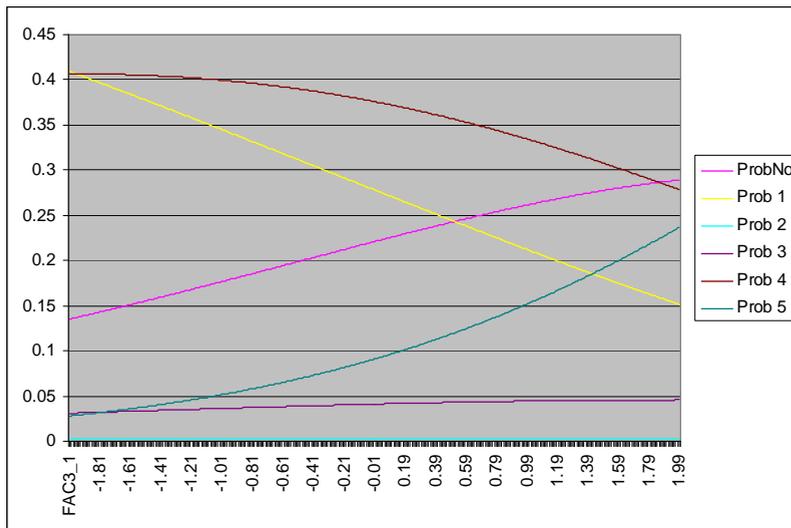
The significant results from Graph 1 indicate that the higher the evaders' view of the importance of positive enforcement, the less chance there was that they were penalized for failing to withhold and remit tax. (ie non-compliant – Probability 4 above). Alternatively, the higher the evaders' view of the importance of positive enforcement, the more chance there was that they were penalized for overstating deductions and offsets. (ie, non-compliant - Probability 1 above). Likewise a higher view of positive enforcement was also found in taxpayers who indicated that they were not subject to penalty (ie, Probability of 'No' above) However, an insignificant

result was discovered for the effect of positive enforcement upon evaders who were penalized for understating their income (ie, non-compliant – Probability 2 above).

In terms of the research question RQ4 regarding the effectiveness of ATO enforcement upon taxpayer compliance, it is concluded that positive enforcement only impacted upon the compliance attitudes and behaviour of taxpayers who had overstated deductions and offsets. There was little, if any, evidence of the effectiveness of positive enforcement amongst the other categories of non-compliant taxpayers. Consequently, positive tax law enforcement was limited in influencing taxpayers' compliance behaviour. On this basis it was concluded that the answer to RQ4 was 'Yes' and H4 was accepted given that the majority of taxpayers, who perceived enforcement to be ineffective, were non-compliant.

Factor 2: FAC3_1

Graph 2 Probability of Detection – FAC3_1



Low Probability of Detection High Probability of Detection

With reference to Table 3 above, FAC3_1 which involved the probability of detection Q11(b) (the likelihood of being caught for tax evasion is small) was tested for its impact upon compliance behaviour -question 7.

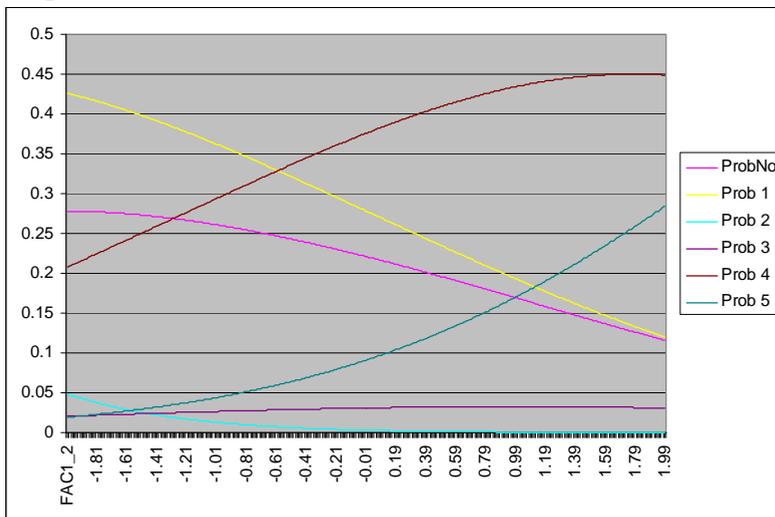
The significant results from Graph 2 indicate that the higher evaders' view of the probability of detection, the less chance there was that they were penalized for overstating deductions, rebates and tax offsets. (ie, non-compliant – Probability 1 above). Likewise, the higher the evaders' view of the probability of detection, the less chance there was that they were penalized for failing to withhold and remit tax (ie, non-compliant – Probability 4 above).

On the other hand, the higher the evaders' view of the probability of detection, the more chance there was that they were either not penalized at all (ie, probability of 'No' above) or penalized for another type of non-compliance (ie, Probability of 5 above). An insignificant result was discovered for the effect of the probability of detection upon evaders who were penalized for understating their income (ie, non-compliant – Probability 2 above).

Overall, in terms of the research question RQ5 regarding the probability of detection by the tax authority influencing taxpayer compliance, it is concluded that a high probability of detection impacted upon the compliance attitudes and behaviour of taxpayers who had either not been penalized or had been penalized for another unspecified type of non-compliance. Consequently a high probability of detection was considered to be a possible factor upon the compliance behaviour of a minority of taxpayers in this sample. Therefore, the answer to RQ5 was a qualified 'Yes' and H5 was accepted in part given that taxpayers, who perceived the probability of detection as low, were non-compliant taxpayers while those who perceived the probability to be high were also non-compliant.

Factor 3: FAC1_2

Graph 3 Tax Morals – FAC1_2



Low Tax Morals High Tax Morals

With reference to Table 3 above, FAC1_2 which involved questions concerning tax morals including Q17(b) acceptability of overstating tax deductions on one's tax return, Q17(c) working for cash in hand payments without paying tax is a trivial offence, Q17(d) do the majority of Australians try and evade tax (all in the negative direction), against Q17(a) should one honestly declare all income on ones tax return,

(in the positive direction) was tested for the impact upon compliance behaviour - question 7.

The significant results from Graph 3 indicate that the higher the evaders' view of high tax morals, the less chance there was that they were penalized for overstating deductions, rebates and tax offsets. (ie, non-compliant – Probability 1 above). Likewise, the higher the evaders' view of high tax morals, the less chance there was that they were not penalized. (ie, Probability of 'No' above).

On the other hand, the higher the evaders' view of low tax morals, the more chance there was that they were either penalized for failing to withhold and remit tax (ie, non-compliant - probability of 4 above) or penalized for another unspecified type of non-compliance (ie, non-compliant - Probability of 5 above). However, an insignificant result was discovered for the impact of tax morals upon evaders who were penalized for understating their income (ie, non-compliant –Probability 2 above) and defrauding or deceiving the Commonwealth (ie, non-compliant –Probability 3 above).

Overall in terms of the research question RQ3 regarding the influence of tax morals upon taxpayer compliance, it was concluded that high tax morals *did* have an impact upon the compliance attitudes and behaviour of taxpayers who had either been penalized for failing to withhold and remit tax or had been penalized for another unspecified type of non-compliance. Consequently, low or 'weak' tax morals, is considered to be a factor upon the behaviour of particular non-compliant taxpayers. Therefore, the answer to RQ3 was a qualified 'Yes' and H3 was accepted in part given that taxpayers, who perceived high and low tax morals, were both non-compliant.

To further support the findings from the quantitative analysis and assist in gauging the influence of the selected compliance variables upon the compliance behaviour of the evader group, a qualitative analysis was also conducted.

Qualitative component

Interview design

A semi-structured interview of approximately 30-40 minutes was conducted covering the same general themes as were investigated in the survey instrument. Consequently only 5-6 main themes (14 questions) were explored in the interviews with interviewees being encouraged to elaborate and expand on their responses. Further, general comments of the interviewees with respect to their survey responses for any of the open ended questions were also explored and subjected to further investigation during the interviews. The actual number of subjects recruited in this manner was less than anticipated (ie, 10% of 150 = 15 interviewees) with only six subjects accepting the invitation.

However, given that the interview is about the study of emerging patterns that facilitate analytical rather than statistical generalizations, the lower than anticipated number of repetitions was not considered problematic.⁷⁵ (The aim of the interviews was purely to add value and provide another source of information to assist in answering the research questions posed not to confirm or reject the study's hypotheses).

Interview themes

To assist the investigator in the examination of the qualitative data, Miles and Huberman's⁷⁶ general framework for qualitative data analysis was adapted. Miles and Huberman describe this data analysis as consisting of three concurrent 'flows of activity': data reduction, data display and conclusion drawing/verification.⁷⁷

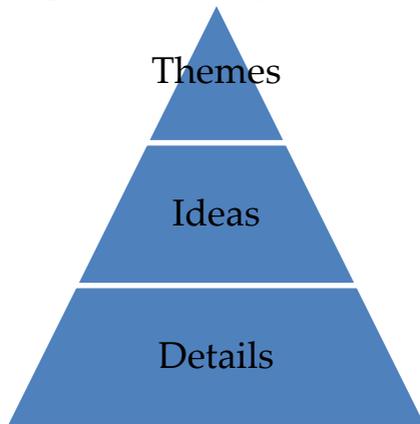
Individual case reports were constructed around the five main interview themes where the summary process entailed extracting relevant words, phrases and quotes under the various questions raised. In particular, data that was relevant to questions on tax awareness was combined, as was separate data on questions on tax fairness, tax morals, tax law enforcement, deterrence and penalties. In this manner the summarized data were sorted into five distinct categories with a sixth category for any additional information. Given the flexible nature of the interviews and the open ended questions posed, responses often overlapped and were sometimes considered more appropriate to another category and subsequently moved. For example, responses to Q2.2 (*What do you think of the government programs and services we receive in return for our tax dollar?*) elicited some information better suited to Q 4.2 (*What strategies do you think the government should employ to improve taxpayer compliance?*).

⁷⁵ M McKerchar, *The Impact of Complexity Upon Taxpayer Compliance: A Study of Australian Personal Taxpayers* (Research Study No 39, Australian Tax Research Foundation, 2003) 132.

⁷⁶ M Miles and A M Huberman, *Qualitative Data Analysis: An expanded source book* (2nd ed, 1994) 9.

⁷⁷ *Ibid* 12.

Diagram Source: Adapted From R Cantwell.⁷⁸



Consequently, in developing the various levels of argument based on the qualitative data, a pyramid approach was employed where the five main identified themes were at the top, with the main ideas flowing from those themes in the middle and the details or evidence provided at the bottom (See Pyramid diagram above). This provided the framework for the analysis.

For case study or interview analysis, one of the most desirable techniques is using pattern matching logic. Such logic, as illustrated by Trochim,⁷⁹ compares an empirically based pattern with a predicted pattern/theory (or with several alternative predictions/theories). If the patterns coincide, the results can help to strengthen internal validity.⁸⁰ Based on this premise the main themes which have emerged from the interview data were pattern matched to various compliance theories discovered through the literature review.

Interview findings

The answers which have emerged with regards to the respective research questions posed overall produced varying and mixed results. Specifically for (RQ1) regarding the perception of penalties, there was evidence of improved future compliance amongst these taxpayers who had been personally subjected to a severe penalty. These taxpayers also indicated that the severity of penalty would be effective in influencing the compliance behaviour of the majority of taxpayers who operated

⁷⁸ R Cantwell, 'Thinking and Writing For Your Thesis' in C Denholm and T Evans (eds) *Doctorates Downunder* (2006).

⁷⁹ W Trochim, 'Outcome Pattern Matching and Program Theory' (1989) 12(4) *Evaluation and Program Planning* 355.

⁸⁰ R K Yin, *Case Study Research: Design and Methods* (3rd ed, 2003) 16.

within the law.⁸¹ However, the taxpayers also indicated that the severity of penalty should be made more public and transparent.⁸² Therefore, the answer to RQ1 was a qualified 'Yes'.

The responses for (RQ2) concerning the perception of fairness clearly indicated that taxpayers felt the tax system was generally unfair and this impacted upon their compliance behaviour. There were many different facets of fairness which were compromised as a result of the tax system that apparently in some cases, justified these taxpayers' evasive actions. Directly related to fairness was the issue of complexity of the tax system. There was evidence that taxpayers found it difficult to understand and comply with their obligations under the tax law and that this unfairly contributed to their own non-compliance.⁸³ Overall the issue of fairness was a significant factor which produced a strong correlation with compliance behaviour amongst this group of taxpayers.⁸⁴ Accordingly, the answer to RQ2 was 'Yes'.

The responses for (RQ3) concerning tax morals produced mixed results with half of the taxpayers interviewed indicating that their moral beliefs played a part in their compliance decisions. It was difficult to gauge the authenticity of the tax morals of taxpayers who had already been audited and penalized for non-compliance, but it was, nevertheless, evident from their comments that the self assessment system, competitive pressures and a vibrant cash economy were significant factors that impacted upon their tax morals and consequential compliance.⁸⁵ Accordingly, the answer to RQ3 was a qualified 'Yes'.

The findings for (RQ4) with regards to the taxpayers' perceptions of ineffective revenue enforcement were mixed. Half of the taxpayers interviewed indicated that the ATO's enforcement powers were ineffective. This attitude may justify why some of these taxpayers had continued with their non-compliance in the past, but for other taxpayers enforcement powers did impact upon their compliance actions to some degree. There was one case in particular where the taxpayer noted that as the ATO's systems are so sophisticated now and the cross matching of information was much easier, it would change her future compliance behaviour.⁸⁶ However, it is likely that initially, for these taxpayers who were found to be non-compliant, their perception of

⁸¹ See Jackson and Jones, above n 14 and Schwartz, and Orleans, above n 17.

⁸² Results indicate there was specific rather than general deterrence implications.

⁸³ See McKerchar, above n 75, 132.

⁸⁴ See a study by N Brooks and A N Doobs, 'Tax Evasion: Searching for a theory of Compliant Behaviour' in M L Frieland (ed) *Securing Compliance: Seven Case Studies* (1990).

⁸⁵ See B Torgler and K Murphy, 'Tax Morale in Australia: What shapes it and has it changed over time?' (2004) 7(2) *Journal of Australian Taxation* 298.

⁸⁶ See J Andreoni, B Erard and J Feinstein, 'Tax Compliance' (1998) 36(3) *Journal of Economic Literature* 818.

the ATO's enforcement powers was that it was generally ineffective. Consequently the answer to RQ4 was a qualified 'Yes'.

The findings for (RQ5) regarding the probability of detection were also mixed based, on the information provided from the taxpayers interviewed. Some taxpayers indicated that audit rates and coverage were poor and that there was generally little chance of being caught for non-compliance, citing the cash economy as an example.⁸⁷ This perception may have impacted upon the taxpayers' own voluntary non-compliant behaviour. For the few taxpayers who did consider the probability of detection to be high, their compliance behaviour was no better as a result. Therefore the answer to RQ5 was 'No'.

Finally, the findings for (RQ6) with regards to taxpayers' awareness of tax penalties, indicate that despite the absence of penalty specific knowledge, amongst most of the interviewed taxpayers, there was evidence of general tax knowledge regarding tax evasion/avoidance distinction and evasion opportunities. As the taxpayers' level of understanding was better in these areas it may have encouraged them to actively seek out tax minimization schemes and courses of action which 'pushed the boundaries.'⁸⁸ There were a couple of examples of taxpayers who had clearly demonstrated their knowledge of penalties and evasion opportunities. Despite this interesting finding, overall, it was concluded that the answer to RQ6 was a qualified 'No'.

Review of the quantitative and qualitative components of the research

From the combined findings matrix (Table 4 below) the areas of convergence and divergence with respect to the research questions and hypotheses posed under both the quantitative and qualitative components of the study can be identified.

Table 4: Combined Findings Matrix

Research Question/ Hypotheses	Quantitative Component		Qualitative Component
	Chi-square tests results	Regression results	Interview Findings
RQ1 Penalties	×	×	√ (qualified yes)
H1 Penalties	×	×	N/A
RQ2 *Fairness	√	—	√

⁸⁷ See evidence of this in Johnson, 'The 1998 Act and the Resources Link between Tax Compliance and Tax Simplification' (2003) 51 *Kansas Law Review* 1013.

⁸⁸ See K Eriksen and L Fallen, 'Tax Knowledge and Attitudes Towards Taxation: A Report on a Quasi experiment' (1996) 17(3) *Journal of Economic Psychology* 387.

H2 Fairness	√	—	N/A
RQ3 Morals*	√	√ (qualified yes)	√ (qualified yes)
H3 Morals	√	√ (accepted in part)	N/A
RQ4* Enforcement	× (qualified no)	√	√ (qualified yes)
H4 Enforcement	×	√	N/A
RQ5 *Probability of Detection	×	√ (qualified yes)	×
H5 Probability of Detection	√ (accepted in part)	√ (accepted in part)	N/A
RQ6 Tax Awareness	√	—	× (qualified no)
H6 Tax Awareness	√ (accepted in part)	—	N/A

* N/A Not Applicable

It is evident that the perception of fairness of the tax system was clearly influential upon the compliance attitudes and behaviours of non-compliant taxpayers. Despite the absence of regression results, this was supported by the chi-square test results and comments both in the survey and at interview. Some taxpayers even admitted that it was the issue of tax fairness that had led them to indulge in their non-compliant actions. As indicated previously, there were many different facets of fairness which appear to have been compromised because of the tax system. Consequently, the answer to RQ2 was 'Yes' and H2 was accepted.

The issue of tax morals indicated converging and complementary results with respect to chi-square tests and survey comments. The regression results and interview findings were also positive despite some qualifications. However, given that the cohort of taxpayers investigated were those who were found to be non-compliant, these qualifications were not unexpected. Significant factors such as self assessment, competitive pressures and a vibrant cash economy clearly impacted upon taxpayers' morals and their consequential compliance behaviour. Therefore, the answer to RQ3 was 'Yes' and H3 was accepted.

An examination of the matrix also reveals that tax law enforcement was to a large degree, an important factor upon the taxpayers' compliance behaviour. Other than

receiving some qualifications under both the chi-square tests and at interview, this variable was found to be influential. In this respect there was also a clear distinction made by taxpayers between negative and positive enforcement, with the latter being preferable. The reason for this also became obvious from the interview comments where all taxpayers indicated that the harsh treatment experienced during the audit was undesirable. Indirectly, the issue of procedural justice was also raised with taxpayers claiming in a couple of cases that they were treated unfairly during the audit and that there was a lack of communication and information provided by the ATO. Overall, the answer to RQ4 was 'Yes' and H4 was accepted.

Other than some qualified support at interview, the results indicated that penalties per se were generally viewed as being ineffective in influencing compliance behaviour. There was no authoritative support that an introduction or increase in penalties would lead to improved compliance on its own. The results rather suggested that penalties ought to be used in combination with other programs, such as taxpayer education and services, in order to improve compliance. Consequently, the answer to RQ1 was 'No' and H1 was rejected.

While the results indicated convergence (in part) for the probability of detection H5, divergence was discovered in RQ5. Other than qualified support from the regression results, taxpayers were of the belief that audit rates and coverage was poor citing the cash economy as a visual example. It was clear that taxpayers who perceived the probability of detection as low were in fact non-compliant therefore, the answer to RQ5 was 'No' while H5 was accepted in part.

Finally, a divergence in results was discovered for tax awareness and its impact upon compliance. There were no results under the regression analysis and survey comments were inconclusive with regards to this variable. Whereas chi-square test results indicated that poor tax awareness resulted in negative compliance behaviour, this was not supported by comments at interview. In fact it was clear from the interviews that taxpayers did possess some general tax awareness with respect to tax avoidance/evasion distinction and evasion opportunities. A possible explanation for the divergence in results could also be that the statistical tests were not able to pick up the subtle difference in tax awareness. Related to taxpayers' tax awareness was the issue of the overreliance on tax agents whose own tax ethics/knowledge may have adversely impacted upon the taxpayers' compliance decisions. Overall, the answer to RQ6 was inconclusive while H6 was neither accepted nor rejected.

SUMMARY AND CONCLUSIONS

Summary of findings

The main objective of the study was to examine if a relationship exists between a number of selected tax compliance variables and the attitudes and behaviour of non-compliant Australian personal taxpayers. In particular, this study focused on the relationship between taxpayers' awareness of tax penalties and the effect of penalties upon their tax compliance decisions. As indicated previously, the thrust of the study in terms of statistical analysis and evidence from interviews centred around how taxpayers felt penalties impacted as a deterrent measure, the probability of detection, taxpayers' attitudes towards law enforcement, tax fairness, tax morals and taxpayers general tax awareness, if any.

Based on the findings of the two components of the research the following conclusions can be drawn with respect to the research questions posed. The one clear result from the research is that perceptions of tax fairness did impact upon the behaviour of non-compliant taxpayers, confirming a positive response to RQ2 and accepting H2. This finding is consistent with the findings of other studies⁸⁹ regarding the impact of fairness perceptions upon compliance behaviour. It should be noted that an indirect result stemming from the issue of fairness was that of tax complexity. Although the investigation of complexity per se was outside the scope of this study, it obviously had implications for non-compliant behaviour as evidenced in prior studies.⁹⁰

The tax morals of non-compliant taxpayers were also influential upon their behaviour according to the both survey and interview results, despite some qualifications. This is not surprising given the cohort of taxpayers examined, but taken on face value these findings are supported by the literature.⁹¹ It was highly unlikely that any of the evaders surveyed and interviewed fell into the category of hard core evaders, where certain deterrent and other measures would be ineffective in influencing their future compliance behaviour. Rather, these taxpayers fell into the category of intrinsic

⁸⁹ See Wallshultzy, above n 11; J Alm, B Jackson and M McKee, 'Institutional Uncertainty and Taxpayer Compliance' (1992) 82 *The American Economic Review* 1018 and A Wearing and B Headley, 'The Would-be Tax Evader: A Profile' (1997) 13(1) *Australian Tax Forum* 3 and Tan, above, n 35.

See also a review of Australian Tax Policy by the Asprey Committee which regarded fairness as the most universally sought after quality in a tax system.

⁹⁰ Mc Kerchar, above n 75, 108.

⁹¹ See K W Smith, 'Integrating three Perspectives on Non-Compliance A Sequential Decision Model' (1990) 17(3) *Criminal Justice and Behaviour* 350; H Elffers, H S J Robben and D J Hessing, 'On Measuring Tax Evasion' (1992) 13(4) *Journal of Economic Psychology* 545; Torgler and Murphy, above n 85 and Kornhauser, above n 34.

taxpayers⁹² who can be influenced by institutional factors. Consequently as the taxpayers' morals were found to influence their non-compliant behaviour, overall on balance, the answer to RQ3 was 'Yes' and H3 was accepted.

With regards to enforcement, overall the results indicated that it was also influential upon the behaviour of non-compliant taxpayers. In particular, ineffective enforcement by the ATO to tackle the cash economy and offshore evasion was found to be a factor upon voluntary compliance. Other studies have reported similar findings.⁹³ Consequently, the answer to RQ4 was 'Yes' and H4 was accepted. However, another indirect result stemming from the issue of enforcement was that of procedural justice. The ATO's treatment of taxpayers has been investigated in previous studies⁹⁴ and although not directly examined here, it should not be discounted as an important variable of non-compliant behaviour.

Following on from the issue of enforcement is the issue of the probability of detection. Results were mixed overall, however, it appeared that taxpayers felt there to be a low probability of detection. This will be of concern to the ATO who perceive the audit function as a vital component of the self-assessment system. Indeed prior studies⁹⁵ have also supported this notion. Consequently the answer to RQ5 was 'No' while H5 was accepted in part.

With the focus of this study upon the penalties for non-compliance, it was evident from the findings that penalties per se were generally viewed as being ineffective in influencing compliance behaviour. It should also be noted that although a specific deterrent may have been achieved for these non-compliant taxpayers, the general deterrent effect of penalties was inconclusive.⁹⁶ The results suggest that penalties should be used in combination with other measures such as taxpayer education and services (as a preferred option) in order to achieve greater compliance. A study by Zimring⁹⁷ supports the notion that informal sanctions, by way of social stigma, are a more effective deterrent. Consequently, the answer to RQ1 was 'No' and H1 was rejected.

⁹² See Torgler and Murphy, above n 85.

⁹³ See R Mason and L Calvin, 'Public Confidence and Admitted Tax Evasion' (1984) 37(4) *National Tax Journal* 489 and Johnson 'The 1998 Act and the Resources Link between Tax Compliance and Tax Simplification' (2003) 51 *Kansas Law Review* 1013.

⁹⁴ See Feld and Fry, 'Deterrence and Tax Moral: How do Taxpayers and Tax Administrators Interact?' (Paper presented at the Centre for Tax System Integrity (CITSI), Australian National University, 2001).

⁹⁵ See Tittle and Login, above n 20.

⁹⁶ See Mason and Calvin, above n 93.

⁹⁷ F E Zimring, *Perspectives on Deterrence* (1971) and F E and G J Hawkins *Deterrence: the Legal Threat in Crime Control* (1973).

Finally with respect to tax awareness it was evident that taxpayers possessed some basic tax awareness although it was inconclusive as to whether it impacted upon their compliance behaviour. What was clear in interviews was that this cohort of taxpayers was aware of the tax evasion/tax avoidance distinction and was willing to push the boundaries of the law as has been discovered in prior studies.⁹⁸ A complementary issue to tax awareness which was raised in the research was the reliance on tax agents by taxpayers. Due to taxpayers' lack of knowledge and awareness, tax agents were found to have influenced the compliance decisions of taxpayers.⁹⁹ Nevertheless, the answer to RQ6 was inconclusive, while H6 was neither accepted nor rejected.

Tax policy implications

Of the six research questions and hypotheses posed in the study, statistically significant relationships were discovered between RQ2/H2 tax fairness, RQ3/H3 tax morals RQ4/H4 law enforcement, and the attitudes and behaviours of non-compliant taxpayers. These findings were generally also supported by interview evidence. Statistically, insignificant results were discovered with respect to RQ1/H1 penalties and RQ5/H5 probability of detection while the results for RQ6/H6 tax awareness were inconclusive.

The key finding from the study is that the ATO and the Australian government need to maintain the fairness of the tax system in order to positively influence the behaviour of individual personal taxpayers. This is heavily supported by the literature.¹⁰⁰ Specifically, the ATO needs to address the issues of both vertical and horizontal inequity and the problems associated with taxpayers legally avoiding payment of their fair share of tax. This perception amongst the taxpaying community has the potential to seriously damage the collection of revenue, as evidenced by the actions of these non-compliant taxpayers.

Support for this contention was found in a study by Alm, Jackson and Mc Kee,¹⁰¹ which indicated that the level of compliance was influenced by the provision of public goods and the perception of whether others were contributing towards those goods. This is also consistent with the significant findings of a study by Wearing and

⁹⁸ See Eriksen and Fallen, above n 88.

⁹⁹ See Wallschutzky, above n 11, whose study uncovered similar findings.

¹⁰⁰ See A Hite and M L Roberts, 'An Analysis of Tax Reform based on Taxpayers' Perceptions of Fairness and Self-Interest' (1992) 4 *Advances in Taxation* 115; C W Chan, C S Troutman, and D O'Bryan, 'An Expanded Model of Taxpayer Compliance: Empirical Evidence From The United States and Hong Kong' (2000) 9(2) *Journal of International Accounting, Auditing and Taxation* 83 and L M Tan, 'Taxpayers Perceptions of the Fairness of the Tax System – A Preliminary Study' (1998) 4 *New Zealand Journal of Taxation Law and Policy* 59, 60.

¹⁰¹ Alm, Jackson and McKee, above n 89.

Headley,¹⁰² where it was found that the perceived injustice of the tax system and unfairness of exchange with government led to a higher propensity to evade. The other policy implication arising from fairness is that taxpayers should generally be able to afford good tax advice. It is suggested that measures should be implemented for those with more complex affairs to also access tax agents/accountants at a reasonable cost so as to achieve equity in access amongst members of the community and ultimately improve compliance.

Where the morals of taxpayers were challenged, compliance behaviour also appeared to be impacted. Greed, selfishness and the rationality to evade is part of human behaviour and hard to eradicate.¹⁰³ Nevertheless, this study revealed that the issue of self assessment gave taxpayers the right to take liberties with respect to 'pushing the boundaries' and exploiting the loopholes in the law which otherwise would not be the case. Consequently, this finding challenges the self assessment system as it currently stands and suggests that at least the effectiveness of audits needs to be addressed, in the absence of returning to full assessment. Many studies have indicated that it is tax audits that drive the compliance behaviour of taxpayers.¹⁰⁴ Improving deterrence measures by increasing the probability of apprehension rather than imposing sanctions was also found to be significant in a study conducted by Tittle and Login.¹⁰⁵ Certainly the assertions of taxpayers who have already evaded provided further validity of the relationship between taxpayer morals and compliance behaviour.

Following on from the issue of audits is that of ATO enforcement generally. While taxpayers view audit rates and collection rates as low the general deterrent impact is minimal. Reviewing direct strategies such as, for example, cash economy benchmarks, raising default assessments and conducting more BAS refund checks will arguably assist. However, this should perhaps be balanced with more taxpayer education, media advertising and visibility within the community. Other studies have found the latter course of action by revenue authorities to be very effective.¹⁰⁶

¹⁰² A Wearing and B Headley, 'The Would-be Tax Evader: A Profile' (1997) 13(1) *Australian Tax Forum* 3.

¹⁰³ For the effect of social norms upon compliance behaviour see Torgler and Murphy, above n 85.

¹⁰⁴ J Wickerson, 'The Changing Roles of Taxpayer audit Programs: Some Recent Developments in the Australian Taxation Office' (1994) 4(2) *Revenue Law Journal* 125; see also B R Jackson and P R Jaouen, 'Influencing Taxpayer Compliance Through Sanction Treat or Appeals to Conscience' (1989) 2 *Advances in Taxation* 131.

¹⁰⁵ Tittle and Login, above n 20; see also Picur and Riahi-Belkaoui, above n 55, where it was shown that by decreasing corruption and bureaucracy tax morale will increase and consequently compliance.

¹⁰⁶ See Hite, above n 27.

The results indicated that the deterrent impact of penalties as a form of enforcement on its own was found wanting. If these non-compliant taxpayers are classified as intrinsic taxpayers who are sensitive to institutional factors such as penalties, this was certainly not evident other than for a few of those interviewed. For most taxpayers in the study, penalties were not something they contemplated or considered in their compliance decision, but rather the focus was on how to reduce the actual payment of tax.

While penalties per se were viewed as having a minimal impact upon the compliance behaviour of taxpayers there was also a clear message that the penalties should be supported by other preventative measures such as educational programs.¹⁰⁷ Therefore it is suggested that the actual levels of penalty may be made more transparent in public literature and in the tax return itself. This would assist in providing a general deterrent for potential tax offenders. Also while taxpayers' awareness of the different types of penalties was poor, it was evident that there was a strong preference for community service, weekend detention, and the naming and shaming of offenders as having a greater impact upon compliance attitudes, as opposed to penalties. In this regard it may well be worthwhile reconsidering the listing of tax evaders by name and offence, in the Commissioners Annual Report. Achieving deterrence through education and voluntary means as evidenced in other studies¹⁰⁸ emphasizes the notion of developing a compliance strategy based on prevention rather than cure.

Limitations of the study

The first limitation of the study was that the sample of taxpayers surveyed was not representative of the Australian population which makes it difficult to extrapolate the results to the wider Australian population. For example, certain occupational groups, those of a lower educational standard and annual income and the age spread, given that Australia is an aging population was not evident. Nevertheless, the ATO had confirmed that the sample was representative of the broader adjusted population (ie, evader/non-complier) in the years chosen, 2004-06. Second, as only six interviews were conducted which was less than 10% of the number surveyed, it somewhat limited this component of the study and made it difficult to draw any solid conclusions from there. However, the fact that a very reasonable response rate of 27.4% was achieved from the surveys maintained the validity of the results with the interview findings used mainly for comparison and cross validation. Third, problems of honesty and misinterpretation in tax surveys are always present and hard to

¹⁰⁷ Ibid.

¹⁰⁸ See James and Alley, above n 13 and R. Noble, 'Tax Evasion amongst Small and Medium Businesses' (2002) 6 *Tax National* 22.

erase.¹⁰⁹ Finally, as the study only focused on selected tax compliance variables, other compliance and demographic variables were not employed, thereby limiting overall results.

Future research

Nevertheless, it is proposed that this survey data will be subjected to further analysis in subsequent research which will incorporate mediating factors such as demographic variables as well addressing other descriptive and definitional issues. In particular, it is suggested that the behaviours and attitudes of taxpayers from the general population (ie, non-evaders) will also be analysed employing a mixed method research approach. A comparison of those results could then be made with what has already been discovered in the results of the evader group, with further statistical testing undertaken to assist in identifying any trends or patterns between the two groups. As the data is further analysed, hopefully the reasons for taxpayers' responses and attitudinal changes can be more closely explored. This should, in turn, result in improving the revenue authority's tax compliance strategies and targeting of non-complying taxpayers in order to bridge the tax gap.¹¹⁰

APPENDIX

Formula 1

$$\text{Log}(P/1-p) = a + b x_1 + c x_2 + dx_3$$

$$P = \frac{\exp(a + b x_1 + c x_2 + dx_3)}{1 + \exp(a + b x_1 + c x_2 + dx_3)}$$

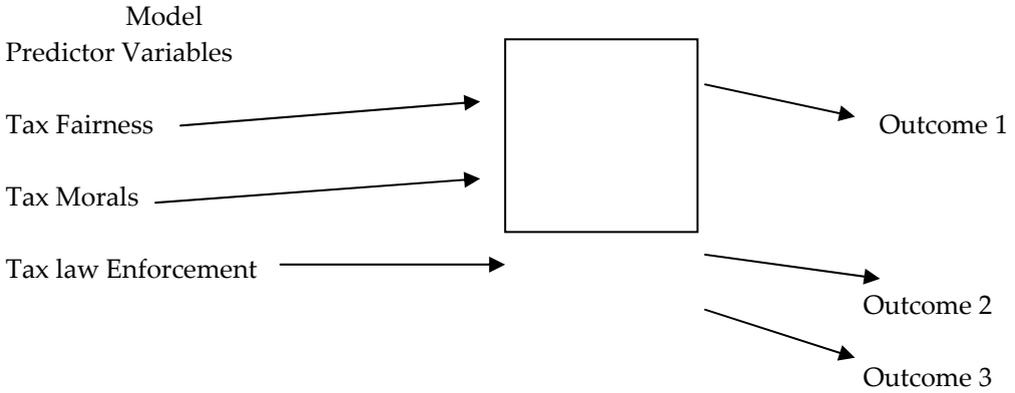
$$\text{Probability of No} = 1 - P = 1 / (1 + \exp(a + b x_1 + c x_2 + dx_3))$$

A Multinomial logistic model is a fit for the full factorial model or a user specified model. Parameter estimation is performed through an interactive maximum-likelihood algorithm. The model in terms of this study is depicted in the diagram and formulae below.

¹⁰⁹ Actual taxpayer behaviour is measured by hypothetical compliance behaviour. However prior research (by Hite 1988, Roberts 1994, Hanno and Violette 1996) indicates that hypothetical tax compliance behaviour are reliable measures for actual compliance behaviour. Information provided by subjects on actual compliance behaviour tends to be sensitive, incriminating and likely to be misinterpreted (Hessing et al, 1988).

¹¹⁰ (ie, the difference between tax properly payable according to the law and the tax actually collected).

Diagram



$$p_1 = \frac{1}{1 + \exp(a_2 + b_2x_1 + c_2x_2 + d_2x_3) + \exp(a_3 + b_3x_1 + c_3x_2 + d_3x_3)}$$

$$p_2 = \frac{\exp(a_2 + b_2x_1 + c_2x_2 + d_2x_3)}{1 + \exp(a_2 + b_2x_1 + c_2x_2 + d_2x_3) + \exp(a_3 + b_3x_1 + c_3x_2 + d_3x_3)}$$

$$p_3 = \frac{\exp(a_3 + b_3x_1 + c_3x_2 + d_3x_3)}{1 + \exp(a_2 + b_2x_1 + c_2x_2 + d_2x_3) + \exp(a_3 + b_3x_1 + c_3x_2 + d_3x_3)}$$