eJournal of Tax Research

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EDITOR'S NOTE

The *eJournal of Tax Research* is a refereed journal that publishes original, scholarly works on all aspects of taxation. It aims to promote timely dissemination of research and public discussion of tax-related issues, from both theoretical and practical perspectives. It provides a channel for academics, researchers, practitioners, administrators, judges and policy makers to enhance their understanding and knowledge of taxation. The journal emphasises the interdisciplinary nature of taxation. To ensure the topicality of the journal, submissions will be refereed quickly.

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Editorial Announcement

Binh Tran-Nam
Michael Walpole

We note with profound sadness the untimely passing of Justice Graham Hill (1938–2005) on 24 August 2005. An outstanding student (First Class Honours and University Medal from University of Sydney), barrister, academic, and Judge of the Federal Court of Australia, Justice Graham Hill was widely regarded as one of the foremost tax scholars in Australasia. He was a member of the *eJournal of Tax Research's* Editorial Board and officially launched the *eJournal* on 10 September 2003.

Obituary

The Honourable Justice D Graham Hill, 1938 - 2005

Patrick Gallagher[1]

"With the untimely passing of Justice Graham Hill … on Wednesday 24th August, the Australian judiciary lost one of its outstanding legal minds. We in the Federal Court lost a superb judge and fine colleague whose contribution to the work of the Court judicially and extra-judicially was quite exceptional." Words of The Honourable Michael Black AC Chief Justice of the Federal Court of Australia at Graham's memorial service.

Typically, the evening of his death saw Graham Hill taking classes at Sydney University. The longest serving teacher of law at Sydney University, Graham had taught every term for 40 years. In that time, he had created an unannounced reputation as one of Australia's leading tax academics – albeit his academic work was always 'part-time' – in name at least. The quality of his teaching was exceptional and his writings and legal research (which have been fully catalogued recently by Colin Fong), in the form of papers, judgments and public addresses – not to mention the Stamp Duty service he wrote with Bill Cannon and Michael Aitken – were at the cutting edge of practical tax analysis.

Part-time? It is doubtful that Graham ever did anything without becoming involved body and soul – and he did so much! For example, he also had formal links with law schools at Flinders University, Wollongong University, the University of Western Sydney – and was involved in the very creation of Atax at UNSW as well as many subsequent successes achieved by Atax. Not only was Graham patron of the Australasian Tax Teachers' Association, year after year he attended its annual conferences to the great benefit of all tax teachers across NZ and Australia. Formal recognition for all of his contributions to law, well deserved, took place when The University of Sydney awarded him the degree of (honorary) Doctorate of Laws.

Graham's analytical skills, which equipped him as a fine educator, also equipped him to be amongst the very finest of judges. His judicial activity was not alone limited to taxation – but that is where his mark is truly profound. Dick Edmonds, like Graham a prominent tax QC, now like Graham a Federal Court Judge, wrote words for the Taxation Institute (an organisation whose members benefited from Graham's

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[1] Patrick Gallagher is an Associate Professor at the University of Western Sydney and a former Deputy Director of Atax.

unbelievable level of support over decades) that hit the mark: "I doubt that we will see the likes of Graham Hill in the revenue law area again, however, if I am wrong, then it will be a long time before we do. He was, as Professor Richard Vann said, and the press reported, a Titan in the field. We shall all miss him greatly."

Richard Vann's 'titanic' description is a further pointer to the fact that for Graham, law and education could not exist apart – through entire careers. He was involved in the education of judges in his own Federal Court; he was involved in educating judges in Thailand, judges in China – in judge education forums in the USA. He was aware of cultural, intellectual and philosophical issues involving the law and its application at all levels. Professor Faith Trent of Flinders University, a long time friend and colleague, understood so well that Graham "… enjoyed playing with ideas, challenging orthodoxies and striving to ensure legislative fairness."

Her observation is demonstrated again and again in Graham's judgments and writings. It is demonstrated in a paper perhaps pivotal to tax understandings – "Barwick CJ: 'The taxpayer's friend'?" (1997) 1 *Tax Specialist* 9-13. In that paper, Graham explores the underlying character of tax judgments in the Barwick High Court. As always, Graham's approach is both convincing and reasonable – arguably a 'must read'.

Graham's writing always was clear and obvious. One illustration will suffice – in the particularly difficult area of the law relating to the taxation of one off activities and whether relevant gains are on income account. In the *Westfield Case* (91 ATC 4234 at 4243) he observed, perhaps controversially at that time, certainly from the ATO's point of view, (see TR 92/3 where his judgment is not received with appreciation) that:

> While a profit-making scheme may lack specificity of detail, the mode of achieving that profit must be one contemplated by the taxpayer as at least one of the alternatives by which the profit could be realised. Such was the case in *Steinberg*. But, even if that goes too far, it is difficult to conceive of a case where a taxpayer would be said to have made a profit from the carrying on, or carrying out, of a profit-making scheme, where, in the case of a scheme involving the acquisition and resale of land, there was, at the time of acquisition, no purpose of resale of land, but only the possibility (present, one may observe, in the case of every acquisition of land) that the land may be resold.

There have been some, arguably notorious, cases where Graham's decisions have not survived appeal. The quiet acceptance of his approach in *Westfield* is demonstrative of the fact that Graham's strength of argument usually allowed no option other than simple acceptance.

When GST came along open minds and careful logical analysis were essential in dealing with the extraordinary complexity involving apparently simple questions. Graham set about ensuring the development of an informed profession regarding the complexities of GST. He attended and spoke at many conferences all the while educating more fully the ATO, practitioners and us academics. He was instrumental, with Peter McMahon of Blake Dawson Waldron and me, in conceiving the Sydney GST Discussion Group. Graham even organised its monthly lunchtime venue from 2000 until his death. One of Europe's leading VAT lawyers, Roderick Cordara QC, of Essex Court Chambers London and more recently also Wentworth Chambers Sydney,

after Graham's death said to me that Graham would be sadly missed and that we had lost one of the very best tax judges anywhere – echoing Dick Edmonds, Roderick queried whether any person could even partly fill the void.

Graham spoke at a huge number of tax conferences over many years – for an array of organisations. He was generous with his time and his knowledge and concerned to ensure clear understandings and mutual gratification in learning and in work. He enjoyed meeting delegates from all areas of all professions and he had no time for grandeur or graces – but all the time in the world for people and their opinions. When at Atax UNSW, I was honoured time and again to have Graham accept invitations to attend events I was organising. His generosity was simply without equal – with all people. Little known is that, about the time he became a judge, he contributed entire weekends of his time, with a range of key tax experts assisting Yuri Grbich and me in planning the very foundations of the Atax program at UNSW (we might not have thought it until now but, a Sydney University heart, in part at least, beats within Atax).

Recently, prominent Sydney tax practitioner Carlo Moretti discussed with me Graham's enthusiasm for Italy. I was interested that, rather than concentrating on Italian anecdotes, Carlo moved straight to Graham's generosity and interest in education and in sound legal understandings. Carlo was quite moved that only a short time before his death, Graham accepted an invitation to dine with junior staff from Carlo's firm. At that event, after discussing tax in some depth, Carlo was once more impressed at Graham as he took the time to meet the junior staff as individuals and ensure that each one felt important and comfortable at that function.

Michael D'Ascenzo – to be the new Tax Commissioner recently wrote a valedictory note with Frank O'Loughlin on behalf of the Law Council of Australia. This can be seen on the Law Council website. In addition to that note Michael commented to me, reflecting the views of many people with whom I have spoken, that: "I personally enjoyed Graham's company as a fellow presenter at many conferences, seminars and workshops. He was always a good contributor who had a real interest in lifting the level of sophistication and understanding in our knowledge of the tax law. I always found it a mark of distinction that Graham would share his insights with us…"

Faith Trent, a long time friend of Graham, and another person glowing in her comments on Graham, has provided some biographical details. In the next two paragraphs, modified slightly, are some of the details provided by Faith – details which help us to understand more about this remarkable man.

Graham was born in Sydney on Melbourne Cup Day, 1938. An only child his father was an engineer and his mother headmistress. From Summer Hill Opportunity School he entered Fort Street Boys' High School. By the age of 20, while studying psychology as part of his BA/LLB, he had become an orphan. While undertaking the LLB at Sydney University, he came under the influence of, and subsequently worked with Professor Ross Parsons – indeed Graham is thanked for his contributions in Ross' seminal 1985 publication. Graham was awarded the University Medal and gained First Class Honours in Law – quite an achievement given that his fellow graduates included both their Honours Murray Gleeson and Michael Kirby of the High Court. During his student days, his house in Croydon became a place of parties, music (Graham was a great piano player – as well as fluent in German) and passionate discussions about religion, politics, sex and all the things of importance to young people in the changing world that then confronted them.

Graham was awarded a Fulbright Scholarship and a Ford International Fellowship. Travelling to the US by ship, Graham disembarked at Panama and wandered the Americas to Harvard. A wandering way that from then became part of his life. It was an important experience as Graham learned more about people and life and the circumstances in which people live and survive – surely key knowledge for a good judge!

Graham's most recent Federal Court Assistant and also Associate in many cases, Jennifer Farrell provided some lovely insights, amongst them were her description of many treasured memories, including the "… stimulation of just working with someone so brilliant … along with his 'family' of associates who will always appreciate how lucky they were to have the opportunity of working with him. We will hold the past associate's dinner every year in his honour."

Many have written many words about Graham – every one of them demonstrating Graham's sense of fairness, his reason and recognition of right – along with his kindness and compassion. Professor Robin Woellner perhaps summarised the views of so many when he said "He had one of the sharpest intellects I had the pleasure of encountering, but with a grace, humility and tolerance one does not always find in the law."

Sadly missed, he was our friend, a friend who confided both to my wife Diane and to me of the great pride he had in his family and their achievements. I will leave the last words to Graham, relayed to me by more than one person. They seem appropriate, given our collective loss, for this man who became great in life through his care and support of so many people and so many things.

"It's only tax – there are more important things. People with tax problems should be thankful – there are far worse problems."

Commodity Tax Reforms In A Many Consumers Economy: A Viable Decision-Making Procedure

Fabrizio Bulckaen and Marco Stampini[*]

Abstract

This paper deals with efficiency and distributional effects of marginal commodity tax reforms in economies with heterogeneous individuals. It contributes to the literature in three ways. First, a decision rule based on revenue potentialities – the ratio between marginal revenue and the tax base - is originally developed with reference to a many consumers economy. The relevance lies in the fact that these indicators do not depend on measures of utility. Second, the connection with former literature is analyzed. Third, a comprehensive and progressive decision-making procedure relying on revenue potentialities is defined. Overall, all that policy makers need to know – in order to look for improvements in efficiency and/or distribution through revenue-neutral marginal commodity tax reforms – is the revenue potentiality of each tax and the share of expenditure by poor families. An example with reference to Italian data is provided.

INTRODUCTION

This article deals with efficiency and distributional effects of revenue-neutral marginal commodity tax reforms[1]. The paper contributes to the literature in three ways. First, it originally develops a rule based on revenue potentialities – defined as the ratio between marginal revenue and the base of a tax – for decisions in a context characterized by many and heterogeneous consumers. Revenue potentialities have important relevance for policy making because they do not depend on measures of utility. Second, the connection with former literature is analyzed, in order to make as clear as possible the relationship between efficiency and distribution of welfare. In particular, we consider the work of Ahmad and Stern (1984) – based on the specification of social weights in the social welfare function – and of Yitzhaki et al. (Yitzhaki and Thirsk (1990); Mayshar and Yitzhaki (1991)) – looking for welfare dominating reforms. Third, we define a procedure that policy makers interested both in efficiency and distribution can follow when searching for welfare improving opportunities, consistently with the indications of the theory. An explanatory application is provided with reference to Italian data.

The literature on tax reforms differs from the one on optimal taxation because it deals with marginal changes starting from any sub-optimal initial situation. Instead of looking for the optimal tax rate structure, it searches for directions of potential improvement, for small changes that increase welfare. The main advantage of this approach is that it requires a much smaller amount of information. It is not necessary to know the whole shape of consumers

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[1] Though we always refer to marginal tax reforms, the adjective "marginal" is often omitted along the paper.

demand functions, but only their reaction to price changes, moving from the observed starting point[2].

Recent developments in the literature on tax reforms – building on the work of Atkinson and Stiglitz (1976) – suggest that differential commodity taxation is not justified. This implies that there is no reason for studying commodity tax reforms, as a welfare improvement can be obtained by reducing commodity tax differentials, even starting from a non-optimal situation in terms of (non-linear) income tax (Kaplow, 2004). At the limit, it would be advisable to remove commodity taxes altogether. Nonetheless, we think that valid reasons exist for studying commodity tax reforms. First, the conclusions of Kaplow (as the author repeatedly states), as well as those of Atkinson and Stiglitz, fundamentally depend on the assumption of weak separability between leisure and other goods in the consumers' utility function – an assumption that we do not make. If labor supply does not depend on commodity prices, it is obvious that differentials in commodity taxes introduce a distortion in the choice among commodities, without any positive effect on the distortion in the choice between leisure and other goods. However, without this crucial assumption of separability, the commodity tax structure needs not being uniform and commodity taxation has theoretical justification. In addition, commodity taxation could be justified also for other reasons. When information is imperfect, it may be that commodity taxes are less vulnerable to evasion than income taxes. Commodity taxes can also be Pigovian and designed to correct externalities. We do not deal with these and other justifications in the present paper (though our model could accommodate externalities), but feel confident in saying that governments may well be interested in finding ways to reform the existing commodity tax system (without removing it), with positive effects on efficiency and distribution.

Within the literature on commodity tax reforms, two main lines of research can be distinguished: one dealing with efficiency only, in a single consumer economy; the other taking into account also distributional considerations.

Within the former stream, starting from Corlett and Hague (1953-54), the literature has suggested that policy makers should consider each tax marginal distortion, i.e. the welfare cost of raising an extra unit of general revenue by increasing a single tax rate. If the marginal cost of funds raised through different taxes differ, then welfare can be increased by reducing the rate of most distortionary taxes and increasing the rate of less distortionary ones, in order to keep revenue constant. Hatta (1986) provides a more intuitive and easy to implement rule based on tax rates only. He shows that the optimal tax rate structure is close to uniform, so that (under certain conditions regarding substitutability) welfare can be increased by reducing high rates and increasing low ones. Bulckaen and Stampini (2001) study the efficiency effects of commodity tax reforms in presence of environmental externalities through the comparison of revenue potentialities, defined as the ratio between the marginal revenue of a tax and its base. The authors stress the independence of the indicator from measures of utility. These rules, however, are concerned with efficiency only and do not give any relevance to distributional considerations, i.e. to the aversion towards inequality which characterizes social preferences.

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[2] For an updated overview of the literature on optimal taxation, see Auerbach and Hines (2002). For a survey on commodity tax reform, see Bulckaen (1992).

When different consumers are considered, Ahmad and Stern (1984) show that tax reforms can still be analyzed on the base of the marginal cost of public funds raised through different taxes. These, however, are now a function of both the effect on efficiency and of the distributional characteristics[3] of the affected goods. In order to identify welfare improving tax reforms, the policy maker must make social weights explicit [4].

Ahmad and Stern obtain their results under the strong assumption of fixed labor supply. The general framework of the analysis and the main formulas are not affected (suggesting that the authors could have waited to introduce the restriction later on in the paper, when discussing particular cases), but interpretations and implications are. In fact, Ahmad and Stern find that only distributional considerations can motivate a departure from uniform commodity taxation. This is due to the fact that, with fixed labor supply, uniform commodity taxation corresponds to a proportional tax on fixed total wage, hence to a lump-sum tax. The assumption is removed by Gordon (1989), who develops his model in terms of compensated demand functions. Unfortunately, Gordon obtains far less intuitive expressions for the marginal distortions caused by different taxes, which allow for intuitive results only under very specific assumptions – preferences identical among consumers, separable between goods and labor and quasi-homothetic in goods[5].

An important progress is made by Yitzhaki and Thirsk (1990), who study the possibility – starting from any sub-optimal tax rate structure – to identify revenue neutral tax reforms desirable under (almost) any social welfare function. More specifically, they look for revenue-neutral tax reforms desirable according to any social welfare function characterized by a non-negative degree of aversion to inequality. The only necessary condition is that poor people's welfare is weighted at least as much as rich people's, but these weights do not need to be declared explicitly. The analysis can be carried out through two sets of information. First, it is necessary to know the marginal distortion of each tax – i.e. the marginal welfare loss caused by raising one additional unit of revenue through each tax. Second, it is necessary to know how consumption is distributed among different households – i.e. to know the concentration curves[6]. The convenience of tax reforms can be enquired by

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[3] The concept of distributional characteristic was introduced by Martin Feldstein (1972), who dealt with optimal pricing by a public enterprise producing several goods in a multiple consumer economy. His conclusions imply that, when social preferences depend negatively on inequality, tax reforms which increase the rates on goods mainly consumed by better-off people and decrease tax rates on goods mainly consumed by worse-off people are more likely to increase social welfare.

[4] Alternatively, the policy maker can try identifying those weights that are implicitly consistent with the current – observed – situation, i.e. those weights which make the observed tax rate structure optimal. If those weights are obviously unacceptable, it means that there exist opportunities for welfare improving tax reforms. In particular, if some of these weights are negative, then a pareto-improving tax reform is possible.

[5] A similar problem of complexity (of the underlying hypothesis) affects the conclusions of Deaton (1987), who tries to identify the conditions that justify a reform towards uniform taxation starting from differentiated tax rates.

[6] The concentration curve "measures the fraction of total expenditure on a commodity that can be ascribed" to the first j percent of the population, once individuals have been ranked – i.e. ordered on the base of an index of need chosen by the policy-maker (Yitzhaki and Thirsk, 1990, p. 2). The concentration curve of the arbitrary commodity i ($i=1,...n$) is given by the

function $CC^i(j) = \sum_{h=1}^{j} \frac{x_h^i}{x^i}$, $j = 1,...H$, where x_h^i represents consumption of commodity i by

comparing concentration curves multiplied by the respective marginal cost of funds. If one of them lies below another along the whole population range (stochastic dominance), then there is no need to define social weights: a social welfare improving tax reform is possible.

In a related paper, before focusing on stochastic dominance, Mayshar and Yitzhaki (1995) show that the marginal social cost of raising funds (a measure of the marginal distortion) can be decomposed into the product of the distributional characteristic of the good and the marginal efficiency cost of funds. While this suggestion has remarkable empirical relevance, and related indications can be found in the previous (Ahmad and Stern (1984)) and later literature (Slemrod and Yitzhaki (1996), Yitzhaki (2003)), theoretical and applied works on the evaluation of tax reform have failed giving it the deserved importance.

The present paper originally develops the use of revenue potentialities for the evaluation of commodity tax reforms in economies with heterogeneous individuals, where both efficiency and distribution of welfare matter. A simple model with two groups of families – the rich and the poor, represented by two individuals – is employed. The development of the model allows defining a procedure that the policy maker can follow in order to identify welfare increasing opportunities, starting from the lowest amount of hypothesis, structure and information. When the most desirable opportunities are not available, the policy maker can identify welfare improving tax reforms only by imposing more structure. Operationally, the first step is to study the effects of the reform in terms of efficiency, by measuring the revenue potentiality of different taxes. These indicators can be used together with information on the distribution of consumption[7] in order to identify reforms which increase welfare according to any social welfare function characterized by a non-negative degree of aversion towards inequality. If such reforms are not possible, the policy maker is required to express some social weights. This allows identifying the overall welfare effect of the reform the policy maker is interested in, as well as distinguishing between effects on efficiency and on distribution of welfare. The policy maker interested in a particular tax reform can also calculate the minimum degree of preference for the worse-off group (with respect to the better-off) necessary to make the reform socially desirable.

This procedure is applied to the Italian tax system in order to provide an example of how welfare improving opportunities through tax reforms can be looked for. We show that the information set necessary for a quite intuitive analysis is not too big and difficult to collect – being limited to marginal revenues of the taxes and distribution of consumption.

The paper is organized as follows. The next Section develops the theoretical model and defines a viable decision making procedure. The following Section provides an example of empirical analysis, identifying reforms which improve efficiency and/or distribution. The last Section concludes, with some policy recommendations.

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household h, x^i is total consumption of i, and individuals are ranked. A possible example of ranking index is the level of expenditure in non-durable commodities.

[7] The theoretical model shows that the distribution of welfare, the object of our interest, can be studied through the analysis of the distribution of expenditure on commodities.

FROM THE THEORETICAL MODEL TO A VIABLE POLICY PROCEDURE

We consider a two individuals economy. In general, these individuals can be seen as two groups of families, the rich and the poor. The generalization to H individuals (H>2) is straightforward (and is reported in Appendix); at this stage we keep things as simple as possible.

Two individuals (j = A, B) derive utility from leisure (x_A^0, x_B^0), from the consumption of n commodities (x_A^i, x_B^i; i=1,...n) and from a public good provided by the State (*r*). As usual in the literature, we assume that the public good is weakly separable from commodities and leisure in the utility functions, hence demands for commodities and leisure do not depend on *r*. The uncompensated demand functions are represented for each consumer by the vector **x** (with dimension n+1), which depends on the vector of consumption prices **q** and on the exogenous income *y* [8]:

$$\mathbf{x}_A = \mathbf{x}_A(\mathbf{q}, y_A)$$
$$\mathbf{x}_B = \mathbf{x}_B(\mathbf{q}, y_B)$$

(1).

Exogenous incomes are assumed to be equal to zero. The two individuals differ in the utility function, which determines a different allocation of time between labor and leisure, hence a different earned income. Net demand for leisure is negative ($x_A^0 < 0$, $x_B^0 < 0$), so that labor supply is positive for both individuals. The individual budget constraints are given by:

$$\mathbf{q}'\mathbf{x}_A = 0$$
$$\mathbf{q}'\mathbf{x}_B = 0$$

(2).

Production is described by a linear technology, with labor by the two individuals as the only factor of production:

$$\mathbf{p}'(\mathbf{x}_A + \mathbf{x}_B) + r = 0$$

(3),

in which **p** is a vector of positive constants.

We exclude the presence of lump sum taxes; hence, the public sector draws tax revenue through proportional taxes only.

Because of our assumption of constant returns to scale, we can normalize production and consumption prices assuming leisure as the untaxed good[9]. Furthermore, in order to simplify the analysis, we define the units of measure in order to obtain all constants of the production function and all production prices equal to one (**p** = **ι**, vector of elements equal to 1). Hence, consumption prices are given by the following expression:

$$q^i = (1 + t^i), \quad i = 0,...n$$

(4),

where t^i is the i-th element of **t**, vector of tax rates, and t^0=0.

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[8] In what follows, the apex refers to the good (x^i, i=1,…n), boldface type indicates a vector (**x**) and prime indicates vector transpose (´). The first subscript indicates the individual (h=A, B), the second subscript (i=1, n) indicates the derivative, the gradient or the Jacobian matrix of the element with respect to price i ($\mathbf{x}_{Ai}$, $\mathbf{x}_{Bi}$).
[9] A labor tax which reduces wage proportionally is equivalent to a flat commodity tax on all commodities.

Total tax revenue is used to purchase the public good *r*. In order to analyze the welfare effect of a reform which (for example) increases the tax rate on good 1 and recycles the additional revenue by reducing the rate on the arbitrary good *n*, we differentiate the social welfare function:

$$U = U\left[V_A\left(\mathbf{q(t)}, y_A, r\right),\ V_B\left(\mathbf{q(t)}, y_B, r\right)\right] \tag{5},$$

where *V* is the indirect utility function. Using Roy's identity, we obtain:

$$dU^{(1,n)} = -\left(\left(\gamma_A \cdot x_A^1 + \gamma_B \cdot x_B^1\right) \cdot dt^1 + \left(\gamma_A \cdot x_A^n + \gamma_B \cdot x_B^n\right) \cdot dt^n\right) \tag{6},$$

where $\gamma_j = \dfrac{\partial U}{\partial V_j} \cdot \dfrac{\partial V_j}{\partial y_j}$ represents the social evaluation of the marginal utility of individual *j*'s income (j=A, B), which corresponds to the weight in the social utility function (we will later assume that the policy maker does not assign higher priority to individual B's utility, so that $\gamma_A \geq \gamma_B$). By definition of the reform, $dt^1 > 0$ and $dt^n < 0$.

By differentiating the government budget constraint, we derive the relation between tax rate variations implied by the condition of revenue-neutrality[10]. We obtain:

$$dt^1 = -\left(\frac{-\boldsymbol{\iota'}\mathbf{x}_{An} - \boldsymbol{\iota'}\mathbf{x}_{Bn}}{-\boldsymbol{\iota'}\mathbf{x}_{A1} - \boldsymbol{\iota'}\mathbf{x}_{B1}}\right) \cdot dt^n \tag{7}.$$

The second subscripts ($i = 1, n$) indicate the price with respect to which every element of the vector is differentiated. The term $\dfrac{-\boldsymbol{\iota'}\mathbf{x}_{An} - \boldsymbol{\iota'}\mathbf{x}_{Bn}}{-\boldsymbol{\iota'}\mathbf{x}_{A1} - \boldsymbol{\iota'}\mathbf{x}_{B1}}$ is the ratio between the marginal revenue of the two taxes affected by the reform $\left(\dfrac{MR^n}{MR^1}\right)$.

We assume that both taxes are revenue increasing, so that the ratio between the two marginal revenues is positive, i.e. $\dfrac{-\boldsymbol{\iota'}\mathbf{x}_{An} - \boldsymbol{\iota'}\mathbf{x}_{Bn}}{-\boldsymbol{\iota'}\mathbf{x}_{A1} - \boldsymbol{\iota'}\mathbf{x}_{B1}} > 0$.

Equation 6 can now be written as:

$$dU^{(1,n)} = \left[1 - \left(\frac{RRP^n}{RRP^1}\right) \cdot \left(\frac{D^1}{D^n}\right)\right] \cdot \left(\gamma_A \cdot x_A^n + \gamma_B \cdot x_B^n\right) \cdot \left(-dt^n\right) \tag{8}.$$

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[10] The budget constraint of the public sector is given by:

$$r = \mathbf{t'}\left(\mathbf{x}_A(\mathbf{q(t)}, y_A) + \mathbf{x}_B(\mathbf{q(t)}, y_B)\right)$$

Hence:

$$\frac{\partial r}{\partial t^i} = x_A^i + \mathbf{t'}\mathbf{x}_{Ai} + x_B^i + \mathbf{t'}\mathbf{x}_{Bi}$$

is the marginal revenue of tax i. By differentiating the budget constraint of each individual consumer we obtain:

$$x_A^i + \mathbf{q'}\mathbf{x}_{Ai} = 0$$

$$x_B^i + \mathbf{q'}\mathbf{x}_{Bi} = 0.$$

It follows that the marginal revenue (MR) of tax i can be expressed as follows:

$$\frac{\partial r}{\partial t^i} = x_A^i + \mathbf{t'}\mathbf{x}_{Ai} - x_A^i - \mathbf{q'}\mathbf{x}_{Ai} + x_B^i + \mathbf{t'}\mathbf{x}_{Bi} - x_B^i - \mathbf{q'}\mathbf{x}_{Bi} = -\boldsymbol{\iota'}\mathbf{x}_{Ai} - \boldsymbol{\iota'}\mathbf{x}_{Bi}.$$

where RRP^i, the revenue potentiality, is the ratio between the marginal revenue of tax i and its base (MR^i/x^i) and $D^i = \dfrac{\gamma_A \cdot x_A^i + \gamma_B \cdot x_B^i}{x^i}$ is the distributional characteristic of good i (i=1,n). The definition of distributional characteristic is due to Feldstein (1972) and is related to the relationship between social weights and share of consumption by different classes of consumers. Its value is high when a good is mainly consumed by consumers whose welfare is valued more in the social welfare function (the poor). The revenue potentiality measures the ability to raise new revenue by marginally increasing the tax rate.

In equation 8, the change in t^n is negative by definition of the reform and the term $\left(\gamma_A \cdot x_A^n + \gamma_B \cdot x_B^n \right)$ is always positive. Hence, the sign of the welfare effect of the reform depends only on the term in square brackets.

Equation 8 has remarkable empirical relevance because none of the elements requires the specification of a function of utility in order to represent consumers' welfare. The marginal revenue can be estimated through the analysis of the relationship between total revenue and the tax rates, exploiting for example evidence from previous tax reforms or historical data. The value of consumers expenditure in commodities is found in national accounts or social accounting matrices released periodically by national institutes of statistics. Nevertheless, the empirical literature on the evaluation of tax reforms has not exploited this result[11]. The ratio between the two revenue potentialities, hereafter $\alpha = \dfrac{RRP^n}{RRP^1}$, picks up the efficiency effects of the reform. In fact, if all consumers are given the same social weight ($\gamma_A = \gamma_B = 1$) or if all goods are consumed in the same proportion by poor and rich families, the ratio between the distributional characteristics of the two goods (is equal to 1 and) no longer appears in equation 8. In these cases, only efficiency matters and the welfare effect of the reform can be studied by looking at the revenue potentialities only. In particular, tax reforms increase welfare when the tax burden is transferred from taxes with low revenue potentiality to taxes with high revenue potentiality, i.e. when $\alpha < 1$. The intuition behind this result is that taxes which can produce revenue "more easily" generate less distortions. On the other hand, the effect of the reform on distribution are picked up by the distributional characteristics of the goods. Equity improves if the reform shifts the tax burden towards goods with lower distributional characteristics. This "distributional benefit" must be compared with efficiency effects in order to determine if the reform is socially desirable. Overall, social welfare increases when the following condition holds:

$$\alpha < \frac{D^n}{D^1} \qquad\qquad\qquad (9).$$

If the reform increases efficiency ($\alpha<1$) and the tax burden is shifted towards goods consumed mainly by better–off individuals (the ratio between the two distributional characteristics is bigger than one), then social welfare

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[11] This may be due to the fact that expression 8 is exactly valid in the simple theoretical model used by the literature on tax reforms. Applied works try to replicate more complex economies, characterized for example by the presence of intermediate goods, international trade and multiple forms of taxation. The validity of the simple rule in complex systems needs empirical testing. A recent work by Bulckaen et al. (2003) deals with the problem and finds encouraging results, supporting the use of revenue potentialities for the evaluation of the efficiency effects of commodity tax reforms, hence also the use of expression 8 in a many-consumers setting.

increases. This is the set of reforms which improve both efficiency and distribution. However, it is now possible that social welfare increases also if efficiency decreases ($\alpha > 1$), as far as the ratio between the two revenue potentialities is smaller than the ratio between the distributional characteristics. In these cases, efficiency decreases but distribution improves, and the latter effect is big enough to offset the former.

Condition 9 provides a policy rule for the decision maker. As pointed out above, revenue potentialities can be estimated from data on the relationship between total revenue and tax rates; consumption by different (groups of) consumers is estimated through household surveys. The most problematic issue is in the determination of social weights for consumption by different individuals (or groups). An analysis of sensitivity – as suggested by Ahmad and Stern (1984) – would probably be most appropriate, with the determination of the sets of weights which are consistent with an increase in social welfare. An example is provided later on in the paper.

In some cases, however, it is possible that the structure of the distribution of consumption among different individuals guarantees an increase in social welfare, whichever the value of the weights in the social utility function. The concept of marginal conditional welfare dominance – proposed by Yitzhaki et al. (Yitzhaki and Thirsk (1990) , Slemrod and Yitzhaki (1991), Mayshar and Yitzhaki (1995)) – can be used to select a couple of tax rates whose change, in the context of a revenue-neutral reform, is desirable according to every social welfare function which reflects a non-negative degree of aversion to inequality[12]. A tax dominates another one when it bears on a good whose consumption is relatively lower among poor people and when its revenue potentiality is not lower. For this purpose, it is useful to express equation 6 as follows:

$$dU^{(1,n)} = -\left[\gamma_A \cdot \left(\frac{x_A^n}{x^n} - \alpha \frac{x_A^1}{x^1} \right) + \gamma_B \cdot \left(\frac{x_B^n}{x^n} - \alpha \frac{x_B^1}{x^1} \right) \right] \cdot x^n \cdot dt^n$$

(10).

Expression 10 corresponds to equation 7 of Yitzhaki and Thirsk (1990, p. 6), but now α is the ratio between the two revenue potentialities. If the concentration curve of commodity *n* lies above the concentration curve of commodity *1*, multiplied by the efficiency parameter α, then:

$$\left(\frac{x_A^n}{x^n} - \alpha \frac{x_A^1}{x^1} \right) > 0$$

$$\left(\frac{x_A^n + x_B^n}{x^n} - \alpha \frac{x_A^1 + x_B^1}{x^1} \right) = 1 - \alpha > 0$$

(11),

which can be restated as follows:

$$\left(\frac{x_A^n}{x^n} - \alpha \frac{x_A^1}{x^1} \right) > 0$$

$$\left(\frac{x_A^n}{x^n} - \alpha \frac{x_A^1}{x^1} \right) + \left(\frac{x_B^n}{x^n} - \alpha \frac{x_B^1}{x^1} \right) > 0$$

(12).

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[12] The analysis can be extended to reforms which involve more tax rate changes, following Mayshar and Yitzhaki (1995).

If $\gamma_A \geq \gamma_B$, this is a sufficient condition for:

$$\gamma_A \cdot \left(\frac{x_A^n}{x^n} - \alpha \frac{x_A^1}{x^1} \right) + \gamma_B \cdot \left(\frac{x_B^n}{x^n} - \alpha \frac{x_B^1}{x^1} \right) > 0$$

(13),

which ensures an increase in social welfare.

In this case, t^1 dominates t^n. The same result cannot be reached if the reform increases tax distortions ($\alpha > 1$). In this case, in fact, $\left(\frac{x_A^n + x_B^n}{x^n} - \alpha \frac{x_A^1 + x_B^1}{x^1} \right) = 1 - \alpha < 0$, so that at least in the case in which all social weights are equal to each other ($\gamma_A = \gamma_B$), the sign of 10 is negative (Yitzhaki and Thirsk, 1990).

It follows that social welfare increases for every social utility function with a non-negative degree of aversion towards inequality if the reform shifts the burden of taxation towards taxes which levy revenue more easily and if the ratio between the two revenue potentialities is lower than the ratio between the shares of consumption, i.e. if the following conditions hold:

(a) $\alpha < 1$;   (b) $\alpha < \dfrac{\dfrac{x_A^n}{x^n}}{\dfrac{x_A^1}{x^1}}$

(14).

Condition 14 is evidently more restrictive than 9. In this case, the possibility that a decrease in efficiency is compensated by an improvement in distribution is not allowed. When (almost) no structure is imposed on the social welfare function, it is necessary at least that efficiency does not decrease (first part of 14). However, if efficiency increases, it is not necessary that the tax burden is shifted towards taxes that are consumed mainly by poor individuals. In some measure, the second part of condition 14 allows that the share of consumption by the poor of the good whose tax increases is bigger than the share of consumption by the poor of the good whose tax decreases, as far as the ratio between the two shares is bigger than the ratio between the revenue potentialities.

The above suggestions can be integrated in order to define a procedure that can be followed by the policy maker who wishes to evaluate the efficiency and distributional effects of a revenue-neutral tax reform. The policy maker can hence proceed as follows:

1. estimating the revenue potentiality of the taxes whose rate is affected (and calculate the parameter α): this is sufficient in order to evaluate the efficiency effects of the reform (efficiency improves if $\alpha < 1$);

2. comparing the modified concentration curves of consumption of the two goods: this may identify cases of welfare dominance, in which the reform increases social welfare for any social utility function which reflects a non-negative degree of aversion to inequality – a very general (and safe) conclusion; in our case this boils down to (knowing the poor people's share of consumption of each good and) verifying that 14 holds;

3. if there is no opportunity of welfare dominance, identifying the social weights which are consistent with an increase in social welfare, given the revenue potentialities. In fact, equation 8 can be worked out in order to

find the value of the ratio of γ_A to γ_B necessary for the condition to hold. This is given by the following expression.

$$\frac{\gamma_A}{\gamma_B} > \frac{\alpha \cdot \frac{x_B^1}{x^1} - \frac{x_B^n}{x^n}}{\frac{x_A^n}{x^n} - \alpha \frac{x_A^1}{x^1}} \qquad \text{if} \quad \alpha > \frac{\frac{x_A^n}{x^n}}{\frac{x_A^1}{x^1}}$$

$$\frac{\gamma_A}{\gamma_B} < \frac{\alpha \cdot \frac{x_B^1}{x^1} - \frac{x_B^n}{x^n}}{\frac{x_A^n}{x^n} - \alpha \frac{x_A^1}{x^1}} \qquad \text{if} \quad \alpha < \frac{\frac{x_A^n}{x^n}}{\frac{x_A^1}{x^1}}$$

(15)

With this procedure in mind, we can now move to an empirical application of the theory.

AN APPLICATION TO ITALIAN CONSUMPTION TAXES

The purpose of this section is to provide an example of how the opportunity of consumption tax reforms can be enquired by the policy maker, taking into account both efficiency and equity. We make reference to Italian data for 1993 [13].

The original data allowed distinguishing thirty sectors/commodities, with consumption distributed among six groups of families, ranked according to household income. Here we restrict the analysis to sixteen main commodities, whose final consumption is taxed and exceeds 2.5 billion Euros in value[14] (converted from Italian Lira 1993). This threshold is chosen arbitrarily with the aim to focus on main categories of consumption. Furthermore, in order to keep the analysis simple and consistent with the model outlined above, we aggregate families in two groups, their income being below or above 18,612 Euros (Euros 1993, correspondent to 36 million Italian Lira 1993). This subdivision corresponds to median household income (data from the Household Budget Survey of the Bank of Italy for 1993) and ideally divides Italian families in two groups, the poorer and the richer.

Table 1 reports the composition of consumption in Italy in 1993.

The single most important voice, in terms of value, is processed food (Food products, tobacco and alcoholic beverages), whose purchases amount to 63 billion Euros; together with commodities purchased directly from the primary sector (Agriculture, cattle, forestry and fishing), this constitutes most of Italian household food expenditure (part of the consumption in "Hotels and restaurants" should still be added to complete the picture). Among the other most important components of consumption, in terms of value, we find "Hotels and restaurants", "Other services" and "Textiles".

Table 1 provides also evidence about the distribution of consumption between

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[13] For details, see Accardo et al. (2002). The last social accounting matrix released by the Italian institute of statistics (ISTAT) dates back to 1992. More recent consumption data is made available by the Survey on Consumption by Italian Households; nevertheless, we use data from 1993 (obtained by updating the 1992 SAM), because the availability of a SAM allows estimating the revenue potentiality of different consumption taxes through a general equilibrium simulation. The explanatory value of the analysis is not diminished by this choice, though of course the relevance in terms of current policy recommendations does.

[14] An exception is made for the sector "Communication", whose consumption value is slightly lower than the threshold.

poorer and richer families. The share of consumption by poor households ranges from a minimum of 21 percent for "Chemicals and pharmaceutical" products and "Other services" to a maximum of 42 percent for processed and unprocessed food items.

Table 1, eventually, reports the revenue potentiality of each single consumption tax, estimated through simulations of marginal tax rate changes in a numerical model of the Italian economy[15]. Additional revenue can be obtained with the lowest cost in terms of efficiency (we could say most easily) by increasing the tax rate on the consumption of unprocessed food items (RRP=0.009237) and electrical equipment (RRP=0.009215). At the other extreme, the taxation of energy consumption is most distortionary and new revenue can be risen from it only at high efficiency costs (RRP=0.007192) – though this statement considers consumption distortions only and does not account for environmental externalities.

A policy maker interested in modifying a couple of tax rates within a revenue neutral tax reform and who cares for both efficiency and equity can start by verifying if conditions 14 hold. In this case, social welfare would increase for every social utility function consistent with a non-negative degree of aversion to inequality. It would not be necessary to quantify the preference for poor people's welfare with respect to rich people's, i.e. to set γ_A and γ_B, but only to accept that the former is not less important than the latter, i.e. that $\gamma_A \geq \gamma_B$. Table 2 shows the results of all possible tax reform. Rows refer to the goods whose tax rate increase, columns to the ones whose tax decrease. Cells background is shaded when the first of the two conditions holds, i.e. when the reform increases efficiency (the revenue potentiality of the tax which grows is higher than the revenue potentiality of the one which decreases, hence $\alpha<1$). In a subset of cases, the reform is desirable on both efficiency and distributional ground, when both conditions 14 hold. We mark the corresponding cells with a 1. These are the reforms that the policy maker can realize more safely, with no need to make social weights explicit. Cells containing a 0 represent the cases in which we cannot be sure that social welfare increases, independently from the efficiency effect of the reform. In order to make a decision, it is necessary to know more about the structure of the social welfare function.

Though Table 2 provides evidence about the effects of all possible reforms, we will comment only on a few cases. In particular, we will focus first on reforms that increase the taxation on electrical equipment, the set of commodities with the second highest revenue potentiality. In addition to low distortionary power, electrical equipment have very favorable distributional characteristics, with only 21 percent of consumption ascribable to poor families. We will also consider the possibility to increase the taxation on the consumption of chemical and pharmaceutical products, as the distributional characteristics are once more favorable and because chemical industries are likely to be responsible for negative environmental externalities (concerns for the health of the poor are ruled out by the fact that drugs are actually paid by the public sector through the national health service). We abstain from considering the possibility to decrease the tax on energy products, which is

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[15] A Computable General Equilibrium model of the Italian economy - with quite standard characteristics but a very detailed modelization of the tax system - is used. Revenue potentialities are calculated by simulating the effect on total revenue of a one percent increase in each tax rate. Details can be found in Bulckaen et al. (2003).

characterized by the lowest revenue potentiality, because energy consumption is associated with the production of major negative environmental externalities. It is possible that the high level of taxation on this category of commodities is due to the will to correct such distortions and set the right incentives for private choices (at least in part it should be this way). Our model could accommodate externalities and be used to derive a decision rule for cases in which consumption distortions and other distortions change in opposite directions, creating a trade-off, but this goes beyond the scope of the present paper. Among the sectors whose taxation may be reduced in order to ensure revenue neutrality, we will consider processed food and textiles. Cases on which we comment are bordered in the tables.

Increasing taxes on electrical equipment (sector 9) and reducing taxation on processed food (sector 11, as well as on textiles (12)) in order to guarantee revenue neutrality actually satisfies both conditions 14 and constitutes a welfare improving reform[16]. The same is true for the reform which increases taxation on chemical items (sector 5) and decreases the rate on textiles, but not for the one in which revenue neutrality is ensured by lower taxes on processed food. In this case, the efficiency condition does not hold: despite the fact that processed food is characterized by a much higher share of consumption allocated to the poor, the fact that the tax on chemicals has a lower revenue potentiality implies that welfare would decrease if both groups of households were given the same weight in the social welfare function. This is a case in which the policy maker can justify the reform only by making social weights explicit.

This allows introducing the following step of the analytical process. In cases in which conditions 14 do not hold, the policy maker is forced to make the set of social weights explicit. In Table 3, in order to provide a simple example, reforms are evaluated on the basis of a social welfare function in which poor people's welfare is valued twice as much as rich people's ($\gamma_A = 2\gamma_B$).

The value "1" marks the cases in which social welfare is found to increase. The background of the cell is shaded in the cases in which conditions 14 hold (which is of course a subset of the cases in which welfare increases), i.e. those in which social welfare increases according to any social utility function with a non-negative degree of aversion to inequality.

Assigning a higher weight to poor people's welfare remarkably increases the relevance of distributional consideration with respect to efficiency. Table 3 shows that reducing the tax on unprocessed food (sector 11) is now convenient in most cases, despite the high value of its revenue potentiality, thanks to the high share of these goods consumed by poor households and to the high value assigned by the policy maker to the welfare of this category.

When poor people's welfare is assigned double value, also the reform which increases the tax on chemical products and reduces the tax on processed food turns to be socially desirable. However, giving double value to poor people's welfare is not necessary in order to obtain this result. For any cell in Table 3,

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[16] In the present analysis, we are assuming perfect information. In the real world, the policy maker will be interested in evaluating the degree of confidence of the indications of each policy rule. This could be done, for example, by performing a sensitivity analysis of the main assumptions of the model used to calculate the revenue potentialities. In other cases, if the parameters are estimated econometrically, they will be associated with an interval of confidence. In this exemplification, we keep things as simple as possible.

the policy maker can determine the minimum value of γ_A necessary in order to make the reform convenient, according to equation 15. In this specific case, any value above 1.053 guarantees that condition 8 holds – indeed a very reasonable degree of preference for poor.

CONCLUSIONS AND POLICY RECOMMENDATIONS

This paper deals with revenue-neutral marginal commodity tax reforms in economies with heterogeneous individuals. In a simple model with two classes of consumers, we originally develop a decision rule based on revenue potentialities. The relationship with the streams of research dealing with specific weights in the social welfare function (Ahmad and Stern (1984)) and looking for cases of welfare dominance ((Yitzhaki and Thirsk (1990); Mayshar and Yitzhaki (1991)) is analyzed.

The use of a simple two consumers model makes the relationship between efficiency and distributional considerations particularly explicit. The former can be studied in terms of ability of different taxes to collect new revenue, an indicator of distortion which does not depend on assumptions about utility functions. The latter is related to shares of expenditure by poor and rich for the different goods involved in the reform.

The analysis allows defining a procedure that the policy maker can follow in order to identify welfare increasing opportunities, starting from the lowest amount of hypothesis, structure and information. When the most desirable opportunities are not available, the policy maker can identify welfare improving commodity tax reforms only by imposing more structure. Operationally, the first step is to study the effects of the reform in terms of efficiency, i.e. to measure the revenue potentiality of different taxes. These indicators can be used together with information on distribution of consumption in order to determine if the reform in which the policy maker is interested increases welfare according to any social welfare function characterized by a non-negative degree of aversion towards inequality. If this does not happen, the policy maker can calculate the minimum degree of preference for the worse-off group (with respect to the better-off) necessary to make the reform socially desirable – and check if this assumes a sensible value, upon which society can agree.

TABLES

Table 1 - Structure of final consumption (Italy, 1993)

Sector		RRP	Consumption (billion Euros) by families with income		Total (billion Euros)	Share consumed by most poor
			below 18.612 Euro	above 18.612 Euro		
Agriculture, cattle, forestry, fishing	1	0.009237	11.766	16.277	28.043	0.420
Energy products	2	0.007192	8.988	15.409	24.397	0.368
Chemicals and pharmaceuticals	5	0.008299	4.691	16.797	21.488	0.218
Electrical equipment	9	0.009215	2.081	7.678	9.760	0.213
Transport equipment	10	0.008421	4.038	14.380	18.418	0.219
Food products, tobacco, alcoholic bev.	11	0.008387	26.443	36.580	63.023	0.420
Textiles, made-up textile articles	12	0.008244	9.756	27.538	37.294	0.262
Leather, footwear	13	0.008258	3.078	8.689	11.767	0.262
Wood, wood furniture	14	0.008331	2.675	8.345	11.021	0.243
Paper, printing, publishing	15	0.008117	1.877	6.924	8.801	0.213
Miscellaneous manufacturing	17	0.008109	2.485	8.727	11.213	0.222
Recycling, repair	19	0.008327	2.312	8.232	10.544	0.219
Hotels and restaurants	21	0.008785	8.880	31.183	40.063	0.222
Land transport, transport via pipelines	22	0.008648	1.215	4.325	5.539	0.219
Communications	25	0.008472	1.045	3.720	4.765	0.219
Other service activities	29	0.008454	9.013	32.269	41.282	0.218

Table 2 - Tax reforms which increase welfare according to any SWF with a non-negative degree of aversion to inequality. Shaded background indicates cases in which efficiency would increase. Value 1 indicates that SW would increase according to any SWF with a non-negative degree of aversion to inequality (a subset of shaded cells).

		Sector whose tax rate descreases (n)														
		1	2	5	9	10	11	12	13	14	15	17	19	21	22	25	29
Sector whose tax rate increases (1)	1	0	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	0	**1**	0	0	0	0	**1**	**1**	0	**0**	**1**	0	0	0	0	0
	9	0	**1**	**1**	0	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
	10	0	**1**	**1**	0	0	**1**	**1**	**1**	**1**	**1**	**1**	**1**	0	0	0	0
	11	0	**1**	**0**	0	0	0	**0**	**0**	**0**	**0**	**0**	**0**	0	0	0	0
	12	0	**1**	0	0	0	0	0	0	0	**0**	**0**	0	0	0	0	0
	13	0	**1**	0	0	0	0	**1**	0	0	**0**	**0**	0	0	0	0	0
	14	0	**1**	**0**	0	0	0	**1**	**1**	0	**0**	**0**	**0**	0	0	0	0
	15	0	**1**	0	0	0	0	0	0	0	0	**1**	0	0	0	0	0
	17	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	19	0	**1**	**0**	0	0	0	**1**	**1**	0	**0**	**1**	0	0	0	0	0
	21	0	**1**	**1**	0	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	0	**1**	**1**	**1**
	22	0	**1**	**1**	0	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	0	0	**1**	**1**
	25	0	**1**	**1**	0	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	0	0	0	**0**
	29	0	**1**	**1**	0	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	0	0	0	0

Table 3 – Tax reforms which increase social welfare for specific weights. Specific case $\gamma_A=2\gamma_B$. Value 1 indicates that SW increases. Shaded background indicates that SW would increase according to any SWF with a non-negative degree of aversion to inequality.

		Sector whose tax rate descreases (n)														
		1	2	5	9	10	11	12	13	14	15	17	19	21	22	25	29
Sector whose tax rate increases (1)	1	0	**1**	0	0	0	**1**	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	1	**1**	0	0	0	1	**1**	**1**	1	1	**1**	0	0	0	0	0
	9	1	**1**	**1**	0	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
	10	1	**1**	**1**	0	0	**1**	**1**	**1**	**1**	**1**	**1**	**1**	0	0	0	0
	11	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12	1	**1**	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	13	1	**1**	0	0	0	1	**1**	0	0	0	0	0	0	0	0	0
	14	1	**1**	0	0	0	1	**1**	**1**	0	1	1	0	0	0	0	0
	15	1	**1**	0	0	0	1	1	1	0	**0**	**1**	0	0	0	0	0
	17	1	**1**	0	0	0	1	1	1	0	0	0	0	0	0	0	0
	19	1	**1**	1	0	0	1	**1**	**1**	1	1	**1**	0	0	0	0	0
	21	1	**1**	**1**	0	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	0	**1**	**1**	**1**
	22	1	**1**	**1**	0	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	0	0	**1**	**1**
	25	1	**1**	**1**	0	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	0	0	0	1
	29	1	**1**	**1**	0	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	0	0	0	0

APPENDIX

The extension of the model presented above to an economy with H consumers (H>2) is straightforward, as most relationships are additive.

The social welfare function can be expressed as follows:

$$U = U\left[V_1\left(\mathbf{q(t)}, y_1, r\right),\ V_2\left(\mathbf{q(t)}, y_2, r\right), ..., V_H\left(\mathbf{q(t)}, y_H, r\right)\right]$$
(A.1).

The relationship between the change in the two tax rates affected by the reform, such to keep revenue constant, is given by the following expression.

$$dt^1 = -\left(\frac{-\sum_{h=1}^{H} \mathbf{\iota'x}_{hn}}{-\sum_{h=1}^{H} \mathbf{\iota'x}_{h1}}\right) \cdot dt^n$$
(A.2)

The ratio between the two revenue potentialities is given by:

$$\alpha = \frac{\dfrac{-\sum_{h=1}^{H} \mathbf{\iota'x}_{hn}}{x^n}}{\dfrac{-\sum_{h=1}^{H} \mathbf{\iota'x}_{h1}}{x^1}}$$
(A.3),

and the formula for the change in social welfare caused by the reform does not change, though now the distributional characteristic is defined as:

$$D^i = \frac{\sum_{h=1}^{H} \gamma_h \cdot x_h^i}{x^i}$$
(A.4).

Once again, the reform increases social utility if the following condition holds:

$$\alpha < \frac{D^n}{D^1}$$
(A.5).

The interpretation in terms of relationship between (the ratios of) revenue potentialities and distributional characteristics does not change.

Expression 10 can now be expressed as follows:

$$dU^{(1,n)} = -\left[\sum_{h=1}^{H} \gamma_h \cdot \left(\frac{x_h^n}{x^n} - \alpha \frac{x_h^1}{x^1}\right)\right] \cdot x^n \cdot dt^n$$
(A.6).

If the concentration curve of good n lies below the concentration curve of good 1, multiplied by the ratio between the two revenue potentialities, then $\left\{\sum_{h=1}^{j} \left(\frac{x_h^n}{x^n} - \alpha \frac{x_h^1}{x^1}\right),\ j = 1, ... H\right\}$ is a succession of positive terms. If individuals are

ranked so that the social weights (γ_h) are non-increasing in h, this is a sufficient condition for the following expression to hold:

$$\sum_{h=1}^{H} \gamma_h \cdot \left(\frac{x_h^n}{x^n} - \alpha \frac{x_h^1}{x^1} \right) > 0$$

(A.7),

hence for social welfare to increase.

In this case, the condition for an improvement in welfare cannot be reduced to a comparison between revenue potentialities and consumption shares. Social welfare increases according to any social utility function characterized by a non-negative degree of aversion to inequality if efficiency does not decrease and the concentration curve of the good whose tax decreases lies above the concentration curve of the good whose tax increases, the latter multiplied by the ratio between the revenue potentialities.

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Trans-Tasman Tax Reform: The Real Story

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Abstract

In 2003 the Australian and NZ governments enacted legislation to permit trans-Tasman companies to allocate to their shareholders franking credits and imputation credits. This legislation is known as the pro rata allocation method, and was heralded as a major improvement in trans-Tasman taxation. This paper critically evaluates the claims which have been made by the Australian and NZ governments about the reduction in personal income tax which the pro rata allocation solution will deliver to individual share holders in a typical trans-Tasman company. The paper concludes that the benefits have been significantly over stated and that a more effective legislative solution would have been the streaming model. Accordingly the pro rata allocation solution is unlikely to discourage trans-Tasman companies from engaging in profit repatriation strategies to overcome the inherent tax inefficiency associated with the pro rata allocation solution.

INTRODUCTION

On 19 February 2003 the Australian Treasurer and the New Zealand Minister of Finance announced a solution to a longstanding taxation problem known as triangular taxation:[1]

> To resolve this problem, Australia and New Zealand will extend their imputation systems to include companies resident in the other country. Under this reform, Australian and New Zealand shareholders of trans-Tasman companies that choose to take up these reforms will be allocated imputation credits, representing New Zealand tax paid, and franking credits, representing Australian tax paid, in proportion to their ownership of the company. However, each country's credits will be able to be claimed only by its residents.

The problem referred to in the quotation is known as the so-called triangular tax issue. In November 2003 legislation was passed by the New Zealand Parliament to give effect to the February 2003 announcement. The relevant provisions are contained in a number of different sections in the Income Tax Act 2004 (ITA 04)[2]. The corresponding provisions in the Australian Act (the ITAA97) are contained in Div 220.

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[1] http://www.taxpolicy.ird.govt.nz/news/archive. php year = 2003 at p, 2

[2] Refer to sections: ME 4, (1B), (1C), (2B),ME 5 (IA), (2A) for the relevant credits and debits to the Imputation Credit Account (ICA), section ME 1C for foreign currency conversion issues, sections FDA 1 – FDA 6 for grouping of company procedures, and sections ME 10 (1D) and (1C) for the rules governing trans-Tasman imputation groups.

As a result of the amendment Australian companies can now pay dividends with NZ imputation credits attached. This legislative solution is often referred to as the pro rata allocation (PRA) model.

The new rules allow Australian and NZ companies to elect into a regime, which allocates to their Australian and NZ shareholders franking and imputation credits in proportion to their ownership in the parent company. However the Australian franking credits can only be utilised by Australian shareholders and NZ resident shareholders can only use the imputation credits.

The November 2003 legislation reflects the analysis and assumptions contained in the March 2002 Discussion Document. [3] Prior to November 2003 the trans-Tasman taxation treatment of a triangular investment by a New Zealand shareholder resulted in an effective tax rate of 57.3%. The Discussion Document claimed that the PRA solution would reduce the effective tax rate to 43.6%. If that claim is true, the effective tax rate would have been reduced by 24%. This article examines:

- whether that claim is a fair representation of the benefits of PRA legislative solution

- the underlying assumptions the calculations were based on

- to what extent those assumptions are reflected in the ownership structure of a "typical" trans-Tasman company

- some of the possible behavioural responses of trans-Tasman companies to the PRA legislative solution.

WHAT IS TRIANGULAR TAXATION?

Introduction
A triangular investment occurs when a shareholder resident in Australia or New Zealand invests in a company resident in the other jurisdiction that earns income and pays tax in the shareholder's home jurisdiction. Prior to November 2003 whenever a shareholder received a dividend, they were unable to obtain a credit for tax that had already been paid in their home country. This meant that triangular income was being taxed twice, i.e. in the country in which it was earned and again in the hands of the shareholder. This was a major disincentive to trans-Tasman investment, which has led to the development of structures to overcome the problem of double taxation.

The previous position
The following table demonstrates the taxation of a pre PRA trans-Tasman investment held by individual portfolio shareholders in publicly listed trans-Tasman companies. Columns (a) and (c) summarise the tax payable by an individual shareholder who invested in a public company that is a tax resident in the same country as the shareholder. In both cases the individual shareholder is taxed at the top marginal rate. The cash dividend is grossed up for the imputation/franking credit, which reduces the tax payable, by the shareholder.

Columns (b) and (d) illustrate the additional tax cost associated with an investment in a company that is a tax resident in the other jurisdiction. For the purposes of column

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[3] "Trans-Tasman triangular tax: An Australian and New Zealand government Discussion Document", p 4, available at either: ATO-Triangular@ato.gov.au, or webmaster@ird.govt.nz.

(b) there is no Australian NRWT because the dividend is fully franked. In the case of column (d) the New Zealand Company receives a foreign shareholder tax credit (FITC) of $12, which reduces the company tax from $33 to $21. The New Zealand Company passes on the credit to its non-resident Australian individual shareholder that is used to pay New Zealand NRWT of $12. Finally the Australian individual shareholder claims a foreign tax credit of $12.

TABLE ONE: SUMMARY OF PREVIOUS RULES

	A	B	C	D
Parent Company	**NZ Co NZ Individual Shareholder $**	**Australian Co NZ Individual Shareholder $**	**Australian Co Australian Individual Shareholder $**	**NZ Co Australian Individual Shareholder $**
Profit	100	100	100	100
Tax payable	(33)	(30)	(30)	(21)
Imputation / Franking credit	33	30	30	21
Withholding tax 15%	-	-	-	12
Cash dividend	67	70	70	67
Individual shareholder				
Cash dividend	67	70	70	67
Gross up	33	-	30	12
Taxable income	100	70	100	79
Gross tax payable[4] (39-48.5%)	(39) (27)	(27) (216)	(48.5) (32)	(38) (34)
Less NRWT credit	-	-	-	12
Less imputation franking credit	33	-	30	-
Net tax payable	(6)	(27)	(18.5)	(26)
After tax cash	61	43	51.5	41
Effective tax rate	39%	57%	48.5%	59%

The implications of Table One are obvious. A New Zealand individual shareholder paid 57% tax on Australian sourced dividends compared with 33% on a New Zealand

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[4] The "Gross Tax payable" has been calculated using the top NZ marginal rate of 39% or the top Australian marginal rate of 48.5%. The respective marginal rate is applied to the "taxable income" which is the sum of the cash dividend plus any Imputation or NRWT credits. The imputation or NRWT credits are then deducted from the "Gross tax payable" to create the "Net tax payable".

dividend. The Australian individual shareholders paid 59% tax on New Zealand sourced dividends and 48.5% tax on Australian sourced dividends.

There are a number of important key points that are highlighted in this table which provide an insight into the legislative solution. The available franking credits and imputation credits are allocated according to the respective shareholding in each country. Secondly an individual shareholder can only utilise the imputation or franking credit applicable in the shareholder's country of residence. The net effect of these two points is that there is an inevitable element of wastage which is measurable by ascertaining the percentage of individual shareholders who are resident in the other country.

The high rates of tax were comparable to the tax which was payable under the old classical system of taxing dividends that existed in both countries prior to introduction of full dividend imputation.

Debt finance
The bias against trans-Tasman equity does not exist in the case of a comparable debt financed investment. This is illustrated in Table Two.

TABLE TWO: SUMMARY OF CURRENT RULES

Parent Company	A **NZ Parent Co NZ Bond Holder**	B **Australian Parent Co NZ Bond Holder**	C **Australian Parent Co Australian Bond Holder**	D **NZ Parent Co Australian Bond Holder**
Profit before interest	100	100	100	100
Interest expense	(100)	(100)	(100)	(100)
Tax payable	Nil	Nil	Nil	Nil
NRWT 10%	-	10	-	10
Bond holder				
Net interest	100	90	100	90
NRWT Gross up	-	10	-	10
Taxable income	100	100	100	100
Gross tax payable	(39)	(39)	(48.50)	(48.50)
Less NRWT credit	-	10	-	10
Net tax payable	(39)	(29)	(48.50)	(38.50)
After tax cash	61	61	51.50	51.50

In each of the four cases the borrowing company has reduced its taxable income to zero, so there is no company tax payable. Non-resident withholding tax (NRWT) of 10% is deducted from the gross interest in columns (b) and (d). In all four cases the tax paid equates to the bondholder's marginal rate of tax. The enactment of the PRA solution has no impact on debt securities. The tax paid by an individual bondholder is the same for a domestic and a trans-Tasman debt instrument.

A JOINTLY OWNED COMPANY

The hypothetical trans-Tasman company

Table 1 assumes that individual shareholders own the parent company resident in the other jurisdiction. Secondly, there is only one operating subsidiary, which is taxed in the other jurisdiction. A more realistic scenario is illustrated in Diagram one, which formed the basis of the analysis, contained in the Discussion Document.[5]

DIAGRAM ONE: A TYPICAL TRANS-TASMAN CORPORATE OWNERSHIP STRUCTURE:

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  ┌─────────────────────┐              ┌─────────────────────┐
  │ Australian shareholder│              │ New Zealand shareholder│
  └─────────────────────┘              └─────────────────────┘
              ↖                                    ↗
               50%                          50%
                   ┌──────────────────┐
                   │  Aust Parent Co  │
                   └──────────────────┘
               ↗                              ↖
          62.5%                          37.5%
  ┌─────────────────┐              ┌─────────────────┐
  │  Aust. Sub Co   │              │   NZ Sub Co     │
  └─────────────────┘              └─────────────────┘
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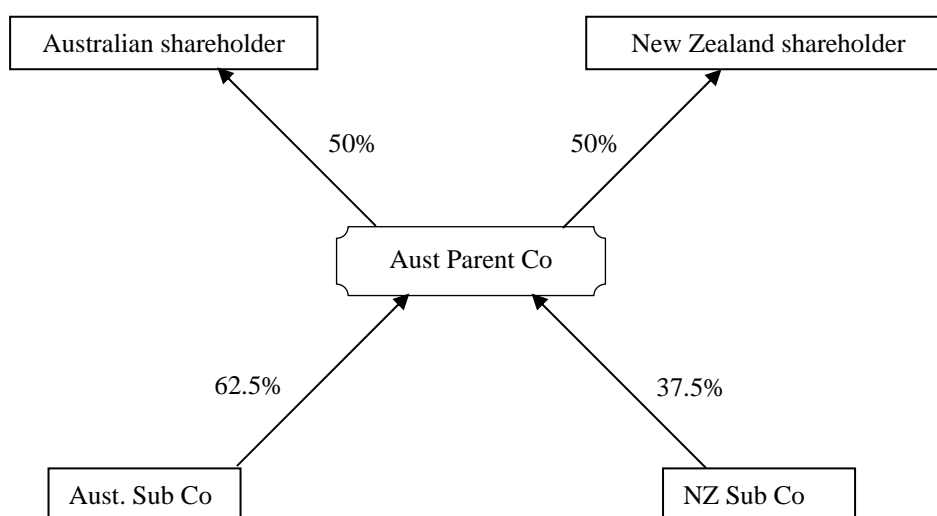
A hypothetical example of a New Zealand trans-Tasman shareholder company

The common theme which underlines Diagram one is the unique nature of trans-Tasman investment. Shareholders on both sides of the Tasman own a parent company. Secondly, the parent company owns an operating subsidiary on the other side of the Tasman. Thirdly, the operating subsidiary is paying full local corporate tax. Fourthly, the dividend paid by the subsidiary to its parent company is usually not effectively subject to non-resident withholding tax (NRWT). Finally, the dividend derived by both groups of shareholders does not contain a tax credit for the corporate tax paid by the operating subsidiary. Prior to the adoption of the PRA solution it was one of the ironies of the closer economic relations (CER) agreement that any "local" parent company that wished to become an Australasian player would reward its shareholders with a punitive tax bill, which was totally inconsistent with CER.

The seriousness of the pre PRA problem is illustrated by the case of a hypothetical New Zealand brewer who expands into Australia. Let us assume that Lager Limited is a company paying New Zealand Company tax at 33% and that it pays a fully imputed dividend to, inter alia, its individual New Zealand shareholders. Assume that Lager Limited is also producing beer for export into a highly competitive global market. The company identifies an opportunity in the Australian market. It merges with an

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[5] Op cit, footnote 2 p. 19.

established Australian beer manufacturer to exploit that opportunity. To fund the merger a new parent company (Super Lager) is formed which is listed on the Australian and New Zealand stock exchanges. As is so often the case, the parent company is based in Australia and the original New Zealand shareholders now hold shares in Super Lager. Despite the fact that the merger was fundamental to the long-term viability of both the pre-merger companies and despite the clear benefits to the respective national economies, the New Zealand shareholders were rewarded with an increased tax liability from 39% to 59%. This occurred despite the fact that the same amount of New Zealand company tax was still paid and the New Zealand shareholding remained intact. Clearly something was wrong with both countries' tax systems.

The New Zealand resident shareholders would argue that local New Zealand tax should be able to be attached to dividends paid to resident individual New Zealand shareholders. There was a prima facie case for arguing that such an outcome is consistent with the objectives of New Zealand's imputation system. It is important to note that the New Zealand shareholders were not asking for any credit to be given to them for the Australian company tax paid by Super Lager. Their case was based solely on the fact that there is local tax paid, there are local shareholders and there is no economically coherent reason for preventing those shareholders receiving an imputation credit for the local company tax.

Why was a 50-50 shareholding structure chosen?
The Discussion Document states that the PRA solution will reduce an individual New Zealand shareholder's effective tax rate by 24%.[6] This saving is based on the hypothetical group structure illustrated in Diagram One.

The shareholding of the hypothetical Australian parent company that was used in the Discussion Document disclosed that 50% of the parent company share capital is owned by individual Australian shareholders. Individual New Zealand shareholders hold the remaining 50%. That is not a typical trans-Tasman shareholding structure. Empirical evidence suggests that a more realistic shareholding is for the dominant group of trans-Tasman shareholders to own approximately 95% of the parent company share capital with the remaining 5% held by the other group of trans-Tasman shareholders

It would appear that a 50/50 shareholding was chosen because it fitted well with one of the key design features of the PRA solution. The available franking credits and imputation credits will be allocated equally to the two groups of trans-Tasman shareholders. The second unusual feature of the hypothetical example is the underlying income flows and the distribution policy of the parent company.

The hypothetical income and dividend flows
Diagram two includes: the tax payments, dividend flows, franking credits and imputation credits. For simplicity, the example assumes a 30% corporate tax rate in both Australia and New Zealand, rather than the actual rates of 30% and 33%, respectively. It should be noted that all diagrams are in Australian dollars and no currency adjustment has been applied in this diagram or in any other diagrams, tables, or graphs included in the paper.

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[6] From 57.3% to 43.6%.

DIAGRAM TWO: THE DISCUSSION DOCUMENT EXAMPLE OF TAX PAYMENTS AND CASH FLOW

```
┌──────────────────┐                          ┌──────────────────┐
│   Australian     │                          │   New Zealand    │
│   shareholder    │                          │   shareholder    │
└──────────────────┘                          └──────────────────┘

$700 Cash                                                  $700 Cash
$300 Franking credits      50%        50%                  $300 Franking credits
$225 Imputation credits                                    $225 Imputation credits

                    ┌─────────────────────────┐
                    │  Australian Parent Co   │      50% distribution policy ($1,400)
                    └─────────────────────────┘
           62.5%    ┌──────────────────────────────────┐   37.5%
                    │ Total Income          $2,800     │
                    │ Distribution Policy   50%        │
                    │ Total dividend paid   $1,400     │
                    │ Franking credits      $750       │
                    │ Imputation credits    $450       │
                    └──────────────────────────────────┘
┌───────────────────────────┐              ┌───────────────────────────┐
│    Australian Sub         │              │        NZ Sub             │
│ Australian Income  $2,500 │              │ NZ Income     $1,500      │
│ Australian tax     $ 750  │              │ NZ tax        $  450      │
│ Net income         $1,750 │              │ Net income    $1,050      │
└───────────────────────────┘              └───────────────────────────┘
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Prior to the adoption of the PRA solution, only the Australian franking credits were attached to the dividend paid by the Australian parent company to trans-Tasman shareholders. However, the New Zealand shareholders were unable to and still cannot utilise the $300 franking credits. Under the PRA solution, the New Zealand shareholders will for the first time be able to access their proportionate share of the imputation credits of $450 which is $225.

TAX BENEFITS OF PRA: THE DISCUSSION DOCUMENT

The New Zealand shareholder's tax reduction
The Discussion Document refers to a 24% reduction in the effective tax rate of a New Zealand shareholder who has invested in a trans-Tasman company with the above ownership and income flows. That reduction is calculated in 'Table Three'.

A significant point to note is that even under this optimal hypothetical company, the effective tax rate is not 39%. This is due to the fact that the dividend is not fully imputed and that follows from the fact that the percentage of profits distributed to the 50% New Zealand shareholders is significantly higher than the 37.5% profit generated from sources within New Zealand. Consequently the dividend is partly generated from Australian source income, which was subject to Australian and not New Zealand income tax. Accordingly the 50% New Zealand shareholders will only receive a partly imputed dividend whenever the percentage of the Australian parent company profit distributed (50%) exceeds the percentage of the parent company's income (37.5%), which is generated from sources within New Zealand.

TABLE THREE: THE DISCUSSION DOCUMENT EXAMPLE OF THE TAX SAVINGS

NZ Shareholder	Before reform $AU	Pro rata allocation $AU
Cash dividend	700	700
Imputation credits	Nil	225
Franking credit	Nil	300
Gross income	700	925
Tax due @ 39%	273	361
Less imputation credit	Nil	(225)
Franking credit	Nil	Nil
Tax payable	273	136
Net dividend	427	564
Effective tax rate	57.3%[1]	43.6%[2]

[1.] [273 + 300 (uncredited underlying corporate tax) / 1000]
[2.] [361 + 75 (uncredited underlying corporate tax) / 1000]

Reaction to the February 2003 announcement

The professional advisers to trans-Tasman companies and the business community did not share the Minister's euphoria. For example, the National Business Review reported:[7]

> This is certainly not the breakthrough it is being portrayed as, Ernst & Young tax partner Michael Stanley said … only a very small minority of shareholders are going to be affected by this. For a real breakthrough there would have to be full recognition of the tax paid.

The problem, which Michael Stanley was alluding to, is the fact that the PRA method allocates the available imputation and franking credits according to the respective shareholding in each country. Secondly, the shareholder can only utilise the appropriate imputation or franking credit which in the case of an individual Australian shareholder is the franking credit but not the New Zealand sourced imputation credit. It therefore follows that a parent company with a small shareholder presence in the other jurisdiction would find it difficult to justify the compliance and administrative costs of implementing a regime, which only provided a small benefit to a minority group of non-resident shareholders. The only type of Trans-Tasman Company, which would derive a significant benefit from the PRA solution, is the hypothetical company described in the Discussion Document.[8]

A MORE REPRESENTATIVE EXAMPLE OF THE PRA SOLUTION

A sample of trans-Tasman companies

The Discussion Document support of the PRA solution is based on a hypothetical trans-Tasman company with, inter alia, a 50% New Zealand and 50% Australian

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[7] Rob Hosking, "Tax specialists pour scorn on tax deal", *National Business Review*, February 21, 2003 p. 5.
[8] Please refer to graphs:4,5, and 6, and the discussion which illustrates this principle based on different levels of distribution. Graph 4 plots the effective tax rates associated with a 50% distribution policy. Graph 5 plots the impact of a 75% distribution policy and graph 6 illustrates the effective tax rates associated with a 100% distribution policy. I concede that there are commercial and cash flow reasons why a company is unlikely to implement these levels of distribution.

shareholding. However, the following Table demonstrates that the Discussion Document example is not a reliable indicator of a representative company.

TABLE FOUR: THE SHAREHOLDING COMPOSITION OF TRANS-TASMAN COMPANIES

Source: Company Annual Reports

Company	Year Ending	New Zealand Shareholding	Australian Shareholding
Australian Gas Light Company	2003	1.66%	97.71%
AXA	2003	2.95%	97.05%
Goodman Fielder Wattie	2003	4.64%	94.86%
National Australia Bank	2002	0.64%	98.58%
Telstra	2002	0.50%	93.20%
The Warehouse Group*	2003	97.02%	2.47%
Tower*	2003	78.81%	20.64%
Westpac	2003	3.34%	95.15%
* A New Zealand company			

The New Zealand shareholding in this sample of Australian parent companies is less than 5%. In the case of Westpac, the approximately 95% Australian shareholders will gain no advantage from the PRA solution, and only approximately 4% of the total tax paid by the New Zealand group will be passed on as an imputation credit to the small minority of New Zealand shareholders. It is perhaps not surprising that as at 1 January 2005, no major trans-Tasman public company has announced that it will implement the PRA solution.

A more realistic example of an Australian parent company
The following diagram illustrates the impact of the PRA solution on an Australian parent company, which is dominated by Australian individual shareholders. The Diagram is based on selected information taken from the Annual Report of Westpac Australia.[9] The shareholding percentages, income mix and distribution were taken from the 2002 Concise Annual Report and the 2002 Financial Report. However, the combined total pre tax income of both the New Zealand and Australian and operating subsidiaries ($4,000) is based on the example used in the Discussion Document.

Assumptions:

- The Australian operating subsidiary earns 85% of the total combined income.

- The New Zealand subsidiary earns 15% of the total combined income.

- Australian shareholders own 95% of the Australian company.

- New Zealand shareholders own 5% of the Australian company.

- Both subsidiaries distribute 100% of their net profit after tax to the parent.

- The Australian parent distributes 60% of its after-tax income as a dividend.

- The corporate tax rate is 30% for both operating subsidiaries.

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[9] Shareholding statistics taken from *Westpac Australia Concise Annual Report 2002*. Income statistics taken from *Westpac Financial Report 2002,* Note 29, p. 114. Both documents are available online at http://www.westpac.gov.au.

DIAGRAM THREE: THE PRO RATA ALLOCATION REGIME

Australian Shareholder	
Cash dividend	$1,596
Franking Credit	$684
Imputation Credit	$171

New Zealand Shareholder	
Cash dividend	$84
Franking Credit	$36
Imputation Credit	$9

95% shareholding

5% shareholding

Australian Parent Company	
Total income from subs*	$2,800
Distribution policy	60%
Total dividend paid**	$1,680
Franking credits available***	$1,020
Imputation credits available	$180

Dividend $2,380

Dividend $420

85% of total income

15% of total income

Australian Sub Co	
Australian Income	$3,400
Tax @ 30%	$1,020
Net Income	$2,380

NZ Sub Co	
New Zealand income	$600
Tax @ 30%	$180
Net income	$420

Pro-Rata Allocation	
Australian Shareholder	
Franking credits available	$969
Franking credits at maximum ratio	$684
Imputation credits available	$171
Imputation credits at maximum ratio	$180
New Zealand Shareholder	
Franking credits available	$51
Franking credits at maximum ratio	$36
Imputation credits available	$9
Imputation credits at maximum ratio	$36

*Total income from subsidiaries = $2,380 + $420 = $2,800.
**Total dividends paid = $2,800 x 60% = $1,680.
***Franking credits (FCs) available = $969 + $51 = $1,020.
The New Zealand company tax paid of $200.13 is not eligible for imputation to dividends distributed by the Australian company.
FITC is reflected in this calculation (but not in the dividend flows):
A supplementary dividend of 17.65% of the ordinary dividend (of $420)
is paid to the non-resident parent company: $420 x 17.65% = $74.13

Cash dividend	$420.00
Plus supplementary dividend	$74.13
	$494.13
NRWT @ 15%	$74.13
Net cash dividend	$420.00
Company tax	$126.00
NRWT	$74.13
Total	$200.13

PRA: The tax saving revisited

The total income of the two subsidiaries is $4,000. In Diagram Three, the New Zealand Subsidiary Company only contributes 15% (compared to 37.5%) of the income earned by the Australian Parent Company whereas the Australian Subsidiary Company contributes 85% of the income (compared to 62.5% in the example portrayed in the Discussion Document). The following Table illustrates the change in the effective tax rate, which a New Zealand shareholder would expect to derive from a company such as Westpac. The fall in the effective tax rate is from 57.3% to 52.5%

(5%), which is only an 8% reduction in the effective tax rate. This is significantly less than the 24% benefit referred to in the Discussion Document. The difference between the respective results reflects the change in shareholding and the change in the underlying sources of income between this Example and the hypothetical example used in the Discussion Document.

TABLE FIVE: THE PRO-RATA ALLOCATION (AUSTRALIAN PARENT)[10]

New Zealand shareholder	$AU	Australian shareholder	$AU
Cash dividend	84	Cash Dividend	1,596
Imputation credit	9	Imputation Credit	171
Franking credit	36	Franking credit	684
Taxable income	93	Taxable income	2,280
Tax due @ 39%	36	Tax due @ 48.5%	1,106
Less imputation credit	9	Less imputation credit	0
Less franking credit	0	Less franking credit	684
Tax payable	27	Tax payable	422
Net dividend	57	Net dividend	1,174
Effective tax rate	52.50%	Effective tax rate	48.50%
Pre-tax cash dividend	120	Pre-tax cash dividend	2,280
Company tax	36	Company tax	684

Compliance costs

The Discussion Document acknowledges that, from an individual shareholder's perspective, the pro rata allocation method does not provide the optimal solution [11] which will only occur if one of the alternative methods such as pro rata allocation is adopted.[12] This conclusion is based on the fact that only a proportion of the tax paid in each country is available to the resident shareholders of that country.

Secondly, the PRA solution will result in additional compliance costs for any company that elects to adopt the proposal. For example, the Australian parent company, described in Diagram three will be required to maintain an additional memorandum account which would track the imputation credits generated in New Zealand and the attachment of those credits to any dividend paid to its trans-Tasman shareholders.

Unless the pro rata allocation model provides significant additional benefits to individual Australian shareholders, the Australian parent company may have difficulty justifying the increased compliance costs. This could become an issue if there are alternative and more cost effective ways of achieving the desired benefits for shareholders.

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[10] A surprising aspect of this table is that there is NO reduction in the effective tax rate for the Australian shareholders. This could be one of the reasons why no Australian public companies have implemented the PRA solution. A more detailed discussion and analysis of the reasons for this apparently unusual tax outcome is illustrated in graphs 2, & 3, and the accompanying discussion.

[11] See note 2 above at p 15 (para.3.20), and p16 (para. 3.26 & 3.28).

[12] The Discussion Document contains a brief analysis of the pro rata allocation, streaming and apportionment options at p 14 – 17.

ALTERNATIVE SOLUTIONS

The optimal solution

The pro rata model is not the optimal tax solution. From a company and shareholder perspective, the streaming of tax credits would provide significant additional benefits that are not available under the pro rata allocation method. If this alternative were adopted, then the Australian parent company and its New Zealand subsidiary would attach imputation credits to any dividend distributed to the New Zealand resident shareholders. Those shareholders would not receive a proportion of the available franking credits. Accordingly, the streaming of credits model does not result in any wastage; that is to say, the misallocation of either imputation or franking credits.

There were three other alternatives, which both governments considered but rejected. They were:

- Mutual recognition (including pro rata revenue sharing).
- Apportionment.
- Streaming.

Mutual recognition

Under this theoretical alternative, there are two possible solutions. The first would involve providing imputation/franking credits for the company tax paid in the other jurisdiction. The second method would involve extending the full benefits of, for example, imputation to individual shareholders resident in Australia. This would be done on a reciprocal basis.

In addition, compensation could be paid to the country that recognised the imputation credit from the country that received the company tax, which created the credit.

Under the pro rata revenue sharing solution, the New Zealand government would recognise, as a New Zealand imputation credit, a franking credit that was attached to a dividend derived by a New Zealand individual shareholder, and vice versa. Under this solution the New Zealand government, as the resident country, would bear the cost of recognising the Australian franking credit. Accordingly, compensation could become payable to the country that recognised the imputation credit (New Zealand) from the country that received the tax which generated the franking credit (Australia). If this feature did not form a part of this solution, it would mean that the cost of the franking credit would be borne by the country of residence (New Zealand).

At the end of each income year, there would be a wash-up calculation and payment. The two revenue authorities would calculate the total credits claimed by their respective taxpayers and one country would pay to the other the net balance. For example, if the New Zealand government had recognised $100m in Australian franking credits granted to New Zealand residents, and the Australian government had recognised $50m in New Zealand imputation credits granted to Australian residents, then the Australian government would pay to the New Zealand government $50m.

From the perspective of an individual New Zealand residence shareholder, this method would involve each country recognising the other country's imputation credits as if they were its own, but in turn receiving compensation from the other government. Both governments rejected this theoretical solution because mutual recognition exceeds what was required to solve triangular taxation. One of the main conceptual

concerns was that shareholders in either country would receive imputation credits, regardless of whether tax was paid in their respective home countries. "Neither government is willing, therefore, to pursue mutual recognition further at this stage."[13]

Apportionment

This theoretical solution is similar to pro rata allocation except that the imputation credits are allocated in proportion to shareholdings of residents in each country and the amount of income earned in each country. Under the pro rata allocation solution, the credits do not reflect the sources of the underlying income of the parent company.

If the hypothetical parent company in Diagram three earned 50% of its income from sources in Australia and 50% of its income from its New Zealand subsidiary, the shareholders would receive 50% of a full Australian imputation credit and 50% of a full New Zealand imputation credit. The solution would be advantageous to the New Zealand individual resident shareholders who currently do not receive any of the New Zealand imputation credits. However, it would create a significant disadvantage to the resident Australian shareholders who currently receive a fully franked dividend from the Australian parent company. Accordingly, this theoretical solution was unlikely to find any support from an Australian parent company with a significant Australian individual shareholding.

Secondly, this method was rejected because it is inconsistent with the current imputation regimes of both countries, which provide that imputation/franking credits must be allocated across all shareholders. Thirdly, the present regimes do not recognise different sources of income that are contained in a dividend distribution.

Streaming

Under this alternative, all tax paid by the hypothetical Australian parent company would be allocated to the Australian shareholders whereas the tax paid by the New Zealand subsidiary would be allocated solely to the New Zealand shareholders' in the Australian parent company. From a trans-Tasman shareholders perspective, this is the optimal solution because it does not involve the wastage or misallocation of a proportion of the available imputation and franking credits and is therefore superior to the PRA pro rata solution. It would appear from the Discussion Document that both governments rejected this alternative because they did not wish to signal that the streaming of available credits should become more acceptable.[14] One of the main design features of both countries imputation regimes, which have not altered since their introduction, is the principle that credits must be allocated equally to all shareholders irrespective of their ability to utilise the credit. For example, a shareholder on a marginal rate of 19.5% who receives an imputation credit of $33 is not able to effectively utilise the surplus imputation credit, unless they have alternative sources of unimputed income.

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[13] Op cite, footnote 2 para 3.42 p.15.
[14] Ibid p16 para 3.27

THE DETERMINANTS OF EFFECTIVE TAX RATES UNDER PRO RATA ALLOCATION

The relationship between income distribution policy and income earned in a jurisdiction

A dividend will always be partially imputed (or franked) if the proportion of income derived in New Zealand (or Australia) is less than the percentage of profits the parent company distributes as a dividend. This finding is intuitive because when the income distribution policy exceeds the ratio of income earned in a particular jurisdiction, part of the dividend consists of income derived from the other country. This "other" income would have paid company tax in the other jurisdiction, which cannot be offset against the personal tax liability of a non-resident shareholder. Conversely, whenever the proportion of income earned in a particular jurisdiction is greater than the portion of income distributed, shareholders resident in that jurisdiction will receive fully imputed dividends.

**A graphical representation of the general rule of pro rata allocation**

The graphs numbered one to six demonstrate the general principles of pro rata allocation. They show how a shareholders marginal tax rate changes as the distribution policy, and level of income earned in New Zealand are manipulated. For example, the curve representing "Pro rata, 25%" corresponds to the effective tax rates associated with a 25% dividend distribution policy. The graphs are based on an Australian parent company with a trans-Tasman shareholding of 95% Australians and 5% New Zealanders. Note however a change in the shareholding of either group does not alter the shareholder's effective tax rate under pro rata allocation. The general rule ensures that only a change in the proportion of income earned in each country, or the distribution policy, will lead to a change in the effective marginal tax rate. Accordingly, under the pro rata allocation model it is assumed that shareholding mix was the same throughout the simulation.

Graph One portrays the effective tax rates of a New Zealand shareholder based on different levels of profit distribution. Whenever the proportion of income generated by the New Zealand subsidiary exceeds a particular level of income distribution, the effective tax rate becomes equal to the current marginal tax rate of the New Zealand shareholder (which is currently 39%). Full imputation is represented by the horizontal part of the line. In the case of a 25% distribution policy, a New Zealand shareholder's tax liability becomes 39% whenever the New Zealand subsidiary contributes more than 25% towards the parent company's total income. Prior to reaching the point of full imputation, an additional tax liability is imposed on the New Zealand shareholder, which is portrayed by the sloped section of the line.

Graph Two is identical to Graph One except that it illustrates the impact of the PRA solution from the perspective of an Australian shareholder. Graph Two provides further evidence of the general theme of pro rata allocation. Australian shareholders will only receive limited tax relief when the proportion of income earned in Australia is less than the distribution policy. Modelling a distribution policy of 25% illustrates how the effective tax rate of an Australian shareholder is higher than their marginal tax rate whenever the level of New Zealand sourced income exceeds 75% of the total income derived by the parent company. This implies that the proportion of income earned in Australia is less than 25%.

Graph 1

**The Effect of Income Distribution Policy on
New Zealand Shareholders' Tax Liability**
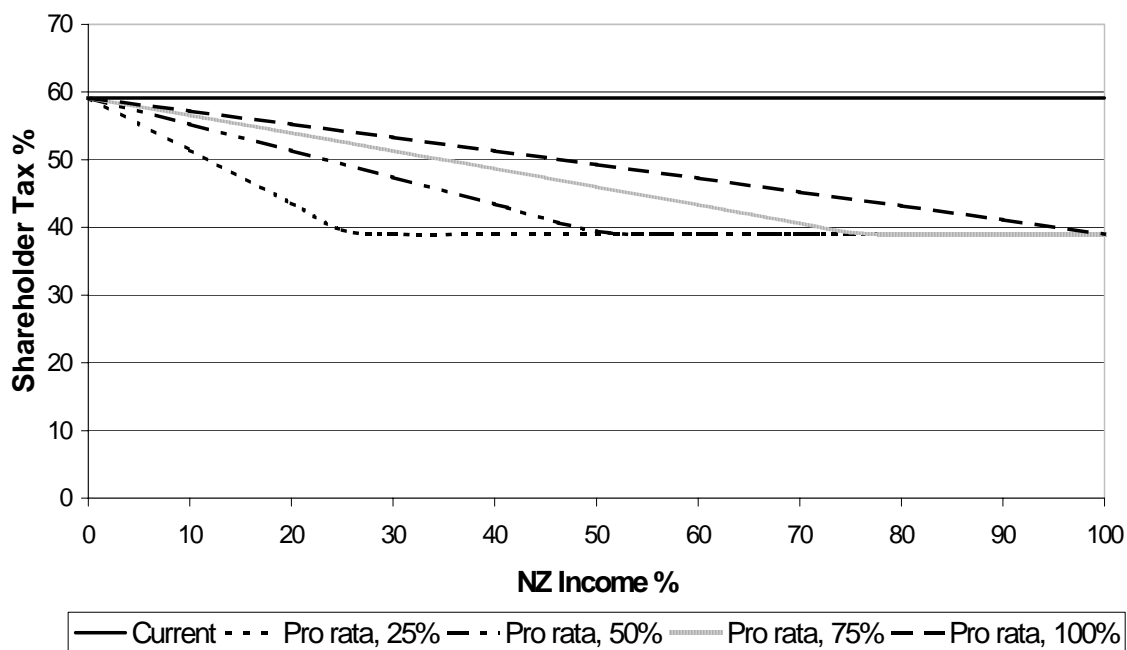
Graph 2

**The Effect of Income Distribution Policy on
Australian Shareholders' Tax Liability**
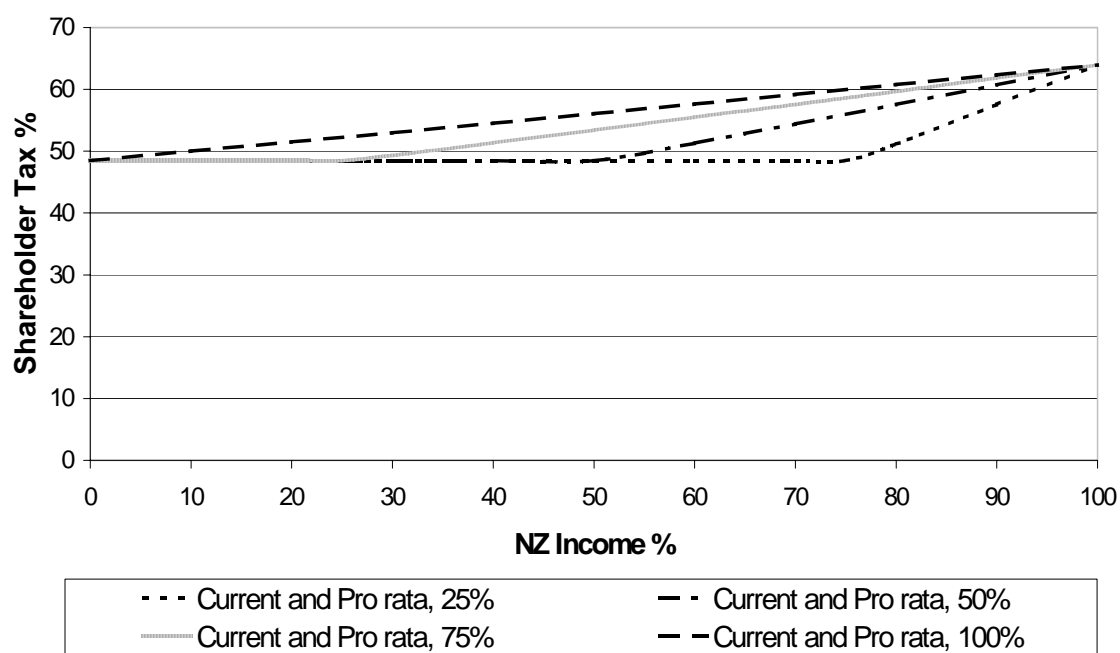
| Graph 3 | **Effective Tax Rates for a 25% Distribution Policy** |

Legend: NZ Current (solid) · · · NZ Pro rata — — AU Current and Pro rata
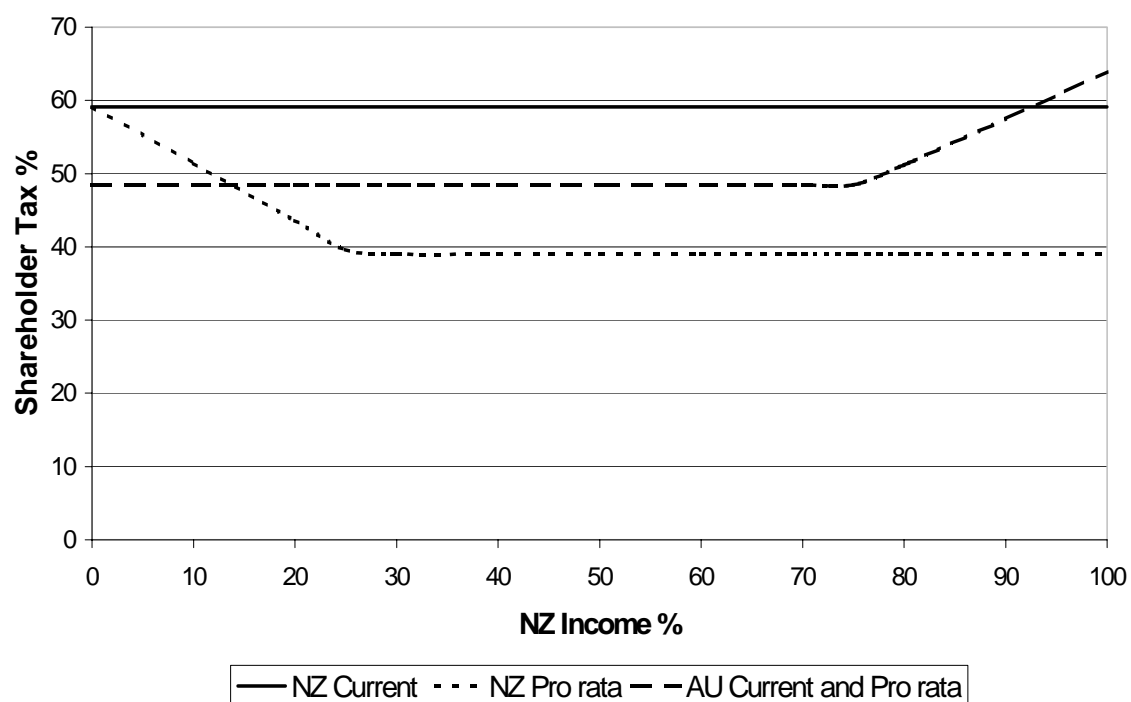
| Graph 4 | **Effective Tax Rates for a 50% Distribution Policy** |

Legend: NZ Current (solid) — — NZ Pro rata · · · AU Current and Pro rata
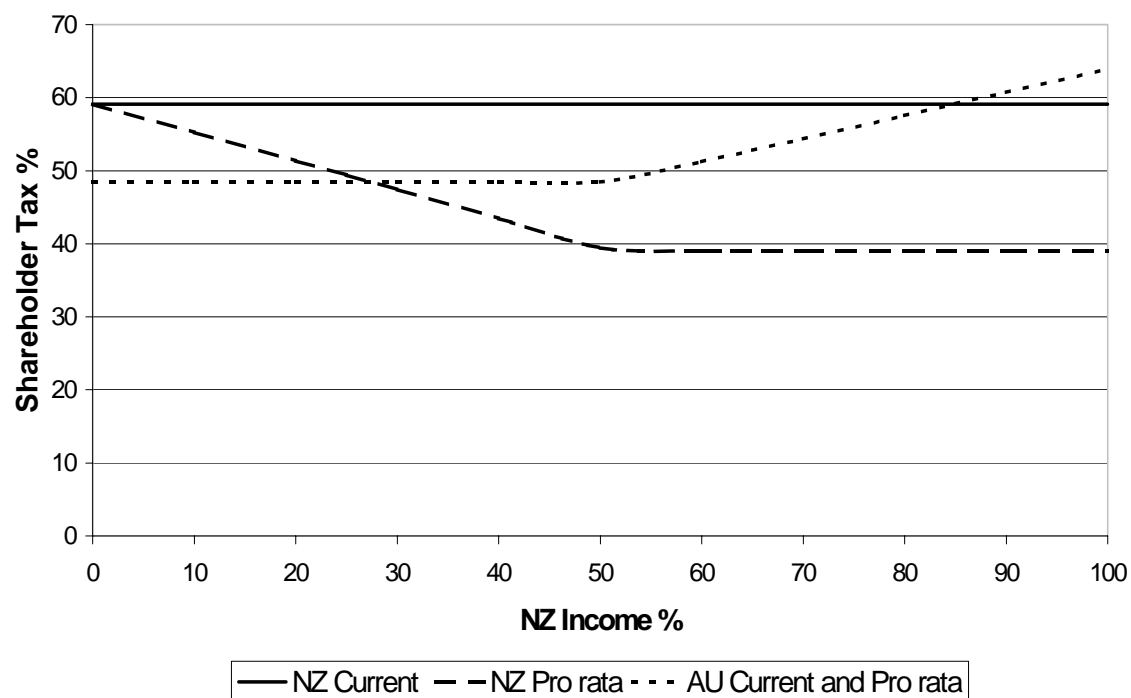
Graph 5   **Effective Tax Rates for a 75% Distribution Policy**

Effective Tax Rates for a 75% Distribution Policy

— NZ Current — — NZ Pro rata · · · AU Current and Pro rata
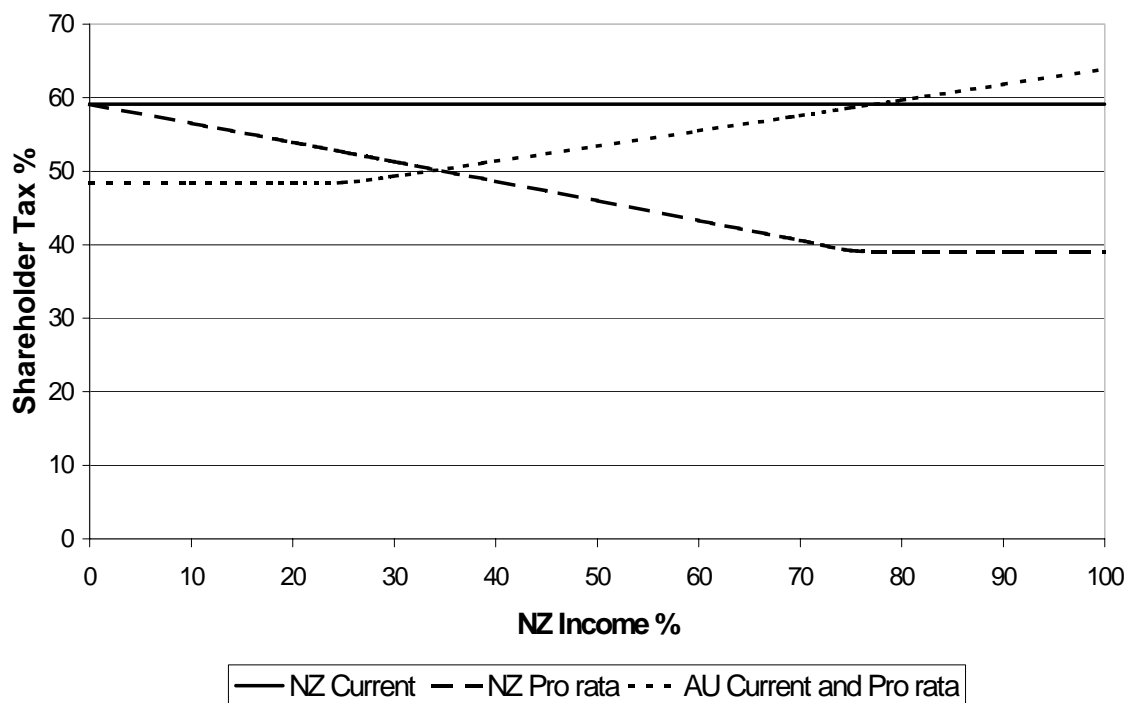
Graph 6   **Effective Tax Rates for a 100% Distribution Policy**

Effective Tax Rates for a 100% Distribution Policy

— NZ Current — — NZ Pro rata · · · AU Current and Pro rata
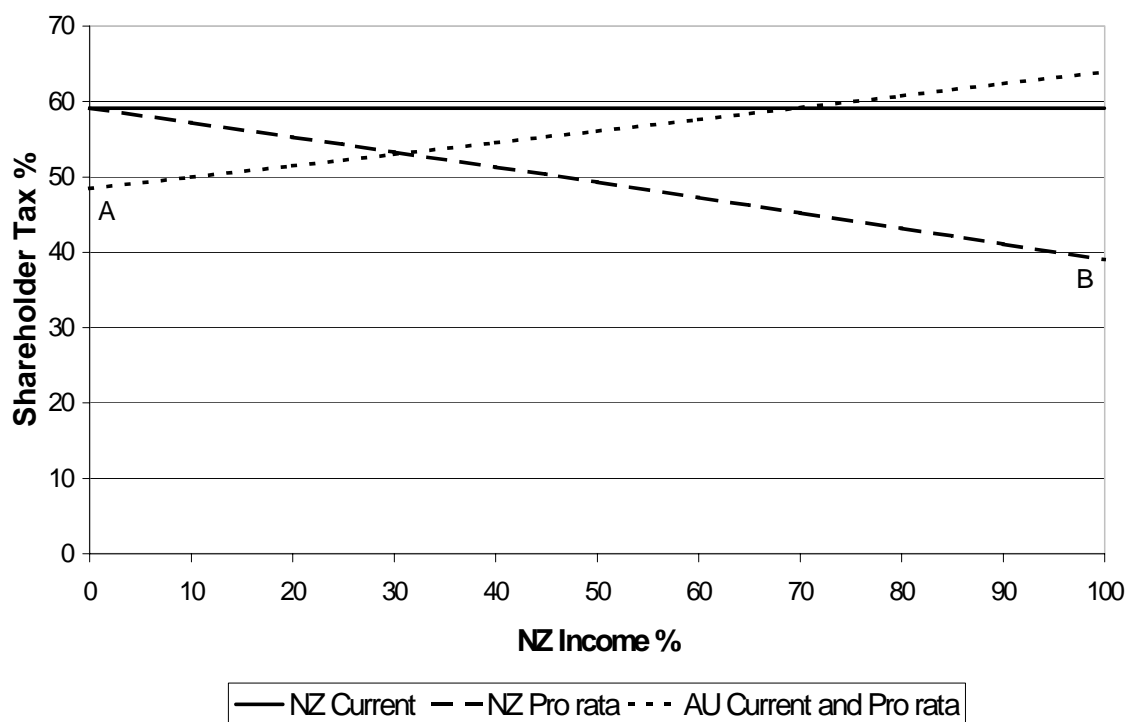
Finally Graph Two emphasises that regardless of the distribution policy, the Australian shareholders marginal rates of tax are the same prior to and after the enactment of the PRA solution. The foreign tax credits attached to their dividend cannot be used to reduce their domestic tax liability. Constructing the graphs to reflect a New Zealand company would also demonstrate that a New Zealand shareholder's tax rates under pro rata allocation reflect those under the current regime.

Graphs Three, Four, Five, and Six illustrate the effective tax rates for New Zealand and Australian shareholders of an Australian parent company. The only variable, which has been altered, is the percentage of the available profit, which is distributed. These four graphs will assist trans-Tasman companies to calculate the income and dividend payments, which would be necessary to provide their shareholders with a fully imputed dividend.

Graph Three demonstrates that a 25% distribution policy will provide fully imputed and franked dividends whenever the proportion of New Zealand income is between 25% and 75% of the parents company's total income. However as the dividend is increased, the shareholders no longer receive a fully imputed dividend.

The only scenario when both groups of shareholders are able to receive fully imputed dividends is shown in Graph Four (which models a distribution policy of 50%). The only point where this occurs is at the 50% level of income distribution. Moving beyond a 50% distribution the four graphs illustrate that both full imputation and franking becomes a mutually exclusive event. It is not possible for both subsidiaries to be earning greater than 50% of total income. The 75% and 100% distribution graphs[15] highlight the mutual exclusivity principle.

An evaluation of the Discussion Document hypothetical trans-Tasman group
The shareholding and income characteristics of the Australian parent company in Diagram Three do not correspond to the major trans-Tasman companies listed in Table Four. It appears to be more common occurrence for a company resident in one jurisdiction to have a minority group of shareholders in the other jurisdiction. Secondly, a significantly lower level of income is typically sourced from the foreign jurisdiction. The empirical evidence would suggest that the New Zealand subsidiary generating 37.5% of the Australian parent's total income is an unrealistic proportion.

The income of the Australian and New Zealand subsidiaries in Diagram Three is based on the Westpac example where 15% of the total group income was sourced from New Zealand. However the New Zealand shareholding was only 5%. Modelling an actual company's shareholding and income characteristics produces an example that is more indicative of trans-Tasman commercial reality. The figures used in the Discussion Document are unlikely to accurately illustrate the benefits that large publicly owned trans-Tasman company would produce for their shareholders if they were to adopt the PRA solution.

A second unrealistic simplification contained in the main example used throughout the Discussion Document is the 100% distribution of each subsidiaries net income to the parent company. A full distribution of net income would be unusual in practice.

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[15]   Graphs 5 and 6, respectively.

Thirdly, subsidiaries that do pay a dividend to their parent company often to do so on an irregular basis.

The effective tax rates used in the Discussion Documents example of Pro Rata Allocation

The tax benefits calculated in this paper, before and after the enactment of the PRA solution, are materially different to the tax savings highlighted in the Discussion Document. This stark contrast can be traced to the respective differences in the income and shareholding characteristics of the parent company.

Unlike the Discussion Document, Table Five depicts a much more realistic tax saving of 4.85% for the New Zealand shareholders. The Discussion Document's example of PRA creates a unrealistic perception of the PRA regime. The simplistic income mix in Diagram Two was directly responsible for the apparent tax savings which would occur once the proposal became law. This would not have been possible if a more commercially representative example had been used. However, that would have led to a less favourable impression of the benefits of the PRA solution.

The 50% income distribution assumption was another factor that enabled the Discussion Documents main example to produce a fully franked dividend for the Australian shareholders. If a distribution policy higher than 62.5% (the proportion of income sourced in Australia) were adopted, the Australian shareholder would no longer receive a fully imputed dividend. This could be the reason why a 50% distribution of profit was adopted in the Discussion Document because it was less than the ratio of income derived in Australia.

Graph Six (100% distribution policy) emphasises the negative effect that a high distribution policy can have on the marginal tax rates which occur under the PRA solution. At point "A", Australian shareholders will only receive a fully franked dividend if the New Zealand subsidiary does not earn any income. The same thing occurs for the New Zealand shareholders modelled in Graph Six at point "B". The New Zealand shareholders will receive a fully imputed dividend whenever the income of the parent company is generated entirely from its New Zealand subsidiary.

The ability to modify the effective tax rate of a trans-Tasman shareholder through the dependent variables of the PRA legislative solution can be used to create a particular outcome. The unrealistic profile of the group of companies, which formed the bases of the analysis in the Discussion Document significantly over stated the level of tax saving which would occur if one of the public companies disclosed in Table Four elected to implement the PRA solution. This is a serious concern because a company may be misled into adopting the PRA solution due to the unrealistic portrayal of the benefits of the PRA legislative solution.

FULL STREAMING

Introduction

One of the major criticisms of the PRA solution is that it will force an Australian parent company to allocate its available imputation and franking credits to individual shareholders that are unable to utilise them. Under the full streaming, alternative all tax paid by the hypothetical Australian Parent Company would be allocated to the Australian shareholders whereas the tax paid by the New Zealand Subsidiary Company would be allocated solely to the New Zealand shareholders. From a trans-

Tasman shareholder's perspective, this is the optimal solution because it does not involve the wastage or misallocation of a proportion of the available imputation and franking credits and is therefore superior to the pro rata solution. It would appear from the Discussion Document that both governments rejected this alternative because they did not wish to signal that the streaming of available credits should become more acceptable.[16] One of the core design features of both countries imputation regimes, which have not altered since their introduction, is the principle that credits must be allocated equally to all shareholders irrespective of their ability to utilise the credit. For example, a New Zealand shareholder on a marginal rate of 19.5% who receives an imputation credit at the maximum rate of $33 on a $67 cash dividend is not able to effectively utilise the surplus imputation credit, unless he/she has alternative sources of unimputed income.

The full streaming methodology
Diagram Four is based on the profile of the same Australian parent company shown in Diagram Three (which was designed to demonstrate the actual tax saving associated with the PRA solution.) This will enable a valid comparison to be made between the two alternatives. The key difference is that the Australian shareholders no longer receive an imputation credit and the New Zealand shareholders no longer receive a franking credit. A second important difference is that the respective operating subsidiaries franking and imputation accounts now disclose a credit balance. In other words, there are surplus tax credits that are available even after the payment of a fully imputed dividend. There is no longer any wastage of domestic credits that are otherwise allocated to the Australian Parent Company's non-resident shareholders.

An effective tax rate that is equal to a comparable domestic market investment
Table Six demonstrates the significant reduction in the effective tax rate associated with the full streaming option. Under this option, there is no improvement in the Australian shareholder's after tax return. However, the full streaming option enables the New Zealand shareholders to receive a dividend with an effective tax rate that is comparable to an equivalent domestic investment. Double taxation is completely eliminated.

For a New Zealand shareholder Table Six demonstrates that their after-tax position has substantially improved. Full streaming enables the New Zealand shareholders to gain the benefit of the total amount of New Zealand company tax paid by the New Zealand subsidiary,[17] whereas PRA solution links the tax benefit to the shareholder's ownership in the Australian Parent Company. The profile of the Australian Parent Company summarised in Diagram Four will completely eliminate double taxation, reducing the New Zealand tax rate to 39%. This amounts to a reduction of approximately 32% compared to the approximately 8% reduction associated with the PRA method.

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[16] See n 2, at P. 16, para 3.27
[17] Subject to the maximum imputation ratio.

DIAGRAM FOUR: THE FULL STREAMING MODEL
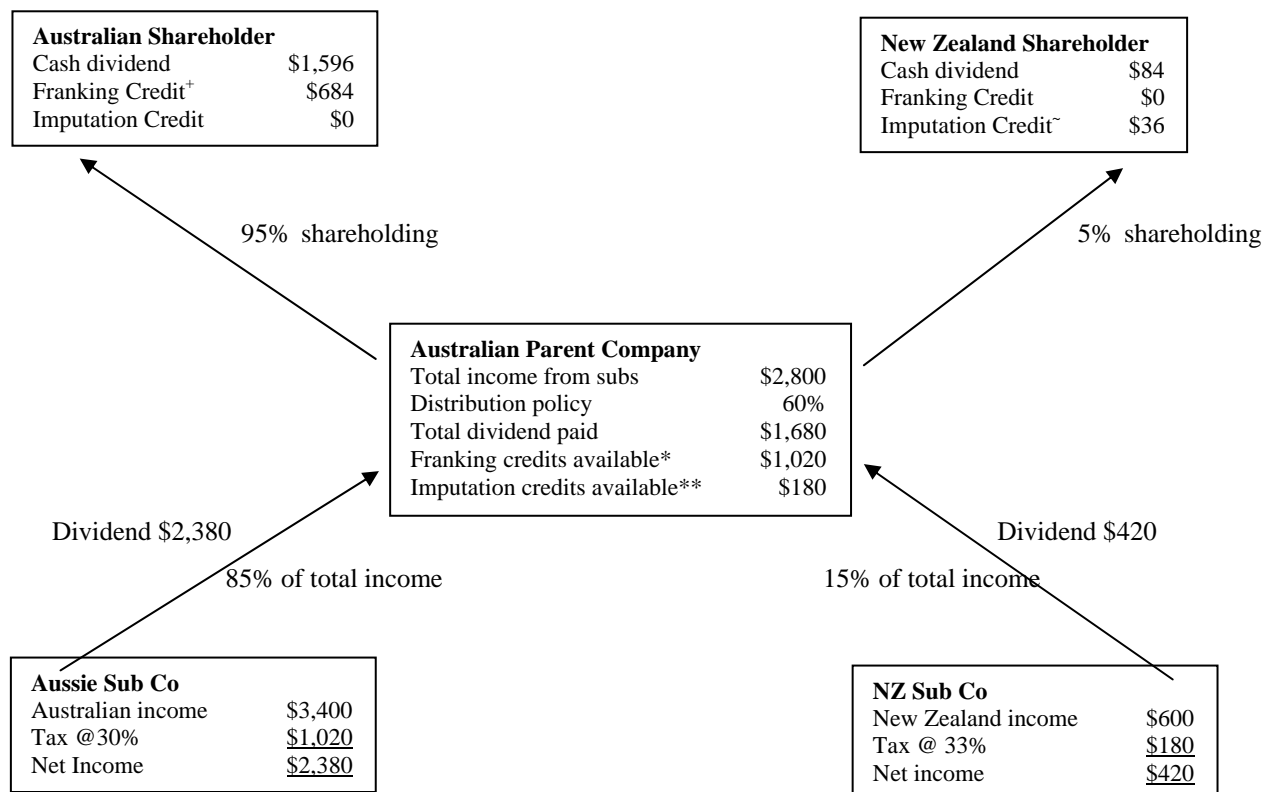
Australian Shareholder
Cash dividend $1,596
Franking Credit[+] $684
Imputation Credit $0

New Zealand Shareholder
Cash dividend $84
Franking Credit $0
Imputation Credit[~] $36

95% shareholding

5% shareholding

Australian Parent Company
Total income from subs $2,800
Distribution policy   60%
Total dividend paid $1,680
Franking credits available* $1,020
Imputation credits available** $180

Dividend $2,380

85% of total income

Dividend $420

15% of total income

Aussie Sub Co
Australian income $3,400
Tax @30% $1,020
Net Income $2,380

NZ Sub Co
New Zealand income $600
Tax @ 33% $180
Net income $420

*Total income from subsidiaries = $2,380 + $420 = $2,800.
**Total dividends paid = $2,800 x 60% = $1,680.
***Franking credits (FCs) available = $969 + $51 = $1,020.
The New Zealand company tax paid of $200.13 is not eligible for
imputation to dividends distributed by the Australian company.
FITC is reflected in this calculation (but not in the dividend flows):
A supplementary dividend of 17.65% of the ordinary dividend (of $420) is paid to the non-resident parent company: $420 x 17.65% = $74.13

Cash dividend	$420.00
Plus supplementary dividend	$74.13
	$494.13
NRWT @ 15%	$74.13
Net cash dividend	$420.00
Company tax	$126.00
NRWT	$74.13
Total	$200.13

FULL STREAMING

Australian Shareholder
Franking credits available* $1,020
Franking credits at maximum ratio $684

Balance in franking credit account $336

New Zealand Shareholder
Imputation credits available** $180
Imputation credits at maximum ratio $36

Balance in imputation credit account $144

TABLE SIX: THE FULL STREAMING MODEL (AUSTRALIAN PARENT)

New Zealand shareholder	$AU	Australian shareholder	$AU
Cash dividend	84	Cash Dividend	1,596
Imputation credit	36	Imputation Credit	0
Franking credit	0	Franking credit	684
Taxable income	120	Taxable income	2,280
Tax due @ 39%	47	Tax due @ 48.5%	1,106
Less imputation credit	36	Less imputation credit	0
Less franking credit	0	Less franking credit	684
Tax payable	11	Tax payable	422
Net dividend	73	Net dividend	1,174
Effective tax rate	39.00%	Effective tax rate	48.50%
Pre-tax cash dividend	120	Pre-tax cash dividend	2,280
Company tax	36	Company tax	684

WHY WAS FULL STREAMING REJECTED?

Introduction

The Discussion Document summarises[18] the three primary reasons why both governments have rejected the streaming alternative.

The perception that the streaming model provides tax benefits that are disproportionate to the individual shareholder's interest in the company.

The perception that this alternative contained a fiscal risk because all of the available imputation credits could be used to reduce an individual shareholder's New Zealand tax liability.

A concern that the adoption of the streaming model could be interpreted as a signal that streaming is now an acceptable strategy.

A careful examination of the history of both the Australian and New Zealand international tax regime and the underlying objectives of the imputation regime strongly suggests that there is very little merit (if any) in the governments' concerns.

Disproportionate benefits

The Discussion Document

The governments' concern was

> Streaming would see all tax paid in New Zealand available to provide imputation credits solely to New Zealand shareholders. Such a model is contrary to Australia and New Zealand's imputation rules as it provides tax benefits to shareholders disproportionate to their shareholding.[19]

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[18] Pages 16-17, paragraphs 3.25-3.27.
[19] p.10, paragraph 3.25.

Maximum imputation ratio
This is not a substantial reason for rejecting the streaming model. Under the maximum imputation model an Australian Company is restricted by the amount of imputation credit that it can attach to the dividend. Based on the current New Zealand corporate tax rate of 33% imposed upon the New Zealand subsidiary company, the maximum imputation credit is 33/67, of the net dividend paid. It is not possible for the New Zealand shareholders to receive an imputation credit which exceeds the tax paid by the New Zealand operating subsidiary to the New Zealand revenue authority.

A minor distinction
The only difference between the pro rata and streaming models is that the parent company has a choice under the streaming model of allocating either a franking or imputation credit to its respective shareholders. The objective of the streaming model is to eliminate the incidence of double taxation on income sourced from the country in which the shareholder is a tax resident. This laudable objective is entirely consistent with the objectives of the New Zealand and Australian imputation regimes, which were introduced to eliminate double taxation. The point that has been overlooked in the Discussion Document is that New Zealand corporate tax is imputed to New Zealand resident shareholders. There is no attempt under the full streaming approach to ensure that an individual New Zealand shareholder obtains a credit for Australian company tax in respect of income, which was not previously taxed in New Zealand.

Fiscal risks
The Discussion Document
The fiscal concerns of the governments are difficult to understand. The Discussion Document states that:

> "Both governments, … are concerned about the fiscal risks of [the streaming] model, given that imputation credits would be allocated only to shareholders of countries in which the tax was paid. This means that most of the imputation credits allocated could be used to reduce the shareholder's home country tax liabilities."[20]

An anomaly in the current law
Both governments are incorrect in their understanding of the streaming model because streamed credits will offset a resident shareholder's domestic tax liability only to the extent that underlying corporate tax was paid in that country. When viewed from this perspective it is difficult to see how the streaming model could ever pose a material threat to the New Zealand tax base. The streaming model merely alleviates the wastage of credits, which occur under the current imputation regime. The streaming model simply rectifies a deficiency in the current law, which is not putting the tax base at risk. Correcting an anomaly in the existing law will ensure that there is consistent treatment between a domestic investment and a triangular investment.

Inconsistent with anti-streaming rules
The Discussion Document
The third and final concern of both governments was that to allow streaming in the context of triangular taxation:

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[20] p. 16, paragraph 3.26.

"might also signal that streaming of credits more generally is now acceptable. Both governments wish to avoid such a result, as it is still both countries policy that imputation credits should not be streamed and should be allocated across all shareholders."[21]

It is clear that the streaming model is not inconsistent with the imputation regime. The report of the original committee, which considered the design parameters of the current imputation regime, noted that from an imputation policy perspective, there were no policy reasons to prevent the streaming of credits in the case of triangular taxation. [22] The committee rejected the streaming option because of their concern that it could undermine the CFC and FIF regimes. The Consultative Committee noted that from an imputation policy perspective there were no theoretical reasons to prevent, for example, National Australia Bank and Bank of New Zealand (NAB/BNZ) from passing imputation credits to its NZ resident individual shareholders. The Consultative Committee's concern was that:[23]

"The imputation system and the international tax reforms need to be mutually consistent and reinforcing. A non-resident company can avoid the international tax regime by holding its non New Zealand interests through a non-resident subsidiary. This advantage would be counterbalanced in part if such a company were not able to pass imputation credits through to its New Zealand shareholders. For this reason, the Committee does not favour allowing non-resident companies to allocate credits to New Zealand resident shareholders."

This passage clearly demonstrates the interrelationship between NZ's international tax regime and the current imputation regime. The designers of both regimes correctly noted the interrelationship and that from a purely imputation perspective, there were no issues arising from the streaming of credits to alleviate triangular taxation.

Of greater concern are the significant changes in corporate ownership that have occurred since 1988. Lion Nathan and Goodman Fielder Wattie are no longer NZ resident companies and therefore the concerns about the impact of the CFC and FIF regime on these taxpayers no longer apply. The current anomaly merely reflects the historical imperative that Australian and New Zealand companies should not be in a position to stream imputation credits arising from New Zealand source income to domestic New Zealand shareholders. If that were to occur it could have provided those companies with an incentive to trap offshore income in a CFC, thereby avoiding the impact of those two regimes (which were also introduced at the time of imputation).[24]

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[21]P: 16,paragraph 3.27.

[22] The Report of the Consultative Committee on Full Imputation noted that from an imputation perspective there were no policy reasons to prevent the allocation of credits to NZ resident shareholders: *"Where a New Zealand company has an overseas corporate shareholder and New Zealand shareholders hold shares in that overseas company, the New Zealand shareholders would not be able to receive credits for New Zealand taxes paid by the New Zealand subsidiary. Some submissions argued that a non-resident company in these circumstances should be able to pass such credits through to its New Zealand shareholders"*

[23]See n 14, pp 53-54.

[24] *Report of the Consultative Committee on Full Imputation*, (April 1988 at p. 53.

New Zealand's anti-avoidance rule
There are a number of significant provisions in New Zealand domestic law that would prevent the inappropriate use of the streaming model thereby alleviating the above concerns:

The current imputation regime has numerous provisions that are designed to prevent streaming. The first is a restriction against attaching imputation credits to dividends that exceed the maximum imputation ratio (i.e. 33/67). This rule ensures that a company cannot attach imputation credits to a dividend that exceeds the company tax paid or payable in respect of funds in which the dividend was sourced Furthermore, the benchmark dividend rule ensures that the same imputation ratio (subject to a ratio change declaration) applies to all distributions.

A continuity of shareholding test. A company cannot carry forward and imputation credit balance where there is a greater than 33% change in shareholding. In other words, a company must maintain at least a 66% continuity of shareholding.

Specific rules that prohibit the trading of shares where a purpose (not being an incidental purpose) of the arrangement is to provide a tax advantage to any shareholder. Those provisions are designed to prevent shareholders from buying and selling shares to facilitate the passing of imputation credits to shareholders who are best able to utilise them.

Australian anti-avoidance rules
The Australian legislation contains a number of similar provisions.

- The maximum franking ratio is 30/70.

- A 45 day holding period requires a shareholder who wishes to qualify for any franking benefits to have held these shares at risk for at least 45 days prior to the receipt of a franking benefit.

- Specific rules designed to prevent a company from introducing different classes of shares which in substance are identical. This rule is designed to prevent the streaming of franking credits to different legal categories of shareholder.

- A benchmark dividend rule that provides that any subsequent dividend paid within a six-month period must not depart from the initial ratio by more than 20%.

Finally there are a number of specific detailed rules which are as follows. The first is ITAA97 Subdiv 204-B dealing with dividend selection schemes; ITAA97 subdiv 204-D where Commissioner may deny an imputation benefit to a favoured member and determine that a franking debit arise for the paying company where franked dividends are streamed so that some members receive greater imputation benefits than others; the general anti avoidance rule relevant to franking credit trading and dividend streaming s177EA (applied in the context of dividend streaming in Electricity Supply Industry Superannuation (Qld) Ltd v FCT (2003) 53 ATR 120); and Division 208 which generally excludes an exempting entity from the normal gross up and tax offset when paying and receiving dividends. Exempting entities are entities 95% or more owned by non residents or tax exempts.

Conclusion

For all of these reasons it is difficult to see why the adoption of the streaming model would give rise to any genuine tax base maintenance issues. The existing rules in both jurisdictions are adequate to prevent the disproportionate allocation of credits.

However before leaving this subject there is a wider issue to briefly consider. The various table's diagrams and graphs illustrate how sensitive an "optimal solution" is to the inter action of a number of variables which include:

- shareholder profile,
- sources of income,
- income mix,
- dividend distribution policy,
- tax payment profile.

The adoption of an unfettered dividend streaming regime will not necessarily provide a comprehensive solution for ALL Trans-Tasman companies. It would at best only provide an advantage to those companies whose exact corporate profile fitted in with the underlying assumptions contained in any legislative model which is ultimately chosen to replace the PRA "solution". The comments of the Board of Taxations report to the Treasurer on the Review of Australia's International Taxation Arrangements and the Australian Treasury Discussion Paper (which formed part of the review) were a timely reminder of the general problems created by all imputation systems which often struggle to deal with foreign source income and foreign underlying tax and withholding tax. What may be a politically acceptable to the trans-Tasman problem is not necessarily the optimal solution to the wider problem of triangular taxation and nothing in this article should be taken as support for the adoption of either PRA, or full streaming beyond the narrow confines of the unique nature of Trans-Tasman investment.

A COMPARISON OF THE FULL STREAMING AND PRO RATA ALLOCATION REGIMES

Graphs Seven to Nine highlight the differences between full streaming and PRA by using three, different levels of income distribution. These three graphs have used the same company profile.

The three graphs clearly demonstrate that New Zealand shareholders would receive a greater benefit under full streaming, whenever the proportion of income distributed increases. Full streaming allows all of the New Zealand tax paid to be made available to New Zealand shareholders. In the case of the Australian company shown in the graphs, provided that at least 10% of total income is sourced from New Zealand, the 5% of New Zealand shareholders are entitled to a fully imputed dividend, regardless of the distribution policy. Under PRA however, New Zealand shareholders are comparatively worse off when the proportion of income distributed increases.

The benefits for the Australian shareholders under full streaming are not as substantial, because they were receiving fully franked dividends under both the current and PRA solution. Full streaming does not create any additional tax benefits.

Graph 7

**Effective Tax Rates under Full Streaming
with a 50% Distribution Policy**

—— NZ Current	– – NZ Pro rata	· · · AU Current and Pro rata
—— NZ Streaming	—— AU Streaming	
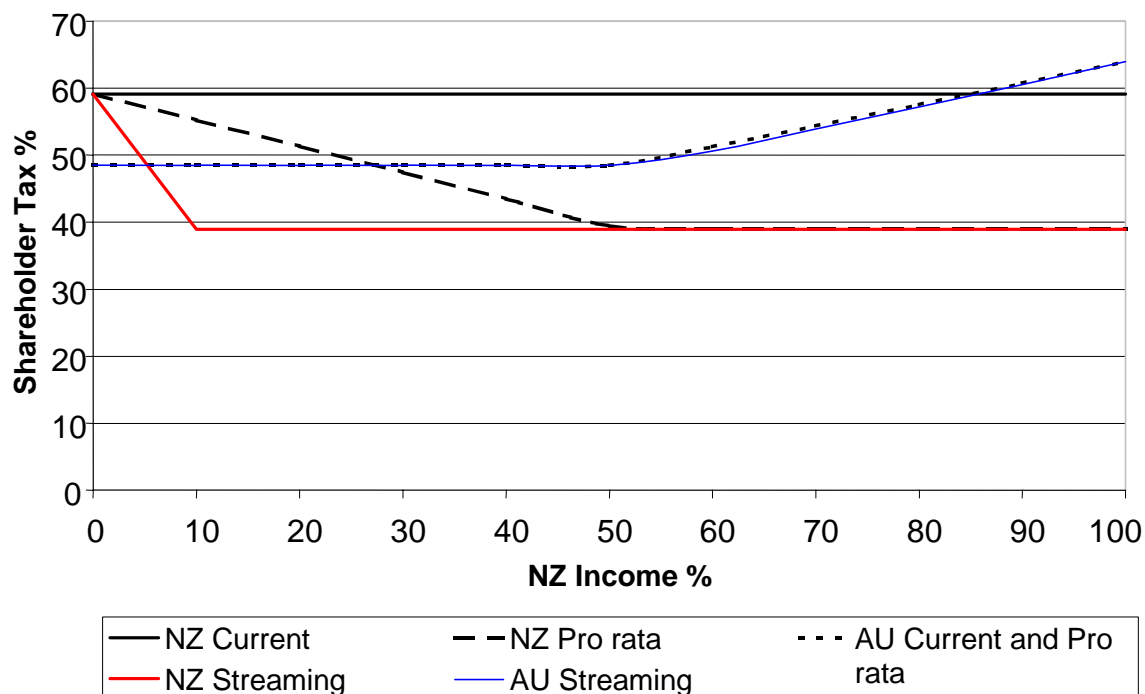
Graph 8

**Effective Tax Rates under Full Streaming
with a 75% Distribution Policy**

—— NZ Current	– – NZ Pro rata	· · · AU Current and Pro rata
—— NZ Streaming	—— AU Streaming	
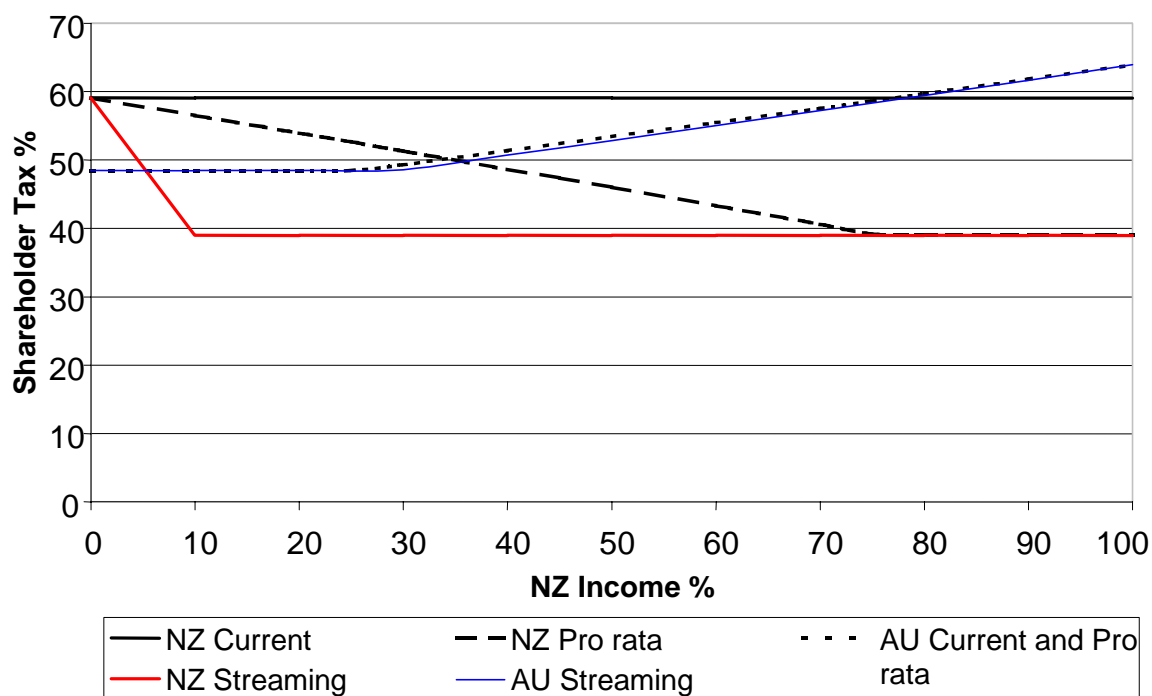
Graph 9

**Effective Tax Rates under Full Streaming
with a 100% Distribution Policy**
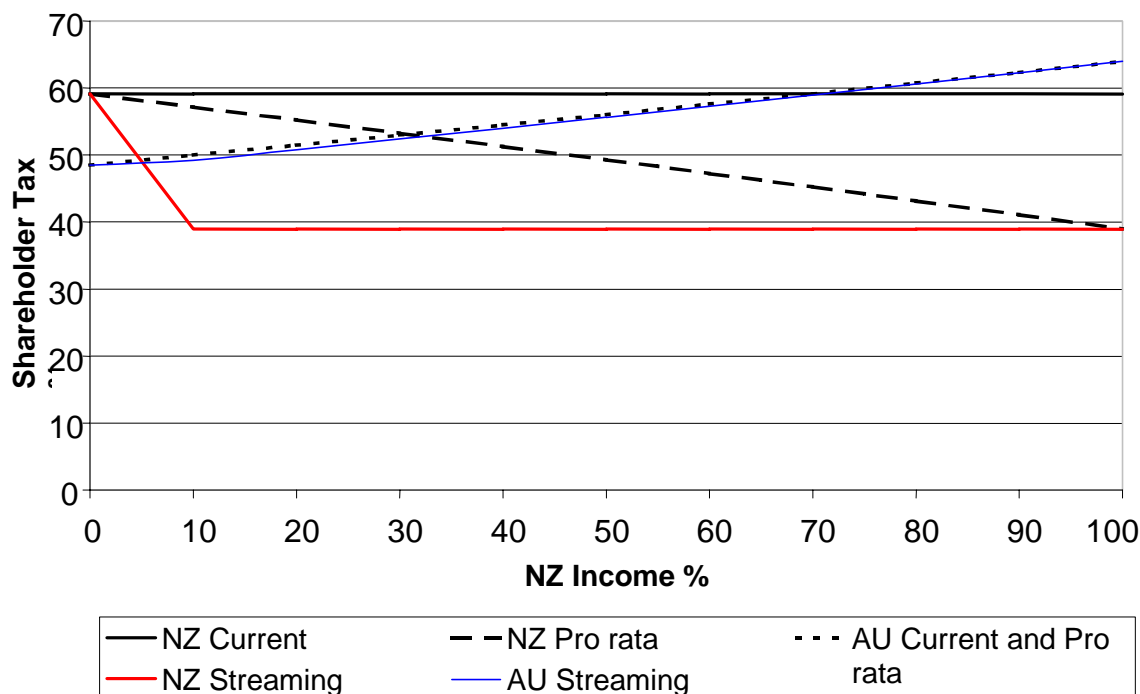
BEHAVIOURAL IMPLICATIONS: CAPITAL RAISING SOLUTIONS

Introduction

The combined effect of the waste of credits associated with the pro rata allocation solution and its complexity and compliance costs will limit its appeal. The Australian Parent Company in the hypothetical example considered in the Discussion Document has very few (if any) incentives to implement a solution which will only benefit its 50% New Zealand individual resident shareholders. There is no benefit to the Australian individual shareholders and there will be inevitable compliance costs arising from the PRA solution.

The rejection by both governments of the full streaming alternative is likely to see a continuation of ad hoc solutions which achieve the same underlying benefits associated with the full streaming option. Recent examples include:

- Capital raising solutions;
- Equity instruments;
- Bonus issues;
- Computer software and management fees;
- Debt solutions; and
- Cross border solutions.

This is NOT a comprehensive of profit repatriation strategies and I have only examined a selection to highlight the range of options that face trans-Tasman companies who are unable to deliver to their shareholders any meaningful tax benefits from the PRA solution. For example a dual listed company is an obvious option which has not been considered. A classic example of that strategy is the dual listing of BHP Billiton which has enabled franked dividends to be paid to Australian shareholders and unfranked dividends to be paid to United Kingdom shareholders.

Capital raising solutions
An obvious solution to triangular taxation is for an Australian Parent Company to incorporate a special purpose New Zealand subsidiary that pays a fully imputed dividend to the New Zealand shareholders. This solution would involve the New Zealand shareholders realising their investment in the Australian parent company and subscribing for shares in the 'new' New Zealand subsidiary. The most significant example of the strategy is the $A800m successful capital raising which was undertaken by Westpac in late 1999. Following the successful Westpac $A800m float, the ANZ Banking Group announced a similar proposal but it has yet to proceed to making a public offer.

The Westpac share issue
As part of the capital raising exercise, Westpac obtained a binding product ruling from the Inland Revenue Department which stated that the proposal did not contravene the specific anti imputation streaming provisions contained in the Income Tax Act 1994 (ITA94) including the general anti avoidance provisions. The essential features of the proposal are described in BR Prd99/13.[25] The relationship between the parties is summarised in the following diagram, which has incorporated the actual shareholding, disclosed in the 2002 Annual Report. The combined income of the Australian branch and the New Zealand branch of $A4,000 is the same as the income flow used in the Discussion Document.

Defacto full streaming
A key feature of the capital raising exercise is to enable the New Zealand issuer to earn taxable income and thereby generate imputation credits. The New Zealand issuer derived rental income from their ownership of a property portfolio which was leased to Westpac affiliates throughout New Zealand. The issuer also lent the funds raised from the float to another member of the New Zealand group, which generated gross interest income. Finally, a swap was entered into to ensure that the dividend payment to the New Zealand shareholders was based on the dividend paid by the Australian parent company to its Australian shareholders. The tax advantage arising from the structure was the creation of imputation credits for the New Zealand shareholders. The following Table shows the advantage for the New Zealand shareholders from investing in the New Zealand issuer (which is essentially the same as Table Four).

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[25] BR Prd 99/13, *Tax Information Bulletin,* Vol 11:10 (November 1999) p. 7. This ruling was replaced with BR Prd 02/14, *Tax Information Bulletin* Vol 14:11 (November 2002) at p. 5.

DIAGRAM FIVE: THE WESTPAC SOLUTION TO TRIANGULAR TAXATION

Australian Shareholders	
Cash Dividend	$1,596
Franking Credit	$684
Imputation Credit	$0

New Zealand Shareholders	
Cash Dividend	$84
Franking Credit	$0
Imputation Credit	$36

95% shareholding

Sell 5% shareholding

Wespac Australia	
Total Income from Subs	$2,800
Distribution Policy	60%
Total Dividend paid	$1,680
Franking Credits available	$1,020
Imputation Credits available	$180

Dividend $2,380

Dividend $420

85%

15%

Australian Branch	
Australian Income	$3,400
Tax@30%	$1,020
Net Income	$2,380

New Zealand Branch	
New Zealand Income	$600
Tax@30%	$180
Net Income	$420

Swap

Lease/Rental
Income

Borrower

Loan/Interest
income

Issuer New Zealand subsidiary	
Cash dividend	$84
Imputation Credit	$36

5% New Zealand shareholders

$800 milion float

TABLE FIVE: THE WESTPAC SOLUTION TO TRIANGULAR TAXATION

| New Zealand Shareholder	$AU	Australian Shareholder	$AU
Cash Dividend	84	Cash Dividend	1,596
Imputation Credit	36	Imputation Credit	0
Franking Credit	0	Franking Credit	684
Taxable Income	120	Taxable Income	2,280
Tax due @ 39%	47	Tax due @ 48.5%	1,106
Less Imputation Credit	36	Less Imputation Credit	0
Less Franking Credit	0	Less Franking Credit	684
Tax Payable	11	Tax Payable	422
Net Dividend	73	Net Dividend	1,174
Effective Tax rate	39.00%	Effective Tax rate	48.50%
Pre-tax cash dividend	120	Pre-tax cash dividend	2,280
Company tax	36	Company tax	684

BEHAVIOURAL IMPLICATIONS: FUNDING THE NEW ZEALAND GROUP

Introduction

The Westpac solution effectively provides its New Zealand shareholders with all of the advantages of the full streaming option, which has been rejected by both the Australian and New Zealand Governments. Note that with the Westpac solution there is no inefficient allocation of the available tax credits. All of the transaction costs are effectively borne by the New Zealand shareholders who derive all of the taxation advantages.

In view of the high level of wastage associated with the PRA solution, there are very few (if any) taxation reasons why an Australian parent company would wish to fund its New Zealand subsidiary in a manner that created imputation credits. A more efficient solution is for the Australian Parent Company to finance the New Zealand operations in a manner that creates franking credits. A possible response to the rejection of the full streaming alternative is for Australian companies to refinance their New Zealand operations in the following tax effective way.

Hypothetical current structure

The following diagram summarises the New Zealand tax implications of a typical trans-Tasman group. The Australasian tax group consists of inter alia a New Zealand Holding Company and New Zealand Operating Company. Finance is provided via the Australian Parent Company subscribing for equity in the New Zealand Holding Company (NZHC). The NZHC lends the proceeds its wholly owned New Zealand Operating Company (NZOC). The NZOC pays interest (which is an allowable deduction) to NZHC (which is gross income). Finally, the NZOC remits the after tax income to the Australian Parent Company in the form of a dividend. The total New Zealand tax ($33) consists of $22.11 company tax and 11.82 NRWT (met via supplementary dividend).

DIAGRAM SIX: CURRENT STRUCTURE

- - - - - - - - - - - - - Ownership (100%)
⎯⎯⎯⎯⎯⎯▶ Transactions
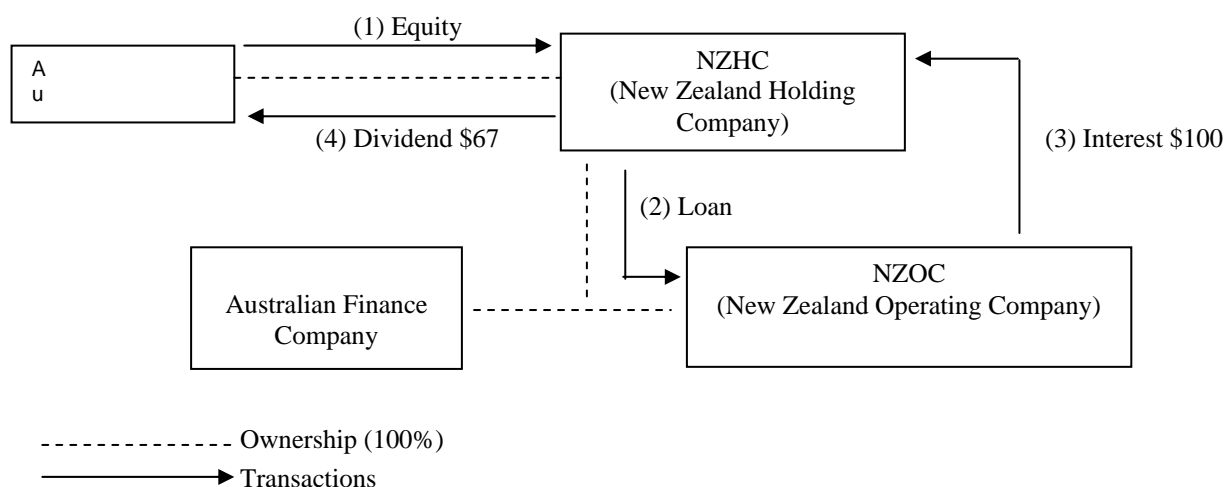
A more tax efficient alternative: hybrid instruments

The following more complex diagram is designed to reduce the amount New Zealand tax and create a corresponding increase in the dividend paid to the Australian parent company. Under a conventional funding arrangement, an after tax dividend of $67 is paid to the Australian parent company. Under the following rearrangement, the net after tax New Zealand sourced dividend is increased from $67 to $90.

For the purposes of illustration only the underlying assumption is that the structure will be used to refinance the existing NZ group. The concepts are equally applicable to financing an expansion of the NZ group associated with for example a merger or acquisition. The "anti avoidance" risks and implications have been ignored.

The initial rearrangement (steps 1 to 5) is designed to replace the NZ group's original equity (which created the tax consequences described in section 7.2) with a more tax effective alternative.

-**Step one**: The Australian Parent Company subscribes for equity issued by the NZHC. The proceeds from that transaction are ultimately returned to the Australian Parent Company via, for example, a share repurchase of the original equity.

-**Step two**: The NZHC uses the proceeds from step one to finance the acquisition of a *hybrid instrument* issued by the NZ Branch of the Australian Finance Company. The transaction is undertaken by the NZ branch to avoid non-resident withholding tax (NRWT) that would otherwise be payable if the transaction was booked with the Australian Finance Company instead of its New Zealand branch. The *hybrid instrument* will be treated as *debt* for Australian tax purposes, and as *equity* for New Zealand tax purposes. Despite the recent Australian changes to the debt/equity boundaries it is still possible to create tax efficient *hybrid instruments*, which contain all of the tax attributes and advantages of for example the pre July 2001 "Section FC 1 Debentures". The tax advantages associated with the *hybrid instrument* arise from the period cash flows described below and summarised in Table 6.

-Step three: The New Zealand branch of Australian Finance Company leads the proceeds (raised from issuing the *hybrid instrument* to NZHC) to the NZOC. For New Zealand tax purposes this is a transaction between two resident entities and therefore the non-resident withholding tax provisions are not applicable.

-**Step four**: The NZOC uses the loan finance to repay the original loan shown as step 2 in Diagram 6. From the NZOC perspective it has simply replaced its current creditor (NZHC) with a new creditor (the New Zealand branch of Australian Finance Company), which means that everything else been equal the new arrangement will have no impact on its current business activities.

-**Step five**: NZHC will use the loan repayment (from NZOC) to return the original equity obtained from the Australian Parent Company. One tax effective method of unwinding the original transaction would be for NZHC to repurchase the original shares from Australian Parent Company. Provided all the technical requirements contained in section CF 3(1)(b) of the ITA94 are satisfied, this transaction will not constitute a dividend and no NRWT would be payable.

DIAGRAM SEVEN: HYBRID INSTRUMENTS

Initial rearrangement (1) to (5)

Periodic cash flows (a) to (d)
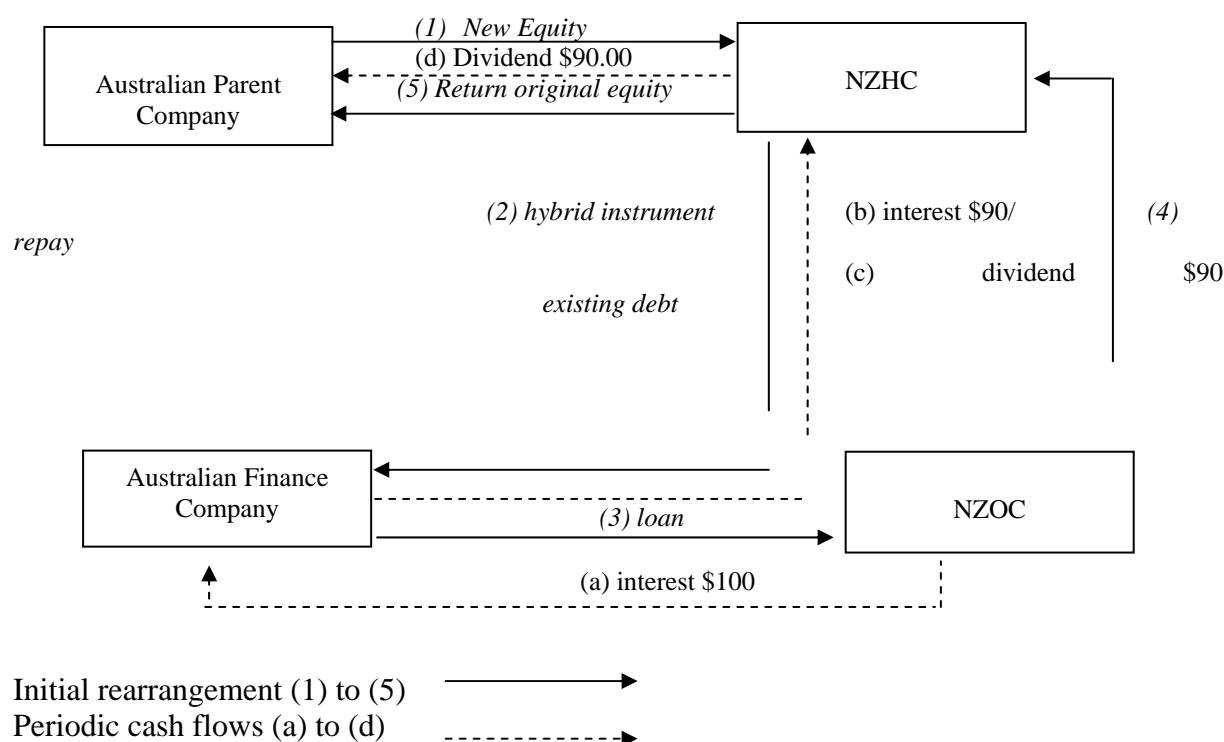
The New Zealand tax consequences of the hybrid instrument
The New Zealand tax consequences associated with step 1-5 described in section 7.3 above are designed to reduce the current level of New Zealand company tax from $33.00 to zero. The only tax payable will be $10 Australian NRWT. Everything else has been equal; the Australian Parent Company will receive a dividend of $90 from the NZHC. This represents an increase of $23 or a 34% increase in the Australian

Parent Company's after tax return from its investment in the NZHC. The Australian Parent Company invest the additional $23 in a manner that will increase the franking credits, which can be distributed to, inter alia, its Australian shareholders.

(1)   Periodic cash flow (a). NZOC plays interest to the New Zealand branch of Australian Finance Company. The interest is deductible to NZOC, and forms part of the New Zealand branch's gross income. In other words, this transaction is tax neutral from a New Zealand perspective. Secondly, there are no NRWT implications because this transaction is between two New Zealand tax residents.

TABLE SIX: THE TAX SAVING ASSOCIATED WITH A HYBRID INSTRUMENT

(a)	Interest NZOC to Aus Finance Co (NZ Branch)		100
	- No liability to deduct NZ NRWT	-	
	- NET CASH PAID		100
(b)	Hybrid Aus Finance Co (NZ Branch) to NZHC	100	
	- Aust NRWT – interest	(10)	
	NET CASH		90
(c)	FDWP Relief s NG 7 (Hybrid)		
	- Net cash	90	
	- add Aust NRWT	10	
	- Gross dividend	100	
	- Foreign Dividend Withholding Payment (FDWP) 33%	33	
	Less Aust NRWT	(10)	
	Less Underlying Foreign Tax Credit (UFTC)	(Nil)	
	Net FDWP	23	
	S NH 7(1) Conduit Tax Relief (CTR)	(23)	
	NET FDWP	(Nil)	
	NET CASH RECEIVED		90
(d)	Dividend NZHC to Aus Parent Co		
	- Cash	90	
	FDWP credits	Nil	
	Section LGI conduit tax relief dividend	23	
	Gross dividend	123	
	NRWT 15%	*NIL	
	Net cash paid		90

* Sufficient imputation credits would be attached to the gross dividend of $123 to eliminate the amount of NRWT which would otherwise be payable, i.e. $61 of imputation credits will ensure a fully imputed dividend.

(2)   Periodic cash flow (b)/(c). Australian Finance Company pays interest/dividend to the NZHC pursuant to the terms and conditions of the *hybrid instrument*. For Australian tax purposes, the transaction constitutes interest and therefore Australian NRWT (at 10%) is payable to the Australian Tax Office (ATO). This is the only tax leakage associated with all of the transactions. For New Zealand tax purposes, the payment is re-characterised as a dividend. In view of the subsequent

payment by NZHC of a dividend to the Australian Parent Company the conduit tax relief (CTR) provisions apply. This is the key feature of the entire transaction which eliminates all of the New Zealand company tax and New Zealand NRWT associated with the original "plain vanilla" financing. However, it would be fair to say that the CTR provisions contained in the ITA94 were never meant to be used in this way.

(3)   Periodic cash flow (d). The final transaction is the payment of a dividend by NZHC to Australian Parent Company. This transaction is linked to the periodic cash flow (b) / (c) because it is the second stage of the CTR. The original purpose of the CTR provisions were to reduce the amount of New Zealand company tax, and NRWT which is payable associated with International Paper (Inc)'s investment in Carter Holt Harvey Limited who in turn owned forestry investments in Chile and Canada. However, there is nothing in the CTR regime, which prevents the relief from New Zealand tax applying to trans-Tasman companies.

The tax saving associated with a hybrid instrument
Table Six summarises the New Zealand tax consequences of the periodic cash flows described above in section 7.4. The main purpose of Table 6 is to demonstrate that the original after tax dividend of $67 (paid by NZHC to Australian Parent Company) has increased to $90, as discussed in section 7.4. This represents an increase of $23 or 34% in the after New Zealand tax return of the Australian Parent Company. This only occurs because the CTR regime effectively enables the New Zealand group to more efficiently utilise the underlying New Zealand company tax (imputation credits) paid by the NZOC associated with the commercial activities that were originally financed by the Australian Parent Company.

CONCLUSION

Prior to the enactment of the PRA solution there were no logical reasons why the hypothetical trans-Tasman group of companies outlined in the Discussion Document (and reproduced as Diagram One) would wish to pay New Zealand company tax. All of the imputation credits created by the New Zealand subsidiary were wasted because they could not be utilised by the any of the shareholders.

What then are the key behavioural implications of the recently enacted PRA solution? The answer depends on the interaction of two variables:

- The ratio of New Zealand to Australian shareholders, and
- The amount of New Zealand and Australian income/company tax paid.

The profile of trans-Tasman companies outlined in Table Two suggest that the PRA solution will provide the New Zealand individual shareholder with a modest increase in their after tax dividend income. The dilution effect means that most of the New Zealand imputation credits will still continue to be wasted because they will be allocated to the Australian shareholders who cannot offset them against their Australian tax liability.

Accordingly, the PRA solution is unlikely to have a significant impact on the current range of trans-Tasman tax strategies utilised by the major trans-Tasman public companies. The PRA solution is likely to encourage the development of Westpac/ANZ ad hoc solutions, which in substance provide the same taxation benefits as the full streaming alternative.

Alternatively, Australian public companies may simply ignore the PRA solution to the detriment of their New Zealand shareholders.

The Determinants of Malaysian Land Taxpayers' Compliance Attitudes

Nor Aziah Abdul Manaf, John Hasseldine and Ron Hodges*

Abstract

This article analyzes the determinants of Malaysian land taxpayers' compliance attitudes. While income taxpayers often have the structural opportunity to underreport income/overstate deductions, it is more difficult to hide land ownership. Despite this, there are high levels of uncollected land tax revenue in Malaysia. We document the factors associated with land taxpayers' compliance attitudes and our results should be useful to policy makers in Malaysia and elsewhere, as we find that independent variables significant in prior income tax compliance research also extend to the field of property and land tax compliance.

INTRODUCTION

In this study, we extend the nature and scope of tax compliance research. Prior compliance research has focused almost exclusively on income tax, and been conducted in western economies such as the U.S. (Jackson & Milliron 1986; Fischer *et al.* 1992; Richardson & Sawyer 2001). By focusing on land tax compliance in a developing country, we respond to the call by Andreoni et al. (1998) for more empirical research from jurisdictions outside the U.S. Although there have been prior studies on VAT compliance (Adams & Webley 2001), we are not aware of any prior work on land taxpayers' compliance attitudes.

Land taxes contribute significant revenues to the Malaysian state governments. For example, they accounted for 30% of revenue in the 1980s (Abdul Rahim *et al.* 1990) and 46% of Kedah state revenue in 2000 (Mustaffa 2001). The Pahang state government has even stated its objective to make land tax the highest source of revenue contribution[1]. Accordingly, it is important for compliance research to document the factors associated with compliance attitudes under the Malaysian land tax. Although there are no specific prior studies on land tax compliance, the voluminous prior work on income tax that has tested a compliance framework

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[1] See the official Pahang State Government homepage, http://ptg.pahang.gov.my/main.php

(including demographics, non-compliance opportunity, taxpayer knowledge etc.), provides a baseline of a-priori expectations for the current study.

The nature of land and property taxation is essentially different from income tax. Under a land tax regime, landowners are imposed with land tax, whereas for income tax reporting, taxpayers file a paper/electronic tax return containing their reported income, with tax based on the income declared. Thus, income taxpayers have more structural opportunities to exploit tax laws than do land taxpayers. In Malaysia, the state governments determine the amount of land tax for each landowner and notify the owner of the tax owed. However, despite a lower opportunity for non-compliance, recent reports suggest there are still high levels of uncollected land tax revenue. For example, in 2001 total land tax arrears in Malaysia were more than RM600 million (approximately $US158 million) (Nor Aziah, 2004).

The remainder of this article is structured as follows. The next section outlines the current structure of the Malaysian state government, briefly reviews the Malaysian constitution and the division of authorities between federal, state and local governments and then describes the present structure of the land tax system and the laws behind it. Section three discusses our research method and outlines the dependent and independent variables used in the study. Section four reports our results and section five offers some brief conclusions and a discussion of the limitations of the study.

THE MALAYSIAN LAND TAX SYSTEM

The Federal constitution in Malaysia clearly outlines the relationship between federal, state and local government. The highest bodies in the federal administrative machinery are the ministries that carry the responsibilities entrusted to the government. The Ministry of Land and Co-operative Development oversees the Department of Director General of Land and Mines, which monitors the land tax revenue of each state and requires property owners to pay an "assessment tax" imposed by the relevant local authority.

With regard to the state administrative mechanisms, each state has its own assembly whereby the chief minister of the state acts as the chief executive of the state government. At the state level, the state secretariat is the highest administrative office and is headed by the state secretary who also acts as the chief advisor to the chief minister of the state and the state executive council. Land offices in state governments have the authority to collect land taxes from landowners.

The administration of land is a state matter and the federal government or local authority has no direct control over matters pertaining to land tax. This indicates that the state government has sole power in terms of managing their lands. The establishment of the National Land Council however, is one of the efforts by the federal government to co-ordinate and monitor all related matters concerning administration of land between state governments in Peninsular Malaysia[2]. The National Land Code (NLC) 1965 empowers the Federation and the rights of state authority on land, classification and use of land, disposal of land and all aspects of

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[2] See the National Land Code (Act 56 of 1965) and Regulations. The Federal Government National Land Code 1965 is currently enforced in all states in Malaysia (excluding Sabah and Sarawak).

alienated land. One of the main aims of the introduction of the NLC in 1966 was to ensure uniformity of laws and policies in respect of land matters in all states[3].

In Malaysia, tax on land is solely based on the location, area, and the use of the land, excluding the value of the land, development or improvement of the land. The government of each individual state levies a land tax upon landowners known as "quit rent". The applicable rate of quit rent varies with the category of land use and size. The taxes are levied on the owner and not on the user of the land. The rates of land tax imposed in one state may differ from the rates imposed in other states because each state government has the authority to determine land tax rates.

After land taxes are computed by the land offices of state governments, bills are sent out to landowners at the end of December for the following financial year. Land taxpayers have until June 30th to pay the land taxes without penalty[4]. If the landowner is late for payment, they are charged a penalty of 10% - 20% of the land tax or a certain minimum amount according to the state government involved.

Under the NLC, state governments have the power to issue a reminder to pay, summons for non-payment through the magistrates' court, and distress warrants that allow bailiffs to confiscate the land. Normally a reminder will be issued after June 30th (or May 31st) and the landowners have up to three months to pay the land tax and penalty. After this period, a summons from the magistrates' court is sent to the landowner[5]. Although the state governments have the right to confiscate land under sections 100, 129, 130 and 131 of the National Land Code, 1965, in practice, this occurs only rarely. In Kedah state government, for example, only seven land parcels were confiscated between 1995 and 2000 despite large arrears and many non-compliant landowners (Nor Aziah *et al.* 2001).

The problem of arrears and low collection rates is not restricted to Kedah. Table 1 shows the overall percentage of land tax collections of all eleven states in Peninsular Malaysia over the period 1996 to 2001. It is apparent that significant sums are involved and that there is a general trend towards decreasing land tax collections in recent years.

METHOD

Research instrument and sample
A questionnaire was utilized to collect data for this study. The questionnaire[6] had two main sections. The first section measured landowner's perceptions on the fairness of the tax system, sanctions, detection probability and positive incentives. It also measured their tax knowledge, ethics and moral values. The second section measured demographics including age, gender, marital status, type of income, occupation, level of income, type of land and size of land.

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[3] Federal Constitution 1957, Article 76 clause (1)(b) and (4)

[4] Several states like Johor and Pulau Pinang, however, give only until May 31st for the land owner to pay the bill without penalty.

[5] Section 131, National Land Code, 1965

[6] Available from the authors on request.

TABLE 1 PERCENTAGES OF LAND TAX COLLECTIONS FROM 1996 TO 2001

	1996	1997	1998	1999	2000	2001	All years average
Johor	84.3	70.3	55.2	46.1	36.9	36.0	54.8
Melaka	-	65.0	65.9	50.9	47.5	52.6	56.4
Negeri Sembilan	79.0	67.8	72.7	67.5	76.3	48.1	68.6
Selangor	63.2	64.9	66.4	60.1	64.9	71.2	65.1
Pahang	-	-	-	58.9	55.7	56.7	57.1
Perak	57.0	51.5	51.0	53.5	54.9	57.4	54.2
Pulau Pinang	91.7	88.4	82.5	78.2	70.5	67.3	79.8
Kedah	70.6	73.4	67.4	57.1	56.4	56.8	63.6
Perlis	81.4	66.5	59.6	53.6	50.7	49.8	60.3
Kelantan	66.4	68.1	65.1	66.4	66.3	70.5	67.2
Terengganu	54.6	44.4	48.0	37.2	33.7	32.4	41.7
Average	72.0	66.0	63.4	57.2	55.8	54.4	61.5

Note: Data was collected in person by the authors.
Figures expressed are:

<u>Current year land tax collection + current year arrears collection</u>
   Amount of current land tax assessed + accumulated arrears

The research questionnaire was carefully constructed and piloted. The questionnaire had to cater for the varying educational background of the recipients and their different levels of knowledge of the land tax system. The process of developing and writing of questionnaires took about four months[7] to complete and was developed in two languages (English and Bahasa Malaysia).

The addresses of the landowners were obtained from each state government. As the names and addresses of landowners are confidential, the authors were not allowed full access to state records. However, with the co-operation of individual states, we were provided with a total sample of 800 names and addresses of landowners. A cover letter explained the purpose of the study, the importance of honest responses, and guaranteed respondents' anonymity. The cover letter also drew attention to the English and Malay versions and that respondents could choose to answer either version. After deleting names with incomplete addresses, a total of 750 questionnaires were distributed.

Model

The model tested in this study extends models reported extensively in the income tax compliance literature (Jackson & Milliron 1986; Fischer *et al.* 1992; Hasseldine *et al.* 1994; Chan et al. 2000), with four additional variables incorporated into the model to accommodate the Malaysian land tax environment. Specifically, the model to be tested takes the following form:

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[7] We started constructing the questionnaires in March 2002 until July 2002 and conducted a pre-test in Malaysia in October 2002.

$$\text{COMPLY} = \alpha_0 + \beta_1\text{AGE} + \beta_2\text{GENDER} + \beta_3\text{RACE} + \beta_4\text{EDUC} + \beta_5\text{INCOME\_LEVEL} + \beta_6\text{INCOME\_SOURCE} + \beta_7\text{OCCUPATION} + \beta_8\text{ETHICS} + \beta_9\text{FAIRNESS} + \beta_{10}\text{SANCTION} + \beta_{11}\text{KNOWLEDGE} + \beta_{12}\text{INDUCEMENT} + \beta_{13}\text{TYPE} + \beta_{14}\text{LOCATION} + E$$

The dependent and independent variables are now outlined.

Dependent Variables

In order to increase the robustness of the study, three separate dependent variables were measured. Respondents were asked to indicate their answers on a continuous scale (0 - 100) in respect of the following three questions:

i.   *"Out of every 100 people who own land, how many would you say paid no land tax at all?"*

ii.   *"Out of every 100 people who own land, what percentage do you believe are honest on their land tax payment?"*

iii.   *"Among your friends, at what percentage are you confident they paid their land tax honestly?"*

Responses to the first question were reverse-scored so that for all three questions, higher scores indicate more compliant attitudes and lower scores indicate less compliant attitudes.

Independent Variables

This section documents the independent variables suggested by prior literature, split by demographics, non-compliance opportunity, attitudes and perceptions, tax system structure and knowledge, incentives, type of land and location (Jackson & Milliron 1986; Fischer *et al.* 1992; Christensen *et al.* 1994; Hasseldine *et al.* 1994; Hajah Mustafa 1996; Tayib 1998 and Chan *et al.* 2000). There are fourteen independent variables, i.e. *V1* to *V14* tested in this study.

Demographic Variables. Three demographics are included in this study, which are age *(V1)*, gender *(V2)* and race *(V3)*. Studies generally indicate that older taxpayers are less likely to evade, but these results are not uniform (Christian & Gupta 1993). Tittle (1980) suggests that generally, young taxpayers are more willing to take risks and are less sensitive to sanctions, and that generation differences may also be important. Warneryd and Walerud (1982) also conclude that significant differences in compliance are attributable to the sensitivity of the younger generation. In their study, Warneryd and Walerud (1982) find that multivariate analyses of the data indicate that younger people have more tendencies to evade tax. Wahlund (1992) also found the same trend in a Swedish survey, where younger people were more likely to evade tax than older people.

Unlike the above findings, Clotfelter (1983) finds that the youngest and the oldest segments of the population have the same degree of compliance. He suggests a substantial curvilinear relationship between age and compliance whereby the youngest and the oldest segments of the population have the highest degree of compliance. On the contrary, Wallschutzky (1984) finds Australian tax evaders tended to be older than compliers.

The majority of previous studies investigating gender effects, show females are more compliant with the tax laws than males. Tittle (1980) suggests that females are identified in accordance with conforming roles; traditionally female children have been brought up with more moral restraints than male children, thus leading to their more conservative life patterns. This in turn promotes tax compliance. Fallan (1995) also finds that there are gender differences on a test of assessing student tax knowledge.

Hite (1997) argues that female subjects with higher education are significantly more tolerant towards evasion behavior than less educated females. Glen (1998) also reports that the interaction between gender and education impacts a taxpayer's attitudes and values. He establishes that female undergraduate students are more likely to exhibit compliant behavior than their male counterparts.

Malaysia is a multiracial, multi-cultural, multi-religious and multi-lingual society. There are three major races among Malaysia's population of 23.27 million (Census, 2000)[8]. It comprises *Bumiputera* (referring to Malays and other indigenous races such as the Iban, Kadazan and Orang Asli), Chinese and Indians. The Malays and other indigenous races make up 65 percent of the population, while Chinese comprise 26 percent and Indians 7 percent. This study will examine whether race is associated with compliance attitudes.

Non-compliance Opportunity. The four variables included under this category are education *(V4)*, income level *(V5)*, source of income *(V6)* and occupation *(V7)*. Wallschutzky (1984) believes that education is one of the variables that has the potential to hold the most long-term promise in improving tax compliance levels. Some evidence exists which suggests that taxpayers may fail to comply with the tax laws because of insufficient knowledge on how to do so (Hajah Mustafa 1996). Christian and Gupta (1993) report a negative correlation between income level and opportunity of being in business or being able to claim for tax deductions. Their study on taxpayers with taxable incomes of less than US$50,000 found that income is negatively correlated with tax evasion; hence indirectly implying that income is positively correlated with tax compliance. Hite (1997) suggests that higher income levels increased the apparent acceptability of tax non-compliance for female subjects, but had no effect on the behavior of male participants.

Over 40 years ago, Groves (1958) identified income source as a significant influence on tax compliance. Wallschutzky (1984) also found both evaders and non-evaders agreed that the greatest opportunity to evade tax exists with those who derive their income from self-employment, independent trade and farming, and the least opportunity exists for those whose source of income was wages/salary subject to withholding tax. Malaysian landowners are not subject to withholding in advance to pay land tax.

According to Jackson and Milliron (1986), research on occupation as a compliance variable is relatively sparse and they noted that a clear research direction was lacking. The main cause of this lack of clarity appears to be the inconsistent and rather ad hoc categories into which the occupation variable has been categorized in individual studies. These occupational categories have ranged from blue collar/white collar

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[8] From the 2000 Census. See http://www.statistics.gov.my/English/pressdemo.htm

(Porcano 1988) to manufacturing/service (Beron *et al.* 1992), with very few studies taking the same approach to classification. Westat (1980a) suggests that white-collar taxpayers are associated with the overstatement of deductions whereas blue-collar workers evade taxes by omitting income. This may also be due to opportunity; the more opportunities one has to evade, the greater the likelihood of evasion. Westat (1980b) however, reports that employment in manufacturing or trade organizations was associated with higher self-reported tax compliance and that the occupational categories of professional/managerial, clerical/sales, and service employees were associated with lower levels of compliance.

Attitudes and Perceptions. Ethics *(V8)* and perceived fairness *(V9)* of tax system are included in this category. Westat (1980a) finds moral concerns about tax compliance to be relatively weak. Taxpayers were generally ambivalent about whether tax cheating, especially when small amounts are involved, is morally wrong. In their review of compliance research, Jackson and Milliron (1986) report on several tax studies that found that ethical beliefs generally increased compliance. However, they also note the difficulty of defining ethical behavior. Reckers *et al.* (1994) indicate that individual moral beliefs are highly significant in tax compliance decisions. When tax evasion is seen as a moral issue, individuals are less likely to evade taxes regardless of the tax situation.

Porcano (1988) finds that taxpayer needs and ability to pay were the most significant variables related to perceptions of a fair tax system. Christensen *et al.* (1994) believe that fairness and complexity of tax laws will also influence taxpayer compliance behavior. According to Jackson (1994) and Tayib (1998), an efficient tax system should have attributes such as equity or fairness. It is suggested that an approximate measure of tax fairness could be the level of taxpayer acceptability in respect to the current tax system. Spicer and Becker (1980) highlight that taxpayers are less compliant when they perceive the tax system or their exchange relationship with the government to be unfair. By extension, if individuals perceive tax procedures to be unjust or perceive tax laws to be so complex that are unfair then they will be more likely to evade.

Tax System Structure and Taxpayer Knowledge. Sanctions are always written into tax law *(V10)*. Previous studies have shown that taxpayer compliance behavior is indeed influenced by the perceived likelihood of detection and punishment. Tittle (1980) reveals that non-compliant taxpayers generally have been found to perceive a lower chance of detection than compliers. Warneryd and Walerud (1982) however, report no relationship between admitted evasion and perceived probability of detection. Hasseldine *et al.* (1994) on the other hand, indicate that the perceived severity of penalties has a positive correlation with tax evasion.

Milliron (1985) indicates a positive relationship between individual understanding of tax laws (*V11*) and tax compliance. Hajah Mustafa (1996) also includes knowledge and understanding as variables in the model that used to explain taxpayer compliance behavior. He argues that a better understanding of the tax system would improve taxpayer attitudes and perceptions, and finally have an impact on tax compliance behavior. However, as people become more knowledgeable about the tax system, they may either understand and appreciate the benefits received from the government or become more aware of tax evasion opportunities. According to Fallan (1999), better tax knowledge means people consider their own tax evasion more serious, that the

perceived fairness in taxation increases and that the attitude towards other people's tax evasion becomes stricter.

Incentives. This study includes positive inducements *(V12)* as an independent variable. The effectiveness of positive reinforcements for encouraging compliant behavior has been recognized in a number of fields (Richardson and Sawyer 2001), including tax. Yet, while researchers have acknowledged the need for a tax system to provide taxpayers with both incentives to comply with tax laws, and sanctions or penalties where non-compliant behaviors are discovered (Slemrod 1992; and Smith 1992) they have not been subject to empirical testing due to the lack of incentives in actual tax environments around the globe.

Land type/location. Type of land *(V13)* is a new variable in this study. In Malaysia, landowners pay different rates of tax according to different types and locations of land. Agricultural land has the lowest rate of tax in all states in Malaysia, yet it is uncertain whether agricultural landowners are likely to be most/least compliant. Land taxpayer's location (*V14*) is also a new additional variable in this study. Since rates and valuations are different between states, it would be useful to policymakers to see if there is any significant relationship between location and compliance attitudes.

RESULTS

Of the 750 questionnaires mailed, 179 usable responses were received – a response rate of 24%[9]. In order to test for non-response bias, we recorded the date of response and tested late responses versus early responses. We measured non-response bias by comparing mean response. Since questionnaires to the land taxpayers were distributed in stages, the late returned questionnaires were selected based on the last two returned questionnaires of each state. Since there is no way of knowing who responded and who did not respond due to enforced confidentiality and anonymity, this method is adopted based on the presumption that 'late' respondents are reasonable surrogates of non-respondents. Exactly 18 late response questionnaires were selected, representing 10% of the total 179 usable responses. The (unreported) results show no significant differences between the late respondents and early respondents for any of the dependent or independent variables and we conclude that non-response bias is not significant.

Frequency statistics for the sample are reported in Table 2. As shown, the sample includes landowners with a broad set of attributes. The sample may be characterized as representing diversity in level of education, source of income, beliefs about ethics, the fairness of the land tax system, understanding tax laws, sanction and detection probability, incentives and types of land. The sample may also be characterized as mostly middle age, male, Malays, low-income level with non-executive occupations. Table 2 also show the mean scores for each dependent variable (out of 100). One-way ANOVA statistics and correlation analysis are also reported in Table 2. At a univariate level, independent variables including age, race, education, income level, ethical beliefs, perceived fairness and incentive beliefs are statistically significant for one or more of the three dependent variables.

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[9] Although low, it is comparable to Hite's (1989) response rate of 29% among United States taxpayers and Hasseldine *et al.'s* (1994) response rate of 22% among New Zealand taxpayers.

TABLE 2 DESCRIPTIVE ANALYSIS OF SAMPLE

Variables		(N=179) Frequency	%	Compliance Attitude Score Model 1	Model 2	Model 3
1. Age	Up to 40	43	24	65.8***	61.5*	64.8**
	41-60	107	60	76.4	69.2	76.8
	Above 60	29	16	82.1	72.2	72.7
2. Gender	Male	120	67	71.7	68.6	75.0
	Female	59	33	76.3	67.5	72.8
3. Race	Chinese	44	25	76.5	74.3*	78.6
	Indian	39	22	71.1	64.2	70.2
	Malay	96	53	75.5	66.4	72.1
4. Education	Low education	58	32	79.8***	70.8	73.5*
	Medium education	68	38	78.4	68.9	77.7
	High education	53	30	64.7	63.3	67.3
5. Income Level	Up to RM24,000	126	70	76.6*	69.9*	73.4
	Above RM24,000	53	30	70.5	63.0	72.4
6. Source of Income	Private sector	51	28	73.4	64.6	70.0
	Public sector	73	41	72.7	66.9	73.6
	Sole proprietor	55	31	78.9	72.1	75.8
7. Occupation	Executive	58	32	75.2	70.9	71.2
	Non-executive	121	68	74.6	66.4	74.2
8. Ethics (tax evasion)		179		-.261***	-.220***	-.197***
9. Fairness		179		.161**	.263***	.248***
10. Sanction		179		-.060	.024	-.132**
11. Understanding Tax Law		179		-.294***	-.151**	-.111*
12. Incentive		179		-.120	-.113*	-.138**
13. Type of land	Agricultural	77	43	75.9	68.0	72.0
	Non-agricultural	102	57	73.9	67.7	74.2

Note: Univariate results are ANOVA tests of the independent variables and compliance attitude scores.
     Mean scores and significant levels are next to every independent variable for each model.
     Correlation analysis are tested for ethics, fairness, understanding tax law and incentive variables.
     *** Significant at the 1% level   ** Significant at the 5% level   * Significant at the 10% level
Model 1: Out of every 100 people who own land, how many would you say paid no land tax at all? (Enter a number between 0 and 100)
Model 2: Out of every 100 people who own land, what percentage do you believe are honest on their land tax payment? (Enter a number between 0 and 100)
Model 3: Among your friends, at what percentage are you confident they paid their land tax honestly? (Enter a number between 0 and 100)

To test our multivariate model, the assumptions of multiple regression analysis were tested and the data comply with the requirements of regression analysis (Hair *et al*., 1998) with the results showing that the assumptions of linearity and homoscedasticity are met. A statistical graphical plot also suggests that heteroscedasticity is not a problem in this study. In identifying multicollinearity, Variance Inflation Factor's (VIF) were used to indicate whether an independent variable had a strong linear relationship with the other independent variable(s).

Table 3 reports the multiple regression results for the three dependent variables. Model 4 combines all three questions into an overall average. The maximum likelihood estimates for each independent variable are included. All models are highly significant (p < 0.001) and the adjusted R^2s' range from 29% for Model 3 to over 37% for Model 2.

For Model 1 ("how many pay no land tax") the dependent variable is reverse scored so that higher scores indicate more compliant attitudes. The results in Table 3 show 8 significant independent variables ($p < .05$). Two negative estimates indicate that land taxpayers with medium level of education (V4) and who believe evasion is morally unethical (V8) are more likely to exhibit compliant attitudes. Age (V1), source of income (V6) and understanding tax laws (V11) are significant indicating land taxpayers who are older, work in the public sector, are sole proprietors, and have a better knowledge of land tax laws are more likely to exhibit compliant attitudes. In addition, Race (V3), occupation (V7) and incentives (V12) are also significant indicating land taxpayers who are Indians, who have low or high levels of education, non-professional/executive occupations, and who believe that strong incentives are necessary to elicit tax compliance, are less likely to exhibit compliant attitudes.

While the first dependent variable asked out of every 100 people how many paid no land tax at all, the dependent variable used in Model 2 was based on respondents' estimate of the proportion out of every 100 landowners believed to be compliant on their land tax payment. The regression results for Model 2 show nine significant independent variables. Age, occupation and ethics give the same result as Model 1.

In comparison with Model 1, differences exist for race, education, income level, source of income, perceived fairness, sanction, understanding tax laws, incentive and location. Thus, land taxpayers who are Malays or Indians, with high income levels are less likely to exhibit compliant attitudes and land taxpayers who perceive the land tax system as fair are more likely to have compliant attitudes with the land tax laws. Rather unexpectedly, the result shows that level of education has no significant relationship with compliance attitudes. Although counter-intuitive, land taxpayers who believe that the chances of sanctions applying are low are also more likely to exhibit compliant attitudes. The result also shows that Johor, Negeri Sembilan and Kelantan land taxpayers (V14) are more likely to exhibit compliant attitudes.

TABLE 3 RESULTS OF MULTIPLE REGRESSIONS (N=159)

	Dependent Variables			
	Model 1	Model 2	Model 3	Model 4
Independent Variables (predicted sign where applicable)	(numbers in parenthesis are *t*-statistics)			
(V1) *Age* (+)				
Middle age (40 – 60)	.248**	.273***	.220**	.275***
	(2.561)	(2.837)	(2.139)	(2.794)
Older age (above 60)	.300***	.240**	.177*	.263***
	(3.027)	(2.442)	(1.680)	(2.612)
(V2) Gender (+)	.052	.075	.153**	.107
	(.728)	(1.050)	(2.016)	(1.468)
(V3) *Race*				
Malays	-.008	-.251**	-1.135	-.152*
	(-.083)	(-2.512)	(-1.259)	(-1.483)
Indians	-.217**	-.338***	-.255**	-.303***
	(-2.016)	(-3.164)	(-2.232)	(-2.772)
(V4) *Education* (+)				
Low level of education	-.187*	-.140	-.235**	-.210**
	(-1.930)	(-1.454)	(-2.287)	(-2.130)
High level of education	-.544***	-.061	-.168	-.274**
	(-4.503)	(-0.508)	(-1.314)	(-2.234)
(V5) Income level (-)	-.119	-.348***	.010	-.169*
	(-1.300)	(-3.829)	(-.099)	(-1.816)
(V6) *Source of Income* (+)				
Public sector	.164*	.111	.161*	.162*
	(1.792)	(1.218)	(1.655)	(1.735)
Sole proprietor	.233**	.144	.132	.186**
	(2.532)	(1.582)	(1.348)	(1.990)
(V7) Non professional/executive	-.462***	-.344***	-.013	-.292***
	(-4.735)	(-3.553)	(-.125)	(-2.950)
(V8) Ethics (tax evasion) (-)	-.201**	-.390***	-.218**	-.302***
	(-2.484)	(-4.853)	(-2.531)	(-3.680)
(V9) Fairness (+)	.014	.158**	2.013**	.128*
	(.192)	(2.129)	(2.280)	(1.689)
(V10) Sanction (-)	-.048	.169**	-.062	.023
	(-.623)	(2.195)	(-.749)	(.298)
(V11) Understanding Tax Law (+)	.149**	.084	.028	.094
	(2.445)	(1.213)	(.384)	(1.321)
(V12) Incentive	-.157*	-.153**	-.181**	-.183**
	(-2.106)	(-2.070)	(-2.292)	(-2.421)
(V13) Type of land	.088	.127	.132	.130
	(1.131)	(1.649)	(1.600)	(1.652)
(V14) Locations				
Johor	-.013	.194**	.106	.111
	(-.141)	(2.150)	(1.099)	(1.207)
Melaka	-.070	-.051	-.248***	-.141*
	(-.941)	(-.688)	(-3.156)	(-1.876)
Negeri Sembilan	-0.22	.162*	.009	.058
	(-.256)	(1.901)	(.094)	(.660)
Pahang	-.057	.001	-.156*	-.081
	(-.656)	(.014)	(-1.704)	(-.922)
Selangor	-.094	.104	.079	.039
	(1.391)	(1.555)	(1.103)	(.571)

Perak	-.056	.064	-.055	-.017
	(-.656)	(.755)	(-.610)	(-.191)
Pulau Pinang	-.015	.008	-.099	-.041
	(-.174)	(.094)	(-1.086)	(-.473)
Kedah	-.126	-.087	-.142	-.132
	(-1.465)	(-1.013)	(-1.556)	(-1.509)
Kelantan	-.032	.167**	.080	.084
	(-.406)	(2.103)	(.937)	(1.034)
Adjusted R^2	.367	.378	.286	.348
F-value	4.450	4.617	3.388	4.178
p-value	.000	.000	.000	.000

*** Significant at the 1% level   ** Significant at the 5% level   * Significant at the 10% level

Model 1: Out of every 100 people who own land, how many would you say paid no land tax at all? (Enter a number between 0 and 100)

Model 2: Out of every 100 people who own land, what percentage do you believe are honest on their land tax payment? (Enter a number between 0 and 100)

Model 3: Among your friends, at what percentage are you confident they paid their land tax honestly? (Enter a number between 0 and 100)

Model 4: An average of scores from model 1, model 2 and model 3.

The dependent variable in Model 3 measures respondents' beliefs as to the percent of their friends that comply with land tax. The results show that middle-aged and older land taxpayers have more compliant attitudes than young land owners. In comparison with Models 1 and 2, females believed their friends to be more compliant than males believed their friends to be. Results of ethics, fairness and incentives are all consistent with Model 2. The results also show that Melaka land taxpayers are less likely to exhibit compliant attitudes. This is also the case, but to a lesser extent for Pahang land taxpayers.

By combining responses to the three separate dependent variables an overall compliance indicator is established (Model 4). Using Model 4, gender is not significant. Income level however shows a significant negative estimate indicating that landowners with high income levels are less likely to exhibit compliant attitudes. The results also show that sole proprietor landowners are more likely to exhibit compliant attitudes. This is also the case, but a lesser extent for those who work in public sectors. Using Model 4, Melaka land taxpayers are less likely to exhibit compliant attitudes.

Thus, it appears that the relationship between demographic characteristics and compliance attitudes in this model provides some support for prior studies. Compliers were generally at middle age (in contrast with Clotfelter 1983, yet similar to Tittle 1980; and Warneryd & Walerud 1982), more likely to be women (similar to Tittle 1980) and at a low income level (in contrast with Christian & Gupta 1993). The results also show that land taxpayers with a medium level of education, sole proprietor status (in contrast with Wahlund 1992), and a non-professional/executive background (similar to Westat 1980b) are more likely to exhibit compliant attitudes. For attitude and perception behavior, the results are similar to that of the studies reviewed by Jackson and Milliron (1986). When tax evasion is seen as a moral issue, individuals are less likely to evade taxes regardless of the tax situation. Taxpayers are more likely to exhibit compliant attitudes when they perceive the tax system to be fair. For the tax knowledge variable, the result is also similar to Milliron (1985), indicating a positive relationship between individual understanding of tax laws and tax compliance attitudes. A number of researchers have acknowledged the need for a tax system to provide taxpayers with incentives to comply with tax laws (Slemrod 1992; Smith

1992). This study, to the authors' knowledge, is the first to do so, and finds that respondents who felt positive incentives were important to ensure compliance indicated lower compliance scores.

CONCLUSION

This article tests a compliance model for a new tax (land tax) in a non-western country (Malaysia) with four previously untested variables (race, positive incentives, land type and location) to identify factors associated with landowners' compliance attitudes. Our regression results show that age, race, level of education, level of income, occupation and ethics strongly influence land tax compliance attitudes. In addition, the independent variables of perceived fairness toward tax compliance, understanding tax laws, incentives and location are also statistically related to land tax compliance attitudes.

These results should prove useful to policymakers and land tax administrators in both Malaysia and elsewhere. As no prior studies have specifically studied land tax, the finding that the income tax compliance literature extends to land tax is an important contribution of this study. In particular, one option that would appear to have promise is to increase taxpayer understanding of land tax laws through information campaigns or advertising containing persuasive messages. This in itself may even improve actual compliance. Such efforts might be targeted towards younger taxpayers and those with either low or high levels of education.

One limitation of this study and others, is that tax compliance research has been criticized for relying on self-reports of behavior. Information provided by respondents on actual compliance behavior is sensitive and potentially incriminating, and could be misrepresented (Hanno & Violette 1996). For this reason, the dependent variables used in this study were of an 'indirect' nature and did not directly ask for respondents' self reported compliance behavior.

While it may be unwise to generalize from this study to other contexts of land and property taxation, this study acts as a baseline for future compliance research in these settings. Such future research could even validate the effectiveness of using persuasive messages to land owners' targeted according to the factors identified in this study. Future research could also address how other moral and social factors might influence landowners' attitudes. Finally, interaction of various beliefs, demographic characteristics, norms and situational factors might also be examined. Overall, our study demonstrates that the compliance framework adopted can be useful in predicting compliance attitudes, as well as extending extant knowledge of race and incentive effects.

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The Attitudes of Tertiary Students on Tax Evasion and the Penalties for Tax Evasion - A Pilot Study and Demographic Analysis

Ken Devos∗

Abstract

The tax compliance behavioural literature indicates that among other factors, demographic variables play an important role in the compliance behaviour of taxpayers. This pilot study investigates the relationship that exists between demographic and other major tax compliance variables and the attitudes of students towards tax evasion and the penalties for tax evasion. A survey of 470 tertiary taxation students was recently conducted. The findings revealed that the demographic variables analysed including, gender, age, nationality, education/qualifications, occupation, and income level in most cases held statistically significant relationships with the incidence of tax evasion and the penalties for evasion. These results provide useful information for revenue collecting authorities and have implications for tax policy development.

INTRODUCTION AND BACKGROUND

The reasons for non-compliance in taxation raises important issues for any government and revenue collecting authority as it impacts on both the equity and efficiency of the economy. Measurement of the magnitude of non-compliance can be difficult as it involves estimating levels of uncollected tax, which by its nature is not detected by the revenue authority. Nevertheless the amount of tax lost through evasion is enormous (The IRS estimated it to be $US 127 billion[1] in 1996 and $US 310 billion[2] in 2004) and revenue authorities need to continually combat this if they are to provide the quality and quantity of public goods and services expected by its citizens. By examining the behavioural attitudes of different taxpayer groups (for example students) more closely, it is envisaged that governments may be able to bridge the tax gap and eventually improve community values and understanding with regard to tax compliance as well as targeting the audit strategies of Revenue Authorities in respect of non-compliers.

Aim and Overview of this Pilot Study

The aim of this study was to investigate if a relationship exists between demographic variables and the attitudes of Australian tertiary students towards tax evasion and the penalties for tax evasion. Specifically, the objectives of the survey were to ascertain demographic differences in:

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[1] Worsham, R. G., "The Effect of Tax Authority Behaviour on Tax Compliance: A Procedural Justice Approach," *Journal of the American Taxation Association*, Vol 18, No 2, Spring, (1996): 19-39.

[2] Stratton, S., 'Taxpayer Advocate addresses disclosure, withholding,' (2004 February 9) *Tax Notes*,714.

- Respondents' attitudes towards various types of business and individual tax evasion,

- Respondents' awareness and understanding of the penalties for tax evasion,

- The number of respondents who had been involved in some type of tax evasion and why,

- Respondents' attitudes on tax law enforcement and

- Respondents' attitudes regarding tax morals and tax fairness.

However, the emphasis in the analysis of the results was based on objectives one, two and five in particular.

The remainder of the paper is structured in the following manner. Section 2 of the paper will define taxpayer compliance in terms of this analysis and attempt to briefly summarise some of the findings of empirical studies on tax compliance undertaken to date. Section 3 will then examine the specific demographic variables employed in this study and this will be followed by an outline of the research methodology in section 4. A discussion and preliminary analysis of the research results including statistical significance is provided in section 5 while section 6 concludes the study, identifying its limitations and provides suggestions for future research.

BRIEF LITERATURE REVIEW

Definition of Taxpayer Compliance

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.[3] An alternative definition has been offered by James and Alley[4] that considers tax compliance in terms of the tax gap. This is the difference between "true" individual income tax liability and that finally collected on a voluntary basis or by enforcement action. This definition has also been viewed as somewhat simplistic. Despite this there is no standard all embracing definition of compliance adopted across all tax compliance studies.

Empirical Evidence

One of the major approaches to compliance relies upon the element of coercion represented by the enforcement activities of police, taxation officials as well as the sanctioning behaviour of the courts and other agencies. Although enforcement activities only indirectly effect compliance and direct enforcement against the

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[3]Roth, J. A., Scholz, J. T. and Witte, A. D., (eds), Taxpayer Compliance an Agenda for Research," Vol 1, Philadelphia PA: *University of Pennsylvania Press*, (1989), 21. See also Jackson, B. R. and Milliron, V. C., "Tax Compliance Research: Findings Problems and Prospects," (1986), Vol 5, *Journal of Accounting Literature*, 125 – 165; Richardson, M. and Sawyer, A. J., "A Taxonomy of the Tax Compliance Literature: Further Findings, Problems and Prospects," (2001), Vol 16, *Australian Tax Forum,* 137-320 and Tan, L. M. and Sawyer, A. J., "A Synopsis of Taxpayer Compliance Studies – Overview Vis-à-Vis New Zealand," (2003), Vol 9,:4 *New Zealand Journal of Taxation Law and Policy*, 431-454.

[4]James, S. and Alley, C., "Tax Compliance, Self Assessment and Tax Administration in New Zealand- Is the Carrot or Stick More Appropriate to Encourage Compliance,?" (1999), Vol 5:1 *New Zealand Journal of Taxation Law and Policy*, 3-14, at 11.

individual engenders hostility, widespread failure to enforce creates cynicism and distorts reference norms.[5]

The Keith Committee[6] in England argued that enforcement powers should be precise and logically formulated, consistent across the range of taxation legislation, should allow for the minimum of administrative discretion and should be subject to ultimate judicial control which in turn should be capable of being applied in a summary and expeditious way.[7] Although the Keith Committee recommended that civil sanctions and surcharges should be the primary means of enforcing compliance, it argued that effective criminal sanctions should be available in cases of deliberate and serious frauds.[8]

Tax offences, however, have been treated as a special form of offending, quarantined from the general types of criminality, in that the non-enforcement of the law, together with the use of civil rather than criminal penalties has, in the past, allowed the taxation system to decay and fall into disrepute. Further, by allowing major illegalities to go unsanctioned, enforcement authorities have allowed the development of endemic cynicism and general disrespect for the law that may take years to reverse.[9] In terms of achieving a deterrent effect, enforcement authorities also appear to have failed in this regard.

However, some researchers have suggested that the whole notion of tax compliance is a social construct. They believe there is no objective standard of the appropriate levels of compliance and that the level "is a product of the negotiation of law and legal institutions."[10] Tomasic and Pentony[11] argue that the notion of compliance is a political one so that what is perceived as an acceptable level of compliance at one time may not be acceptable at another.

The economic definition of taxpayer compliance views taxpayers as "a perfectly moral, risk neutral or risk adverse utility maximizing individual who chose to evade tax whenever the expected gain exceeded the cost."[12] Thus a pure cost/benefit approach is given for why or why not taxpayers may comply with the tax laws. Other researchers propose that individuals are expected to weigh "the uncertain benefits of successful evasion against the risk of detection and punishment."[13] Consequently a

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[5] Freiberg, A., "Enforcement Discretion and Taxation Offences," (1986), 3 *Australian Tax Forum,* 55, 59.

[6] (Lord Keith of Kinkel Committee on Enforcement Powers of the Revenue Departments, Report 2, Vols 1 and 2.
 (London: HMSO, 1983, Cmnd 8822) Vol 1, 9.

[7] Articulated by the Committee on Enforcement Powers of the Revenue Departments, (London: HMSO, 1983, Cmnd 8822) Report 2, 9 (1983).

[8] Ibid.

[9] Freiberg, A., above n 5.

[10] Tomasic, R. & Pentony, B., (1990) *Defining Acceptable Tax Conduct, Discussion Paper (No 2)*, Centre for National Corporate Law Research, University of Canberra, 1.

[11] Ibid 3.

[12] Milliron, V. C., and Toy, .D.R., "Tax Compliance an Investigation of Key Features," (1988), Vol 10, *Journal of American Taxation Association*, 84-104, 85.

[13] Fischer, C. M., Wartick, M. and Mark, M.M., "Detection Probability and Taxpayer Compliance: A Review of the Literature," (1992), Vol 11, *Journal of Accounting Literature*, 1-46, 2.

penalty structure has an impact upon compliance. Allingham and Sandmo published an early model of this theory.[14]

Studies of criminal behaviour in general have found that the probability of apprehension is more important than the sanctions actually imposed.[15] Yet another influence may 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 the low deterrent value.[16]

On the other hand some studies 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 (i.e. 4 % or less).[17] This could have implications for Anglo-Saxon countries that have moved to a self-assessment environment.[18] Other researchers have observed a significant relationship between the severity of the criminal sanctions and compliance by one group of taxpayers: high-income self-employed individuals.[19] This has also been supported by similar work on sanctions.[20] Within each of the groups this study covered, legal sanctions were most effective for the higher class and the better educated (not the best). These studies have also found that the threat of guilt feelings was a greater deterrent to tax evasion than the threats or stigma of legal sanctions.

Another potentially salient issue involves the existence of a threshold or the possibility of being detected. Threshold levels of detection may explain in part, inconsistent findings on the deterrent effects of the certainty versus the severity of punishment. Studies have provided evidence that states that in reaching a threshold probability of detection, mild punishment may be as effective a deterrent as a more severe one.[21] The severity of sanction does not necessarily produce a linear effect with tax compliance. Other authors submit that the social cost of sanctions could outweigh the benefits. Taxpayers as a group may become alienated if sanctions are perceived as too severe, resulting in general antagonism and disrespect for the law.[22]

However, the positive effect of increased sanction levels on taxpayer compliance has been found to hold up even where relatively low (and realistic) penalty levels are

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[14] Allingham, M. G. and Sandmo, A., "Income Tax Evasion: A Theoretical Analysis," (1972), Vol 1, *Journal of Public Economics*, 323-338.

[15] Tittle, C. and Logan, C., "Sanctions and Deviance; Evidence and Remaining Questions," *Law and Society Review, (Spring)* (1973), 371-389.

[16] Friedland, N., "A Note on Tax Evasion as a Function of the Quality of Information about the Magnitude and Creditability of Threatened Fines: Some Preliminary Research," *Journal of Applied Social Psychology,* February, (1982), 54-59.

[17] Jackson, B. and Jones, S., "Salience of Tax Evasion Penalties Versus Detection Risk," *Journal of the American Taxation Association (Spring),* (1985) 7-17. This research also added credence to congressional efforts to raise the magnitude of legal penalties a taxpayer faces for non-compliance. Code Section 6661.

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

[19] Witte, A. & Woodbury, D., "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).

[20] Schwartz, R. & Orleans, S., "On Legal Sanctions," *University of Chicago Law Review (Winter),* (1967), 274-300.

[21] Allingham, M. G. and Sandmo, A. above n 14.

[22] Jackson, B. R, & Milliron, V. C., "Tax Compliance Research: Findings, Problems, and Prospects," *Journal of Accounting Literature* Vol 5, 1986, 125-165, 142.

used.[23] 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 suggests that a tax system that combines both penalties and rewards is more effective in maximizing compliance than a system that focuses solely on sanctions.[24] As such, positive inducements for compliance may also have a key role to play. Whether these inducements come in the form of quicker tax refunds, or a percentage reduction in tax payable, is open to question.

Behavioural Models
Economic Model
The economic deterrence model has been used to examine tax evasion from a theoretical perspective and the fiscal psychology approach has often been used in empirical research. Factors that have been examined include:

- Complexity of the tax system;

- Level of revenue information services;

- Withholding and information reporting;

- Preparer responsibilities and penalties;

- Probability of receiving audit coverage;

- Progressively and actual level of tax rates;

- Penalties for non-compliance, and;

- Individual factors (age, gender, education and income).

The major works of Jackson and Milliron (1986) shows that there is no unanimous agreement on any one of these factors indicating a positive relationship with taxpayer compliance.

The traditional economic deterrence models draw upon deterrence theory and expected utility theory to predict that a rational taxpayer will evade tax as long as the payoff from evading is greater than the expected cost of being caught and punished. However, there is only ambiguous empirical evidence to support the predictions of economic deterrence models as a whole. Researchers[25] summarise the effect of factors that determine the monetary cost of compliance as including, the tax rate, detection probability, the level of income and penalty structure, and suggest for all of them, that existing empirical evidence provides no firm conclusions.[26]

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[23] Carnes, G. A., & Eglebrecht, T. D., "An investigation of the Effect of Detection Risk Perceptions, Penalty Sanctions and Income Visibility on Tax Compliance," *Journal of the American Taxation Association, 17 Spring,* (1995), 26-41.

[24] Falkinger, J. & Walther, H., "Rewards verus Penalties: on a New Policy on Tax Evasion," *Public Finance Quarterly,* 19, (1991), 67-79.

[25] Roth, J. A. & Scholz, J. T., and Witte, A. D., (eds), "Taxpayer Compliance Volume 1: An Agenda for Research," Philadelphia: *University of Pennsylvania Press,* (1989); also see n 3 above.

[26] Hasseldine, J., "Linkages between Compliance Costs and Taxpayer Compliance," 54, *Bulletin for International Fiscal Documentation,* (2000), 299-303.

Social and Fiscal Psychology Models
Overseas Studies
On the other hand, social psychology models inductively examine the attitudes and beliefs of taxpayers in order to understand and predict human behaviour. Researchers indicate that taxpayer's behaviour is directly determined by their intentions that are a function of their attitude towards behaviour and perception of social norms.[27]From a tax administration viewpoint, researchers[28] have concluded that compliance could also be improved, by educating taxpayers of their social responsibility to pay and thus their intention would be to comply.

As a behavioural problem the success of income tax depends on cooperation of the public, as suggested by Schmolders.[29] Consequently, 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 into becoming more responsible citizens (eg TV campaigns) might yield greater revenue rather than if it were spent on enforcement activities. Some Anglo-Saxon revenue authorities support taxpayers through a range of easily accessible explanatory leaflets and provide a useful site on the internet.

The work of Hite[30] suggests that both gender and education impacts on taxpayer compliance. Hite points to an example 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] Despite the difficulty of finding direct associations between compliance and these demographic variables, this area continues to be an active area of research within taxpayer compliance.

Other social and fiscal psychology models also effect compliance, by way of exchange equity (where taxpayers believe they are not receiving the benefits from the government in exchange for taxes paid). Although tax fairness is only one factor in achieving overall compliance, the NZ Government for example, has continuously placed great emphasis on this criterion.[32] Consequently fiscal psychologists, maintain that a taxpayer's belief in the tax system rather than the penalty structure is more salient in generating compliance.[33]

Certainly considerable empirical research has been conducted to examine the link of perceptions of fairness and tax evasion, but the findings of various researchers therein are inconsistent. Nevertheless, the effect of demographic variables, such as, age,

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[27] Ajzen, I., and Fishbein, M., Understanding Attitudes and Predicting Social Behaviour, Englewood Cliffs, Prentice Hall, (1980).

[28] Cialdini, R. B., "Social Motivations to Comply: Norms, Values and Principles," in Roth, J. A., Scholz, J. T., and Witte, A. D. (eds), Taxpayer Compliance Social Science Perspectives, (1989) Vol 2, Philadelphia, PA: *University of Pennsylvania Press*: 200-227.

[29] Schmolders, G., "Fiscal Psychology: A New Branch of Public Finance," (1959), Vol 12, *National Tax Journal*, 340-345.

[30] Hite, P., A., "Identifying and Mitigating Taxpayer Non-Compliance," (1997) Vol 13, *Australian Tax Forum,* 155-180.

[31] Ibid 161.

[32] Tan, L. M., "Taxpayers Perceptions of the Fairness of the Tax System – A Preliminary Study," (1998) Vol 4, *New Zealand Journal of Taxation Law and Policy,* 59-71, 60.

[33] Ibid 61.

gender, marital status, education, culture and occupation have upon fairness perceptions ultimately affects compliance. The responsible citizen approach[34] also covers behavioural aspects of taxpayer compliance and includes the major works of Meier and Johnson,[35] and Jackson and Milliron.[36]

Indeed, much of the empirical work that has been carried out tends to refute the economic model of compliance in its basic form. For example, it has been demonstrated by means of laboratory experiments[37] that, even where the deterrence factor is so low that evasion makes obvious economic sense, some individuals will nevertheless comply. Such findings may be particularly relevant in the context of a self-assessment environment that operates in many western economies. 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.[38]

However, both American and British research indicates mixed results regarding the effectiveness of criminal punishment as a deterrent to non-compliance by taxpayers. That is, the level of punishment alone has not been the sole determinative factor in shaping the level of taxpayer compliance. There is a similar lack of consistency in the results of other studies testing the relationship of the probability and severity of penalties with the level of compliance.[39] Although overseas researchers have found general support for the idea that sanctions encourage compliance, there is conflicting evidence on the merits of legal sanctions and interpersonal sanctions. Furthermore the impact of the severity of sanctions was found to be unresolved.[40]

A proposal to increase criminal sanctions to reduce non-compliance could be considered consistent with the "economic man" model[41], which supposes that a rational taxpayer will attempt to evade taxes unless the risks of detection and punishment outweigh the benefits of tax savings.[42] The economic man model proposes that increasing punishment by expanding criminal sanctions would decrease non-compliance. This principle therefore supports sentencing theory and the courts' right to consider the maximum penalty for an offence in order to achieve general

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[34] The citizen as having a responsible attitude to paying their share of taxes.

[35] Meier, R.F, and Johnson, W. T, "Deterrence as a Social Control: The Legal and Extralegal Production of Conformity," (1977) Vol 42 ,*American Sociological Review*, 292-304.

[36] Jackson, B. R, & Milliron, V. C., above n 22.

[37] Alm, J. Sanchez, I. and De Juan, A., "Economic and Non-Economic Factors in Tax Compliance," (1995) Vol 48, *Kyklos*, 3-18.

[38] Pilkington, C., "Taxation and Ethical Issues," in Growthorpe, C., and Blake, J., (eds), *Ethical Issues in Accounting*, (1998), London, Routledge.

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

[40] Richardson, M. and Sawyer, A. J., "A Taxonomy of the Tax Compliance Literature: Further Findings Problems and Prospects," (2001) Vol 16, *Australian Tax Forum*, 137-320, at 149. See also Jackson and Milliron, n 22 above.

[41] No doubt there is a range of economic considerations from the government's point of view as to whether to increase penalties and sanctions for tax offences. This is particularly so when the cost of auditing and collecting the taxes outweighs the additional revenue that will be raised.

[42] Dean, P. et al, "Taxpayers Attitudes to Income Tax Evasion: An Empirical Study," (1980) *British Tax Review*, Vol 28, 112-131.

deterrence.[43] However, this model has been criticised for failing to consider the analysis of attitudes, perceptions and moral judgements on tax behaviour.[44]

Earlier American research suggested that the threat of legal sanctions has an impact on compliance but not as great an impact as appealing to taxpayers' consciences.[45] Researchers suggest that the evidence supports the proposition that compliance can be increased by threat of punishment, but appeals to conscience can be a more effective instrument than a sanction threat for securing compliance.[46]However, other researchers have found that the probability of criminal sanctions was not significantly related to compliance. In fact, as stated previously the severity of the criminal fraud penalty was significantly related to compliance in only one of three audit classes – high-income self-employed taxpayers. Consequently, the threat of new and increased sanctions may even have a negative effect on taxpayer compliance levels, if no impact at all.

Australian Studies

Previous Australian research since the early 1980's included the work of Wallschutzky[47] which indicated that the exchange relationship 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 Wallschutzky[48] 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.[49] Some of the 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.

More recently both a qualitative and quantitative study by McKerchar[50] investigated the impact of complexity upon tax compliance focusing on Australian personal taxpayers. The findings revealed that the incidence of unintentional non-compliance and intentional over-compliance was high. Australian personal taxpayers appeared to be overpaying their tax liability as a result of complexity and these findings confirmed earlier overseas findings.[51] The clear message for the tax authority was that by addressing the effective simplicity of the tax system both the integrity and fairness of the tax system would be improved.

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[43] Jackson, B. R, & Milliron, V. C, above, n 22.
[44] Lewis, A., *The Psychology of Taxation*, (1982) Martin Robertson, Oxford, 127.
[45] Schwartz, R. & Orleans, S., above n 20.
[46] Witte, A., & Woodbury, D., above n 19.
[47] Wallschutzky, I. G., "Possible causes of Tax Evasion," *Journal of Economic Psychology*, (1984), Vol 5, No 4, 371-384.
[48] Wallschutzky, I. G., "Taxpayer Attitudes to Tax Avoidance and Evasion," Australian Tax Research Foundation, Research Study No 1, (1985).
[49] Ibid 43.
[50] McKerchar, M., "The Impact of Complexity Upon Tax Compliance: A Study of Australian Personal Taxpayers," Australian Tax Research Foundation, Research Study No 39, (2003).
[51] Ibid 207, See also Long, S. and Swingen, J., "The Role of Legal Complexity in shaping Taxpayer Compliance in Van Koppen, P Hessing, D and G. Van der Heuvel, (Eds*), Lawyers on Psychology and Psychologists on Law*, Swets & Zeitlinger, Lisse, pp127-145.

However, another recent study which investigated the impact of culture upon the perceptions of tax fairness and tax compliance was conducted by Gilligan and Richardson.[52] This empirical preliminary study of students from both Australian and Hong Kong universities revealed that there was no universal relationship or pattern that existed cross-culturally between the different facets of tax fairness perceptions and tax compliance. The authors indicated that legitimacy may well be the influence that shapes how fair tax systems are perceived and how likely people are to comply with their tax obligations.

Further studies conducted by Coleman and Wilkins,[53] revealed that there was a diversity of opinion 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 education and no doubt the impact of this variable in improving overall taxpayer compliance remains to be seen. Niemirowski, Baldwin and Wearing,[54] indicated that the results of tax evasion behavioural research over the last thirty years has remained contradictory and inconclusive. In the main this was due to the research addressing only a few variables at a time. Despite extensive research there was still a paucity of consistent reliable predicators or explanations of the causality of tax evasion.

Therefore given the various inconsistent findings in the studies to date outlined above, this study is considered a further valuable contribution to the literature. In particular the study will contribute to a better understanding of taxpayer compliance in Australia by establishing the relationship between demographic variables and the attitudes of tertiary students to tax evasion and the penalties for evasion. Understanding this relationship may consequently assist governments and Revenue Authorities in determining audit and compliance strategies and in the formulation and imposition of penalties for taxation offences.

DEMOGRAPHIC VARIABLES

Gender

A common finding amongst studies reviewed by Richardson and Sawyer and previously Jackson and Milliron[55] was that female taxpayers were more compliant than their male counterparts. In particular, a comprehensive study conducted by Oxley[56] in New Zealand reported that women were more often compliers in comparison with men and less often tax evaders or tax avoiders. However, Richardson and Sawyer noted that this compliance gap between males and females appears to be narrowing with the emergence of a more independent, non-traditional generation of

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[52] Gilligan, G. and Richardson, G., "Perceptions of Tax Fairness and Tax Compliance in Australia and Hong Kong- A Preliminary Study," *Journal of Financial Crime*, Vol 12, No 4, 2005, 1-13.

[53] Coleman, C. and Wilkins M., in Walpole, M. and Evans, C., Chapter 22, Tax Administration in the 21st Century, Prospect, Sydney, 2001, 263-264.

[54] Niemirowski, P. Baldwin, S., and Wearing, A., in Walpole, M. and Evans, C., Chapter 18, Tax Administration in the 21st Century, Prospect, Sydney, 2001, 211.

[55] Richardson, M. and Sawyer, A. J., above n 40 and Jackson, B. R., and Milliron, V. C., above n 22.

[56] Oxley, P., "Women and Paying Tax," (1993) in C., Scott, (Ed) *Women and Taxation*, Wellington Institute of Policy Studies, 31.

women.[57] In a survey of American taxpayers Hite[58] focused on the interaction between gender and education. Female respondents with college degrees tended to be more tolerant of non-compliance than females without college degrees. On the contrary, males tended to be less tolerant of non-compliance as their education levels increased.

Age

The majority of studies reviewed by Richardson and Sawyer[59] that examined the age variable found that older taxpayers tended to be more compliant than younger taxpayers.[60] However there have been a significant number of studies that have found no relationship.[61] Richardson and Sawyer have proposed four possible explanations for the inconsistent findings. Firstly, the significance of the age variable does not extend to all taxpayers. Second, inconsistent definitions of taxpayer non-compliance are employed throughout the research. Third, when age is considered in association with a number of other variables its effect on taxpayers' compliance is diluted. Finally, the interaction of age with other compliance variables could be problematic.

Nationality

There has only been little research undertaken with respect to tax compliance and ethnicity. A literature review by Roth et al[62] which used whites and non-whites as a proxy variable found whites to be more compliant. However, Beron et al [63] suggest the results are dependent upon other variables used in the study. In particular the income variable was found to have a distortive effect. Studies of commitment to compliance using indices have found the largest differences between races.[64]

Education/Qualifications

The effect of education on taxpayer compliance is not clear, based on previous studies.[65] The reasons given for these conflicting findings are varied. First, there can be difficulty in determining which aspect of education is being measured. Comprehensive literature reviews[66] have identified four measures of education- the

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[57] For example, Robben et al [1989] found no significant relationship between gender and compliance, but their experiment involved only 22 females and twice as many males.

[58] Hite, P. A., above n 30, 155.

[59] For example, Beron, K. J., Tuachen H., V., and Witte, A. D., [1992] found the age was positively related to compliance for low and middle income proprietors, whereas Dubin and Wilde [1986] found a similar effect only for low and high income non-business taxpayers, below n 63.

[60] See for example, Smith, K., W., "Reciprocity and Fairness: Positive Incentives for Tax Compliance," in Slemrod, J., (ed), *Why People Pay Taxes: Tax Compliance and Enforcement*, (1992) Ann Arbour, MI, University of Michigan Press, 223.

[61] See for example, Porcano, T. M., "Correlates of Tax Evasion," (1988), *Journal of Economic Psychology*, 47.

[62] Roth, J. A., and Scholz, J. T., and Witte, A D., above n 25.

[63] Beron, K. J., Tauchen, H., V. and Wittie, A., D., "The Effect of Audits and Socioeconomic Variables on Tax Compliance," in Slemrod, J. (Ed), *Why People Pay Taxes: Tax Compliance and Enforcement*, (1992) Ann Arbour, MI, University of Michigan Press, 67.

[64] See for example Song, Y., and Yarborough, T., "Tax Ethics and Taxpayer Attitudes: A Survey," (1978), *Public Administration Review*, 442.

[65] See for example, Wallschutzky [1993] who indicated that education is the variable most likely to improve compliance, whereas Beron, Tauchen and Witte [1992] indicated that inconsistent results are produced as education is highly correlated with income level.

[66] See for example, Jackson, B. R, & Milliron, V. C, "Tax Compliance Research: Findings, Problems, and Prospects," *Journal of Accounting Literature,* Vol 5, 1986, pp125-165 and Richardson, M. and Sawyer, A. J., "A Taxonomy of the Tax Compliance Literature: Further Findings Problems and Prospects," (2001), Vol 16, *Australian Tax Forum*, 137-320, at 149 and Lewis, A., *The Psychology of Taxation*, (1982), Martin Robertson, Oxford, 127.

general degree of fiscal knowledge, knowledge involving evasion opportunities, general educational attainment and specific tax knowledge. These different dimensions may assist in explaining the confusion surrounding the effect that the education variable has on taxpayer compliance.

Correlations between education and other compliance variables may also have contributed to the inconsistent results found. Other possible compliance variables that have been suggested to have a relationship with education are gender,[67] income level,[68] ethics,[69] taxpayers' perceptions of fairness,[70] detection[71] and sanctions.[72] Nevertheless, it is important that university students' attitudes to tax be examined because firstly, young people have many years of taxpaying left and secondly, graduates tend to earn more over their lifetimes than non-graduates. Consequently graduates represent a larger proportionate share of the tax base in terms of per-head taxable income.[73]

Occupation

There is a lack of clear research direction for occupation and employment status as variables contributing to taxpayers' compliance behaviour.[74] The reasons for this lack of clarity could be that many studies employ different occupational categories in their research. These occupational categories have ranged from specific occupational strata[75] to broad categories[76]. Another reason for the lack of direction could be the suggestion that the opportunities for non-compliance are associated with the particular occupation rather than the occupation itself.[77] Consequently, further research needs to be done utilising occupation as an independent variable.

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[67] Hite, P. A., above n 30, 155.

[68] Beron, K. J, Tauchen, H. V., and Wittie A. D., above n 59, 67.

[69] Mc Graw, L. K., and Scholz, J., T., "Norms, Social Commitment and Citizens Adaption to New Laws," in Van Koppe, P. J., Hessing, D. and Van den Heuvel, G. (eds), *Lawyers on Psychology and Psychologists on Law,* Amsterdam the Netherlands, Sweets and Zeitlinger, (1988), 105.

[70] Roberts, M. L., "An Experimental Approach to Changing Taxpayers Attitudes,' Towards Fairness and Compliance via Television," (1994), *Journal of the American Taxation Association*, Vol 16, 67.

[71] Smith, K.W., "Reciprocity and Fairness: Positive Incentives for Tax Compliance," (1992), in Slemrod, J. (ed) *Why People Pay Taxes,* Tax Compliance and Enforcement, Ann Arbour MI, University of Michigan Press, 223.

[72] Grasmick, H. G., Bursik, R. J., "Conscience, Significant Others and Rational Choice: Extending the Deterrence Model," (1990), Vol 24, *Law and Society Review*, 837.

[73] See For Example, Fallan, L., "Gender Exposure to Tax Knowledge, and Attitudes towards Taxation: An Experimental Approach" (1999), Vol 18, *Journal of Business Ethics*, 173 and Erskin, K. and Fallen, L., "Tax Knowledge and attitudes Towards Taxation: A Report on a Quasi-Experiment," (1996) *Journal of Economic Psychology*, 387. Both Studies found that improved tax knowledge increases students' attitudes towards the fairness of the tax system, such that they consider the tax system to be fairer. It also makes their attitude towards other peoples' tax evasion stricter.

[74] See for example, Parcano [1988] above n 61 and Beron, Tuachen and Witte [1992] above n 63.

[75] See for example, Mason, R. and Calvin, L., "A Study of Admitted Income Tax Evasion," (1978) *Law Society and Review,* Vol 12, 73. The author's occupational categories were, professional/technical, managers and officials (not-self employed) managers and officials (self employed), clerical and sales, craftsman, operators and unskilled.

[76] Hasseldine, D. J., Kaplan, S.E., and Fuller, L. R., "Characteristics of New Zealand Tax Evaders: A Note" (1994), Vol 34, *Accounting and Finance,* 79. Hasseldine's survey only included two categories-self-employed/sales/professional and clerical/administration/manual.

[77] Robben, H. S .J., Hessing, .D. J, and Elffers, H., "Legal Controls and Type of Employment in Tax Evasion Behaviour," in Lea, s. E.G., Webley, P. and Young, B. M, (eds), *Applied Economic Psychology in the 1990's*, Vol 1, Exeter, UK, Washington Singer Press, (1990), 512.

Income Level

Recent research has confirmed earlier findings of Jackson and Milliron,[78] that the evidence on the income level variable is mixed and unclear.[79] Previous research has found supporting evidence for three contrasting views encompassing positive,[80] negative[81] and no correlation[82] with taxpayer compliance. It is possible that correlations between income level and other tax compliance variables, in particular the effect of tax rates, may explain why the findings are so inconclusive.[83]

Work Experience/Tax Return Filing Experience

There appears to be a lack of research into the relationship between work experience and tax return filing experience as independent variables and taxpayer compliance. One reason for this situation could be the interaction that these variables have with other independent variables. For example, variables such as age, income level, and occupation are intuitively linked to work experience and consequently tax return filing experience. A study by Tan,[84] tested the effects of working and filing status of taxpayers' with their perceptions of fairness of the tax system. The findings indicate that both variables have an effect on the perception of fairness of the tax rate structure and filing status has an effect on the perception of fairness of the tax burden on different income levels.

RESEARCH METHODOLOGY

Survey Instrument

A survey questionnaire was used to ascertain tertiary students' attitudes towards tax evasion and the penalties for tax evasion. The strength of this approach is that it enables a large number of respondents to be surveyed with minium expense. Approval was sought and obtained from the requisite human ethics committee given the sensitivity of the information being requested. Responses to the survey were confidential and no names were given by participants. The survey was eight pages in length and took respondents approximately 15-20 minutes to complete. In most questions a seven-point Likert scale was employed to indicate the degree of agreement or disagreement. A copy of this pilot survey was given to experienced researchers and the statistical counselling service of the Business and Economics Faculty, at Monash University for suggestions on improving the instrument. It was considered that the survey questions appeared to be well understood with little opportunity for confusion.

The survey contained 31 questions[85] which included, (See Appendix 1) Questions 1-2 that asked respondents for their sources and quality of tax information. Questions 3 to 6 asked respondents for their impressions and beliefs regarding the imposition of tax penalties in certain hypothetical scenarios. Questions 7-11 asked respondents if they

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[78] Jackson, B. R, & Milliron, V. C, above, n 22.

[79] See for example, Christian and Gupta [1993] and Hite [1997].

[80] Smith, K. W., above n 71.

[81] Baldry, J. C., "Tax Evasion is not a Gamble: A Report on Two Experiments," (1986), Vol 22, *Economic Letters*, 333.

[82] Worsham, R. G, above, n 1.

[83] See for example, Feinstein, J .S., "An Econometric Analysis of Income Tax Evasion and its Detection", *RAND Journal of Economics*, [1991] 22, 14-35.

[84] Tan, L. M., above n 32.

[85] Some of the questions in the survey were adopted from the study undertaken by Murphy, K (2003) into tax scheme investors at the ANU through the CTSI unit.

had ever been fined and penalized for tax offences themselves and their impressions thereof. Questions 12-14 sought respondents' views on law enforcement while questions 15-16 sought their views regarding tax fairness and questions 17-23 their views concerning tax morals. Questions 24-31 concluded the survey by asking respondents for their demographic details. Finally, there was also space provided in the survey to give respondents an opportunity for comments.

Survey Sample

The survey was distributed to 420 undergraduate and 50 postgraduate taxation law students at Monash University, Clayton campus, during March-April 2005. The majority of respondents were full-time students as expected, although there were also respondents from industry, accounting firms and other administrative positions. Consequently as the sample was not representative of the whole taxpayer population the findings need to be appropriately qualified. It is proposed however, that a final version of this survey instrument may be utilised by the ATO in the future which could be distributed amongst a more representative sample of the taxpayer population. For this study, 306 completed surveys were received, giving a response rate of 65%. It is considered that a response rate of anything over 30% in a tax survey is acceptable given the sensitive nature of the topic and the response rate of previous tax compliance surveys.[86] In some questions the response rate was less than 300 but the results were nevertheless included in the analysis.

DISCUSSION AND ANALYSIS OF RESEARCH RESULTS

Chi-square tests were employed to investigate the effect of demographic variables on selected survey questions (See Appendix 2). Independent variables included age, gender, nationality, qualification (level of education), occupation, and income level. These are the most common demographic variables used in tax compliance research. Although information was also gathered on taxpayers' work and tax filing experience this was not analysed. Specifically, survey questions three, four, six, sixteen and nineteen were analysed in the paper against the demographic variables. These questions represented the thrust of the study in terms of tax penalties, taxpayers' attitudes towards tax evasion and their attitudes regarding tax morals and tax fairness. The demographic variables employed were tested for statistical significance at the 5 per cent level. (ie statistically significant at $p = 0.05$)

In particular three categories of significance were used. The first category was where the empirical value was less than or equal to 0.05 ($p<$ or $=0.05$) was significant. That is the results were less likely to be due to chance. The second category was marginally significant where the empirical value was greater than 0.05 but less than 0.15 ($0.05<p<0.15$). The third category was insignificant where the empirical value was greater than 0.15 ($p> 0.15$). Consequently, in this category there was no relationship between the variables. It should be noted that the depending on the number of degrees of freedom (df), it is important that the numbers in each cell are large enough to make chi-square tests appropriate. That is, chi-square tests should not be used where more than 20 percent of the expected frequencies are smaller than five or when any

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[86] See McIntosh and Veal achieved a 50% response rate, Tan 58% in a mail out survey, Oxley 29% and Hasseldine 22%.

expected frequency is less than one[87]. Given this qualification, chi-square tests were carried out accordingly. The frequencies and percentage breakdown of responses to all questions was also examined to enable comparisons with other studies[88]. (See Tables 1-12 below.)

Analysis of Dependent Variables.

TABLE 1: Q1-Q2/ AWARENESS OF TAX ISSUES

Respondents Opinion	None (1-2)	Some (3-5)	A lot (6-7)	Total Reponses
Q1 How much information about tax issues do you receive from the following sources? **a The ATO**	142 (47%)	144 (47%)	18 (6%)	304 (100%)
b. tax practitioners	210 (70%)	75 (25%)	17 (5%)	302 (100%)
c. work-related publications	172 (57%)	115 (38%)	16 (5%)	303 (100%)
d. TV, radio, newspapers	111(36%)	173 (57%)	20 (7%)	304 (100%)
e. family and friends	84 (28%)	185 (61%)	36 (11%)	305 (100%)
Q2 Depending on which source was most informative how much information did you receive on **a. how to do your tax return**	92 (30%)	146 (48%)	67 (22%)	305 (100%)
b. what will trigger an audit	164 (54%)	122 (40%)	17 (6%)	303 (100%)
c. what the ATO is able to catch	151 (50%)	134 (44%)	19(6%)	304(100%)
d. what the penalties are for evasion	138 (46%)	145 (48%)	19 (6%)	302 (100%)
e. people having problems with the ATO	155 (51%)	136 (45%)	12 (4%)	303 (100%)
f. people outwitting the ATO	163 (54%)	129 (43%)	9 (3%)	301 (100%)

In Table 1 questions 1 and 2 asked respondents about the sources and quality of the tax information they receive. The aim of these questions was just to give some broad indication of the respondents' awareness of tax issues. It was evident that family and friends and to a lesser degree the media were the most common sources of tax information providing some 36 cases (11% of the respondents a lot of the time). The media provided some tax information ($< 10\%$) while in most cases tax practitioners were least informative. (210 cases or 70% of total respondents' received no information).

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[87] Cooper. D. R., Schindler, P.S., Business Research Methods, (2003), 8[th] Edition, Boston, Irwin/McGraw-Hill, 537.

[88] Birch A., Peters, P. and Sawyer, A., "New Zealanders Attitudes to Tax Evasion: A Demographic Analysis," (2003), *New Zealand Journal of Taxation Law and Policy*, Vol 9, 65-109.

Given that family and friends were the most informative in the majority of cases (221 cases or 72% of respondents) the type of information received was mainly in regard to preparation of tax returns (70%). Only in less than 10% of cases was there a lot of information relating to the penalties for tax evasion or people having problems with or outwitting the ATO and audits. The lack of public education in this regard may well be a major factor in explaining the causes of tax evasion and can be linked to the behavioural factors of taxpayers outlined in the literature review.[89]

TABLE 2: Q3/ TAX PENALTIES GENERALLY

Respondents Opinion	Very Mild (1-2)	Right Amount (3-5)	Very Severe (6-7)	Total Reponses
Q3 a. Trades person underreporting cash earnings	36 (13%)	227 (77%)	30 (10%)	293 (100%)
b. An academic exaggerating deduction claims	42 (15%)	222 (77%)	26 (8%)	290 (100%)
c. small business owner not paying tax debts	25 (9%)	226 (77%)	41 (14%)	292 (100%)
d. a large corporation shifting profits abroad.	53 (18%)	173 (60%)	63 (22%)	289 (100%)
e. a welfare recipient under declaring government payments	47 (16%)	204 (70%)	39 (14%)	290 (100%)
f. a manager underreporting taxes	33 (11%)	212 (73%)	45 (16%)	290 (100%)
g. a student part-time worker failing to lodge a tax return	63 (23%)	182 (63%)	45 (16%)	290 (100%)
h. a retiree under declaring investment income	53 (18%)	214 (74%)	22 (8%)	289 (100%)

In Table 2 question 3 asked respondents to describe the penalties used by the ATO for various occupational groups. The actual penalties for various tax offences were not specifically explained to the students other than what they had learned in class. Although the question was aimed to get the respondents' views as to what they thought the penalty should be for the type of tax offender, it was evident that lack of penalty information and understanding was probably a short coming of the question. The following question provided examples of the penalties that are likely to be imposed.

However in most cases respondents felt the penalties were appropriate. Specifically, 22% indicated that the penalties used against a large corporation shifting profits abroad were very severe. Interestingly, (23%) of respondents indicated that the penalties imposed on students and part-time workers failing to lodge were mild. The majority (77%) indicated the penalties imposed on small business owners and managers who underreport tax were about the right amount. The responses for penalties imposed on retirees under declaring and tradespersons underreporting income however, appeared to be indifferent Chi-square tests revealed a significant difference at 5% confidence level between age and acceptability of penalty for a trades person underreporting cash earnings ($X^2 = 150.270$, df =120 p= 0.032).

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[89] Hite, P. A., above n 30.

Education was also found to be significant for the appropriateness of penalties on small business owners not paying their tax debts ($X^2 = 31.412$, df=18, p= 0.026). Other significant findings were occupation and penalties for welfare recipients under-declaring government payments ($X^2 = 212.607$, df = 180, p= 0.049.) and education and penalties for managers underreporting taxes ($X^2 = 33.036$, df= 18, p= 0.017.) Marginally significant results include, income level and the penalties for small business owners not paying tax debts ($X^2 = 71.936$, df= 60, p= 0.139.) Interestingly income level and the penalties for an academic exaggerating deductions was insignificant ($X^2 = 25.829$, df =60, p= 1.000).

TABLE 3: Q4 PENALTIES SCENARIO

Respondents Opinion	(1)	(2)	(3)	(4)	(5)	(6)	Total
4a)Monetary Fine	< $5,000	$5,000	$10,000	$15,000	$20,000	>$20,000	
	34 (12%)	37 (13%)	65 (23%)	53 (19%)	50 (18%)	44 (15%)	283 (100%)
b) A Prison Sentence	< 1 week	1 week	2 weeks	3 weeks	4 weeks	>4 weeks	
	1 (2%)	10(17%)	12(20%)	7(12%)	17(29%)	12 (20%)	59 (100%)
c) Community Service	< 1 week	1 week	2 weeks	3 weeks	4 weeks	>4 weeks	
	6 (4%)	22 (13%)	35(21%)	19 (12%)	41(25%)	42 (25%)	165 (100%)
d)Education Program	<3 days	3 days	6 days	9 days	12 days	>12 days	
	17 (9%)	43(22%)	52(26%)	17(9%)	23 (12%)	45 (22%)	197 (100%)

In Table 3 question 4 asked respondents for their opinions on a hypothetical scenario of a business owner (X) who negotiated discounts for customers in return for being paid in cash. The majority (50%) indicated that a community service order of 4 weeks or more was the best penalty. Also 60% indicated that a monetary fine in the range of $10,000-$20,000 would be appropriate. Otherwise, chi square tests generally revealed insignificant results. Educational programs indicating between 3-12 days (69%) were a popular response and there was a statistically significant difference between occupation and educational programs ($X^2 = 224.744$, df =180 p= 0.013). It was also interesting to note that a prison sentence was only marginally significant for gender ($X^2 = 19.787$, df =12 p= 0.071), Age ($X^2 = 129.878$, df =114 p= 0.147) and education ($X^2 = 24.817$, df =18 p= 0.130). The findings are consistent with *Hite* (1997), regarding the impact of gender and education upon tax compliance.

In Table 4 question 5 stated that given the business owner (X) in Q 4 had to pay a fine or penalty, respondents were asked questions of what they thought of this. The results indicate that between 35-40% believed that the business owner X was personally responsible and generally knew of the consequences. The majority (65%) were unsure whether this tax evasion was a serious offence (ie deliberate or intentional evasion). The survey did not consider other types of offences with which to compare these

results but in terms of taxpayers' perceptions the findings are consistent with those of Karlinsky.[90]

TABLE 4: Q5- Q6/ PENALTIES SCENARIO CONTINUED

Respondents Opinion	Not at All (1-2)	Neutral (3-5)	Very Much (6-7)	Total Reponses
Q5 Assume Business Owner X had to pay a substantial fine. a. Do you think X deserves harsh punishment?	28(9%)	201(66%)	76 (25%)	305 (100%)
b. Do you think X was personally responsible for receiving the penalty?	12 (4%)	173 (57%)	118 (39%)	303 (100%)
c. Do you think X knew of the possible consequences of his/her evasion?	36 (12%)	159 (52%)	109 (36%)	304(100%)
d. Do you think X was justified in reducing tax?	89 (30%)	192 (63%)	22 (7%)	303(100%)
e. Do you think X tax evasion is a serious offence?	28 (9%)	196 (65%)	80 (26%)	304 (100%)
Q6 Assume you are the business owner and had to pay a substantial fine. How likely is it that you would a feel that what you had done was wrong	36 (12%)	174(58%)	92 (30%)	302 (100%)
b. feel sorry/remorseful	57(19%)	179(59%)	66(22%)	302 (100%)
c. Ignore the penalty and take the risk	165 (55%)	111(37%)	22 (8%)	298(100%)
d. feel like you had won if you had got away without paying the fine	60(21%)	145 (50%)	87 (29%)	292(100%)
e. resent the ATO having control over you	61(20%)	181 (60%)	60(20%)	302 (100%)

Question 6 then asked respondents to assume that they were the business owner who had been fined or penalized and what they thought about it. Some 30% would feel guilty about their wrongdoing, although 29% would have felt victorious if they had got away with it. A clear risk averse attitude was displayed by 55% of respondents who refuse to ignore the penalty and take the risk. Three demographic variables held significant relationships according to chi-square tests. Firstly, gender was clearly linked to respondents feeling sorry and remorseful (X^2 = 28.476, df =12 p= 0.005), ignoring the penalty and taking the risk (X^2 = 23.538, df =12 p= 0.023) and the feeling of escaping (X^2 = 25.472, df =12 p= 0.013). Secondly, nationality was significant with respect to the ATO having control over them (X^2 = 246.159, df =186 p= 0.002) and with respect to feeling sorry and remorseful (X^2 = 217.078, df =186 p= 0.059). Thirdly, income level and the variable of ignoring the penalty and taking the risk was

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[90] Karlinsky, K. Burton, H. and Blanthorn, C., "Perceptions of Tax Evasion as a Crime," (2004), *e-journal of Tax Research*, Vol 2, No 2, 226-240.

significant (X^2 = 79.119, df =60 p= 0.050). Marginally significant results include education and the penalty for risk taking, (X^2 = 27.281, df =18 p= 0.074) and education and feelings of escaping from the penalty (X^2 = 24.298, df =18 p= 0.127). These results have implications regarding the potential deterrent effect of penalties for tax evasion.

TABLE 5: Q7-8/ PERSONAL PENALTY/OFFENCE

Respondents Reasons	Penalty imposed	Penalty not imposed
Q7 Have you ever been fined or penalized in some way?	5 (2%)	291(98%)
Q8 If yes, for what type of offence? eg		
1 making a false or misleading statement	3	
2.Obtaining a financial advantage by deceiving the Commonwealth or Public Authority		
3. Defrauding the Commonwealth	1	
4. failure to withhold and remit tax	1	
5.Other		

In Table 5 question 7 asked respondents whether they had been fined or penalized in some way by the ATO and positive responses were received in only 5 cases (2%). The majority 291 cases (98%) skipped to question 12. It is possible that question 7 may have also caused some confusion with respondents still answering questions 8-11 accidentally. In response to question 8, four cases involved civil offences including making errors on BAS returns, and failing to withhold and remit tax. Interestingly, there was one omission of a criminal offence of defrauding the Commonwealth. This supports the fact that evaders are prepared to reveal details if they feel comfortable with the anonymity of the survey instrument.[91]

TABLE 6: Q9-11 RESPONSE TO PENALTIES

Respondents Opinion	(1) –(2)	(3)-(5)	(6)-(7)	Total Responses
Q9 The ATO's Decision to penalize you;	Absolutely Unfair	Indifferent	Absolutely Fair	
	0	5 (100%)	0	5(100%)
Q10 The penalties against you were	Very Mild	About Right	Very Severe	
	0	5(100%)	0	5(100%)
Q11 Were the reasons for the penalty clear or unclear to you	Totally clear	Neutral	Totally Unclear	
	3(60%)	2(40%)	0	5(100%)

In Table 6 the response to question 9, all five cases were generally indifferent to the ATO s' decision to penalize them being unfair indicating a 3-5 rating on the seven point Likert scale. In response to question 10, the penalties were about right. Answers to question 11, the majority of respondents (60%) felt that the reasons for the penalties were clear although 40% were also neutral in this regard.

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[91] Mason, R. and Calvin, L., above n 75.

TABLE 7: Q12-14/ LAW ENFORCEMENT

Respondents Opinion	Strongly Disagree (1-2)	Neither Agree or Disagree (3-5)	Strongly Agree (6-7)	Total Reponses
Q12 a The prospect of tough penalties would deter people from evading tax	22(8%)	174(57%)	107(35%)	303(100%)
b Teaching tax evaders to deal effectively with their taxes would reduce future offences	29(10%)	192 (63%)	82(27%)	303(100%)
Q13 a. Tax evasion could be best handled through informing and encouraging taxpayers to comply voluntarily	48(16%)	199(66%)	56(18%)	303(100%)
b. Through enforcing strict rules and disciplining the guilty	14(4%)	192(63%)	99 (33%)	303(100%)
c. Though exposing people who cheat the tax system	61(20%)	157(53%)	81(27%)	299(100%)
d. Providing incentives for paying the correct amount of tax	14 (4%)	130(43%)	159 (52%)	303(100%)
Q14 a. The ATO can be trusted to administer the tax system so that it is good for the country as a whole	20(7%)	221(73%)	60(20%)	301(100%)
b. The ATO tries to be fair when making their decisions	28(9%)	239(80%)	33(11%)	300(100%)
c. People should follow the decisions of the ATO even if they go against what they think is right	48(16%)	217(72%)	36 (12%)	301(100%)
d. The ATO effectively upholds the principles of equal rights and opportunities.	34 (11%)	227(76%)	38(13%)	299(100%)

In Table 7 questions 12-14 were aimed at gauging respondents' opinions on law enforcement. In particular question 12 indicated that respondents felt tough penalties (35%) and taxpayer education (27%) would reduce tax evasion, with a higher percentage neither, agreeing or disagreeing. The results in question 13 reinforced this view with 18% indicating that voluntary compliance should be encouraged, along with 33% indicating that strict rules and disciplining the guilty are still important. Respondents were indifferent when queried about exposing tax cheats. Interestingly, 52% of the respondents agreed to providing incentives for taxpayer compliance and paying the correct amount of tax. This is consistent with views put forward by James and Alley.[92]

The majority of respondents (73%) neither agreed nor disagreed regarding trusting the ATO to administer the tax system fairly. Likewise (72%) were indifferent to people following the decisions of the ATO against their will or that the ATO upheld the principles of equal rights and opportunities (76%).

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[92] James, S. and Alley, C., above n 4.

TABLE 8: Q15-16/ TAX FAIRNESS

Respondents opinion	Too Few (1-2)	Right Amount (3-5)	Too Many (6-7)	Total Reponses
Q15 Personally, how many opportunities do you have to reduce your tax?	126(42%)	167(57%)	4(1%)	297 (100%)
Q16 In your opinion, do the following groups have many opportunities to legally reduce their tax? a. Chief executives of large corporations	18(6%)	167(56%)	111(38%)	296(100%)
b. Judges and barristers	13(4%)	184(62%)	98(34%)	295 (100%)
c. Unskilled factory workers	138(46%)	145(49%)	16(5%)	299(100%)
d. Trades people	37(12%)	210(70%)	52(18%)	299(100%)
e. Clerical workers	52(18%)	234(78%)	13(4%)	299(100%)
f. Small business owners	35(12%)	224(75%)	40(13%)	299(100%)

In Table 8 questions 15-16 were aimed at gauging respondents' opinions on tax fairness. In most cases the majority of respondents believed that all occupations listed had the right amount of opportunity to legally reduce their tax. However, 34% of respondents believed judges and barristers have too many opportunities while 46% indicated that unskilled factory workers had too few opportunities. This may largely be due to the ability of professions to afford quality tax advice.

Chi-Square Tests revealed significant differences between gender and corporate CEOs' opportunities to reduce tax (X^2 = 25.592, df =12 p= 0.012) also nationality and judges' and barristers' opportunities to reduce tax (X^2 = 218.982, df =186 p= 0.049) and between age and tradespeoples' opportunities to reduce tax (X^2 = 152.967, df =120 p= 0.023). Generally other results were only marginally significant with totally insignificant results appearing for clerical workers' opportunity to reduce tax against nationality (X^2 = 124.928, df =186 p= 1.000) and against occupation (X^2 = 97.818, df =180 p= 1.000).

In Table 9 questions 17 -19 were aimed at gauging respondents' opinions about tax morals. In question 17 the majority (ranging from 44-69%) all felt that their individuality, their profession or industry, the Australian community and being an honest taxpayer were all as important as each other. Question 18 revealed the majority were indifferent with respect to all income being declared on a tax return (55%) and that it is acceptable to overstate tax deductions (69%). Respondents were also generally neutral regarding the triviality of cash in hand jobs (59%).

The majority of respondents were generally neutral with regard to the variety of reasons given for evading tax. Although 42% clearly indicated that they would not see it as a game against the ATO and thought they would get away with it. Also 34% indicated that they would not evade because of a bad experience with the ATO or want to get even, while 29% gave reasons of compensation and 25% the reason of

self–interest. Chi-square tests reveal that age, (X^2 = 147.371, df =114 p= 0.019) nationality (X^2 = 213.931, df =180 p= 0.043) and education (X^2 = 28.884, df =18 p= 0.050) all had a significant relationship with compensating oneself for evading tax. This is consistent with the equity arguments presented earlier by Tan[93]. The reason of self-interest was insignificant, but wanting to get even with the ATO was significant, for gender, (X^2 = 26.044, df =12 p= 0.011) and income level (X^2 = 85.629, df =60 p= 0.017). A significant result was also reported for gender (X^2 = 21.056, df =12 p= 0.050) and nationality (X^2 = 217.582 df =180 p= 0.029) and the rationality for evading tax.

TABLE 9: Q17-19/ TAX MORALS

Respondents Opinion	Not at all (1-2)	Neutral (3-5)	Very Much (6-7)	Total Reponses
Q17 What is important to you? a. Your individuality	4(2%)	117(44%)	145(54%)	266(100%)
b. Your Profession Industry	2(1%)	158(53%)	137(46%)	297(100%)
c. The Australian Community	17(6%)	204(69%)	75(25%)	296(100%)
d. Being an honest taxpayer	35(12%)	190(64%)	71(24%)	296(100%)
Q18 These questions ask you what you think a. Do YOU think one should honestly declare all income on one's tax return?	26(9%)	165(55%)	107(36%)	298(100%)
b. Do YOU think it is acceptable to overstate tax deductions on ones tax return?	68(23%)	207(69%)	23(8%)	298(100%)
c. Do YOU think working for cash in hand payments without paying tax is a trivial offence?	66(22%)	175(59%)	57(19%)	298(100%)
Q19 If you ever evaded tax what would be your main reason for doing so? a. I would want to compensate myself for being unfairly disadvantaged by the tax system	33(11%)	177(60%)	87(29%)	297(100%)
b. I would look after my own interests first, as everyone else does	26(9%)	195(66%)	76(25%)	297(100%)
c. I would see it as a game against the ATO and thought I would get away with it	125(42%)	152(51%)	20(7%)	297(100%)
d. I would find it rational to get the most out of any situation	27(9%)	187(64%)	80(27%)	294(100%)
e. I would have had a bad experience against the ATO and would want to get even.	101(34%)	171(58%)	23(8%)	295(100%)

[93] Tan, L. M., above n 32.

TABLE 10: Q20-21/ ENGAGING A TAX AGENT

Respondents Reasons	Tax Agent engaged (1)	Tax Agent not engaged (2)
Q20 Did you rely on a tax agent or advisor in preparing your most recent income tax return?	69 (25%)	213 (75%)
Q21 Primary reason for using a tax agent		
1.Fear of making a mistake	16 (23%)	
2.The tax system is too complex	13 (19%)	
3.Insufficient time to prepare my own return	7 (10%)	
4.To legitimately minimize the tax I had to pay	29 (42%)	
5. To avoid paying tax	4(6%)	

In Table 10 questions 20 and 21 were asked to find out how many respondents engaged a tax agent or advisor and if so, why. The results reveal that only (25%) of the sample engaged a tax agent and that for half of them (42%) the main reason was for being able to legitimately minimize the amount of tax paid. This finding needs to be qualified however, when this percentage of tax agent use is compared to the use of tax agents by the general population. For instance, in a study conducted by McKerchar,[94] it was found that agent-lodged returns accounted for almost 75% of the total lodgements by personal taxpayers. Based on the figures in that study presented for tax agent lodgements up to 2001, it appears a high reliance on tax agents by Australian taxpayers still exists. Consequently the findings of this survey with regard to engaging a tax agent are unrepresentative of the Australian taxpayer population.

As the majority of respondents were full-time students this may account for 75% of participants not having to lodge a tax return and therefore engaging a tax agent. However, for those who did engage an agent the findings reveal that to legitimately minimise the amount of tax they had to pay (42%), followed by the fear of making a mistake (23%) and the complexity of the system (19%) were the main reasons given for doing so. It is also interesting to note that there were only 4 cases of employing an agent for the sole purpose of avoiding tax. This may again be evidence of the honesty of respondents in completing the survey.

In Table 11 question 22, respondents were given a scenario where a tax agent advised them as to the deductibility of an ambiguous expense. The tax agent also advised that there would be a low probability that the tax return would be audited and if so, the penalty would be mild. Given that the tax agent advises not to claim, the majority of respondents 54%, stated that they would be indifferent while 47% would probably agree with the agent and further 11% would definitely also agree. Likewise 35% would probably continue to use the same agent. However, interestingly in question 23 where the tax agent advises to claim the ambiguous deduction the majority, although smaller, 42% would again probably agree with the agent's advice and continue to use the same agent 38%. In only 3% of the cases were respondents definitely or 16% probably not going to agree with or use the same agent in question 23.

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[94] McKerchar, M., above n 50.

TABLE 11: Q 22-23/ TAX AGENT SCENARIO

Respondents Opinion	Definitely Yes (1)	Probably Yes (2)	Neutral (3)	Probably No(4)	Definitely No(5)	Total Responses
Q22 The Tax Agent advises you NOT TO CLAIM the deduction on your return a. Would you agree with the tax agent's advice?	31(11%)	136(47%)	54(18%)	63(22%)	8(2%)	292(100%)
b Based on the Tax agents advice would you continue to use this agent?	24(8%)	101(35%)	83(28%)	72(25%)	12(4%)	292(100%)
Q23 Now the Tax Agent advises you TO CLAIM the deduction on your return a. Would you agree with the tax agent's advice?	30(10%)	122(42%)	93(32%)	44(15%)	4(1%)	293(100%)
b Based on the Tax agents advice would you continue to use this agent?	26(9%)	110(38%)	101(34%)	48(16%)	8(3%)	293(100%)

Analysis of Independent Variables.

TABLE 12: Q24-31/ RESPONDENT DEMOGRAPHICS

Q24. Gender	**Frequency**	**Percentage**
Female	186	61%
Male	120	39%
Total	**306**	**100%**
Q25 Age	**Frequency**	**Percentage**
15-19	44	14%
20-29	245	80%
30-39	15	5%
40-49	2	1%
50-59	0	0
60-69	0	0
70+	0	0
Total	**306**	**100%**
Q 26. Nationality	**Frequency**	**Percentage**
Australian	115	38%
Chinese(including HK)	68	22%
Non-Chinese Asian	88	29%
British/NZ	3	1%
European	4	1%
Other	28	9%
Total	**306**	**100%**
Q 27. Qualification (Level of Education)	**Frequency**	**Percentage**
Did not have any or much formal schooling	0	0
Primary School	0	0
Junior /Intermediate/Form 4/Year 10	0	0
Secondary/ Leaving/ Form 6/ Year 12	96	31%
Trade Certificate/ Nursing Diploma	0	0

Diploma Course	37	12%
University Tertiary Degree	170	57%*
Post graduate Degree	3	1%
Total	**306**	**100%**
Q 28. Occupation	**Frequency**	**Percentage**
Professional/Management	7	2%
Student	253	83%
Administrative/Accounting	33	11%
Trades Person	0	0
Social Work/teaching	2	0.6%
Service Industry (Sales)	7	2%
Other- not working	2	0.7%
Other – working	2	0.7%
Total	**306**	**100%**
Q 29 Personal Income	**Frequency**	**Percentage**
Zero income	129	42%
$1-$5,000	10	3%
$5,001-$10,000	79	26%
$10,001- $20,000	26	9%
$20,001-$30,000	13	4%
$30,001-$40,000	12	4%
$40,001 -$50,000	10	3%
$50,001or more	27	9%
Total	**306**	**100%**
Q 30. Employment Status	**Frequency**	**Percentage**
Unemployed	14	5%
Retired from paid work	0	0%
Full-time Student	186	61%
Keeping House	2	1%
Other	5	2%
Employed	99	31%
Total	**306**	**100%**
Q31 Last Tax Returned Lodged	**Frequency**	**Percentage**
2003/04 year	138	45%
2002/03 year	20	6.7%
2001/02 year	3	1%
2000/01 year	1	0.3%
Not lodged in last 5 years	144	47%
Total	**306**	**100%**

* As the majority of students surveyed were in their final year of a degree course they interpreted Q27, the level of education, as having completed their undergraduate degree.

The demographic profile of the sample was skewed and not representative of the population, however, for the purposes of a pilot test nevertheless, useful. Specifically, the results of question 24 revealed that 186 (61%) females and 120 (39%) of males completed the survey. Question 25 indicated that the greatest portion of the respondents fell into the 20-29 age-group. (80%) This is not surprising considering the majority of respondents were full-time students (83%) and only likely to be employed part-time. Question 26 indicated that 115 (38%) of the sample were of Australian

nationality while 156 (51%) were of Asian origin. A further 3 (1%) were of British/NZ origin and 28 (9%) other. Question 27 indicated that all respondents had attained a secondary level and were completing a tertiary level of education. This is not surprising given that the majority were full-time tertiary students. Likewise 253 (83%) of the sample indicated their occupation was a full time student in question 28 with 33 (11%) indicating an administrative or accounting position. No doubt this would represent the majority of the 50 post graduate students who were surveyed. The personal income level of 129 (42%) of the sample was zero. A further 10(3%) were under $5,000 while 79 (26%) earned less than $10,000 per annum as indicated in question 29. The employment status of the majority 186 (61%) of participants was also described as full–time students in question 30, while a further 99(31%) indicated that they were employed. This did represent approximately one third of the total sample. Finally, 144 (47%) did not lodged a tax return in the last five years and 138 (45%) did lodge a return for the 2003-04 tax year as indicated in question 31.

SUMMARY AND CONCLUSIONS

The purpose of this study was to examine the relationship between demographic variables and the attitudes of tertiary students towards tax evasion and the penalties for tax evasion and their thoughts regarding tax morals and tax fairness. Specifically objective one of the study was concerned with the attitudes of respondents to various types of individual and business tax evasion. The sum of responses to Q3 indicated there was a fairly normal distribution against the level of education Q27 and in fact for all demographic variables tested Q24-29. That is, the majority of respondents indicated, that regardless of the type of evasion by whatever occupational group, the penalties used by the ATO were about right. (Refer Appendix 3 Bar Charts- Q3 Chart).

The results with respect to objective two the penalties for tax evasion, indicated that for the number of responses to Q4 (a) of the survey, that a monetary fine was the appropriate penalty for tax fraud with respect to the level of education Q 27. While respondents with a secondary level of education the majority indicated that a penalty in the range of $10,000- 15,000 was appropriate, with a definite skew to the right indicating heavier penalties. (Refer Appendix 3- Q4 Top Chart) Respondents with a diploma level of education were more evenly spread throughout penalty levels, while those with tertiary qualifications also indicated that a heavier penalty of $10,000 or more was appropriate. Responses to Q4 (c) of the survey indicated where community service was the appropriate penalty for tax fraud with respect to the level of education Q 27. Of those respondents with a secondary level of education a large majority indicated that a period less than one week of community service was appropriate. Respondents with diploma level education were more evenly spread throughout penalty levels, although a higher proportion indicated less community service while for respondents with tertiary qualifications, a large majority indicated a period of less than one week of community service was appropriate. (Refer Appendix 3 Q4 Bottom Chart).

The respondents' opinions with regard to Q6, reaction to a substantial fine, indicated a fairly normal distribution against level of education Q27 and in fact for all demographic variables tested Q24-29. Particularly, those with a secondary level of education the majority indicated that they would feel indifferent about having to pay a substantial fine. Respondents with a diploma level of education were more evenly

spread throughout penalty levels, while respondents with tertiary qualifications also indicated that they would feel indifferent about having to pay a substantial fine. The responses to Q6 (a) of the survey indicating whether respondents felt that what they had done, was wrong, was also fairly evenly distributed as per the level of education Q 27 (Refer Appendix 3- Q6 Chart). Of those with a secondary level of education a larger majority indicated a rating of likely to very likely as was the case for respondents with tertiary qualifications while respondents with diploma level were more neutral in this regard.

Examining the attitudes of respondents with regard to tax morals and tax fairness was objective 5 of this study. In particular, the responses in relation to Q16 (d) of the survey indicating the opportunities for tradespeople to legally reduce tax were also analysed with respect to the level of education Q 27. (Refer Appendix 3 – Q 16 Top Chart). Findings revealed that for those with a secondary level of education the majority indicated that tradespeople tend to have too few opportunities to legally reduce their tax with a definite skew to the left. Respondents with diploma level education indicated a normal distribution while those with tertiary qualifications indicated that tradespeople have about the right amount of opportunities. The number of responses to Q16 (a) of the survey indicated the opportunities to legally reduce tax for CEOs of large Corporations with respect to the level of education Q 27 (Refer Appendix 3- Q16 Bottom Chart). For respondents with a secondary level of education the majority indicated that corporate CEOs tend to have too many opportunities to legally reduce their tax with a definite skew to the right. Those with diploma level education showed more of a normal distribution but generally felt opportunities were more while those with tertiary qualifications also indicated that CEOs have either the right amount or too many opportunities. Postgraduates were also similar in this regard.

Finally the responses to Q19 (d) of the survey found that the main reason for evading tax was rationality with respect to the level of education Q 27 (Refer Appendix 3- Q19 Top Chart). For those with a secondary level of education the majority indicated that that they would be indifferent or likely to agree with rationality as being a reason for evasion (skew to the right). Respondents with diploma level showed more of a normal distribution while those with tertiary qualifications also indicated that they were neutral or likely to agree with rationality as being a reason for evasion (skew to the right). The responses to Q19(c) of the survey were in relation to the main reason for evading tax as being a game against the ATO with respect to the level of education Q 27 (Refer Appendix 3- Q 19 Bottom Chart). For respondents with a secondary level of education the majority indicated that that they would be indifferent or disagree to strongly disagree with an ATO game as being a reason for evasion (skew to the left). Those with diploma level education were consistent with this pattern while those with tertiary qualifications were also consistent with this pattern and disagreed with the ATO game as being a reason for evasion (skew to the left).

Consequently, it was evident from the findings for questions 24 to 29 and particularly Q27 of the survey that all six demographic variables analysed: gender, age, nationality, education/qualifications, occupation and income level, in many cases held statistically significant relationships with the incidence of tax evasion and the penalties for evasion. These findings are consistent with the findings of previous

studies of Birch, Peters and Sawyer,[95] Hite,[96] Meier and Johnson,[97] and Tan.[98] In particular, the research indicates that the level of education which was the predominant variable in this study plays a vital role in respondents' attitudes towards non-compliant tax behaviour. Likewise age, income level and the occupation of respondents all showed important implications for tax evasion generally, although there was little direct evidence of personal tax evasion amongst respondents.

Limitations of the Study

There are several limitations that exist in this study. Clearly, the study is not representative of the taxpayer population. Despite including a small portion of post-graduate students in the sample, the number of respondents in paid full-time work of varying occupations is non-existent. Likewise, the female population is nearly double that of males, while the age group of 40 years and older is unrepresented. The extent to which the sample was representative of Australian students is unknown. The educational qualifications of the respondents are also, as expected, exaggerated given that 70% of the sample is tertiary educated while personal income levels are too low and not spread across the spectrum. The fact that a random sampling technique was not employed and that the sample was chosen from the student population only, has resulted in various demographics being under represented.

Likewise problems of honesty and misinterpretation in tax surveys are always present and hard to erase. Tax evasion is a sensitive topic and the terminology in the survey instrument may have prevented some respondents from disclosing certain personal information. Despite the findings of Mason and Calvin[99] that taxpayers do admit to previous tax evasion there were only 5 cases or 2% of the sample that admitted to such evasion in this study. This may however, have been as a result of the majority of participants' lack of work experience which would limit their opportunities to lodge tax returns or even engage in tax evasion. Although the instructions to completing the survey were clearly communicated to the respondents and they were assured of their anonymity, two follow ups were also required to the original survey in order to achieve the final response rate.

The misrepresentation of some questions was also evident in the survey. Question 3 regarding the penalties used by the ATO against various occupational groups did not clearly state what those penalties were and many respondents were unable to comment as a result. Likewise questions 9-11 regarding the response to a personal penalty was confused by some participants who did not realise that the questions followed on from questions 7 and 8.

Future Research

Nevertheless, it is envisaged that a final version of this pilot survey instrument may be extended to a larger sample of taxpayers more representative of the Australian population. A random sampling technique could be employed and further statistical analysis carried out by way of correlations and regressions. It is also proposed that the behaviours and attitudes of taxpayers could be more accurately ascertained by

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[95] Birch, A., Peters, T. and Sawyer A. J., above n 88.
[96] Hite, P. A., above n 30.
[97] Meier, R.F, and Johnson, W. T., above n 36.
[98] Tan, L. M, above n 32.
[99] Mason, R. and Calvin, L., above n 75.

utilizing this survey instrument in conjunction with other research methodologies such as taxpayer interviews and further experimental or analytical research. As further data is gathered, 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 in particular the employment of its audit resources and enforcement measures in line with its first Tax Compliance Program issued in 2002.[100]

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[100] The aim of the Tax Compliance Program was to improve the overall level of tax compliance. For instance in the 2003-04 income tax year the ATO employed about 5,460 staff in preventing, detecting and deterring non-compliant behaviour- See The ATO Annual Report 2003-04, 127.

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APPENDIX 1 SURVEY INSTRUMENT

TAXATION COMPLIANCE SURVEY

Responses to this survey are confidential. Please do not include your name on this survey.

SECTION A   PUBLIC AWARENESS OF TAX ISSUES

1 How much information about tax issues do you receive from the following sources?

	None			Some			A lot
a. the ATO..	1	2	3	4	5	6	7
b. tax practitioners..	1	2	3	4	5	6	7
c. work-related publications	1	2	3	4	5	6	7
d. TV, radio, newspapers	1	2	3	4	5	6	7
e. friends/family	1	2	3	4	5	6	7

2. Think about the source which you considered most informative. How much information did you receive on…

	None			Some			A lot
a. how to do your tax return	1	2	3	4	5	6	7
b. what will trigger an audit	1	2	3	4	5	6	7
c. what the ATO is able to catch	1	2	3	4	5	6	7
d. what the penalties are for evasion	1	2	3	4	5	6	7
e. people having problems with the ATO	1	2	3	4	5	6	7
f. people outwitting the ATO	1	2	3	4	5	6	7

SECTION B   TAX PENALTIES & DETERRENCE

3 Below is a list of possible cases of tax evasion. What is your impression in each case? How would you describe the penalties used by the ATO against…

	Very mild			Right Amount			Very severe
a. a tradesperson underreporting cash earnings..................	1	2	3	4	5	6	7

	Very mild			Right amount			Very severe
b. an academic exaggerating deduction claims	1	2	3	4	5	6	7

	Very mild			Right amount			Very severe
c. a small business owner not paying tax debts..................	1	2	3	4	5	6	7

	Very mild			Right amount			Very severe
d. a large corporation shifting profits abroad	1	2	3	4	5	6	7

	Very mild			Right amount			Very severe
e. a welfare recipient under declaring government payments	1	2	3	4	5	6	7

	Very mild			Right amount			Very severe
f. a manager underreporting taxes......................................	1	2	3	4	5	6	7

	Very mild			Right amount			Very severe
g. a student part-time worker failing to lodge a tax return...	1	2	3	4	5	6	7

	Very mild			Right amount			Very severe
h. a retiree under declaring investment income..................	1	2	3	4	5	6	7

4. Assume the following case: A buiness owner, (X), negotiated "discounts" for customers in return for being paid in cash. Here, the business owner was able to reduce tax illegally by $10,000. This is the second time the person has been caught and convicted of such an offence.
The ATO would demand that the business owner pays back the tax evaded plus penalties and interest. What would you consider an appropriate penalty for the fraud? (if a combination circle more than one)

a. A monetary fine?   ❏ no.
                             ❏ yes. ⟶ If yes, specify the fine in Dollars:

less than $5,000	$5,000	$10,000	$15,000	$20,000	more than $20,000

b. A prison sentence?   ❑ no.
                               ❑ yes. ——▶ If yes, specify the length of the sentence in months:

```
|_____|_____|_____|_____|_____|
less than 1 week   1 week      2 weeks     3 weeks     4 weeks    more than 4 weeks
```

c. Community service?   ❑ no.
                               ❑ yes. ——▶ If yes, specify the length of the service in weeks:

```
|_____|_____|_____|_____|_____|
less than 1 week   1 week      2 weeks     3 weeks     4 weeks    more than 4 weeks
```

d. Education program?   ❑ no.
                               ❑ yes. ——▶ If yes, specify the length of the program in days:

```
|_____|_____|_____|_____|_____|
less than 3 days   3 days      6 days      9 days      12 days    more than 12 days
```

5. Assume the business owner (X) above had to pay a substantial fine or penalty, please answer the following questions.

	Not at all			Neutral			Very much
a. Do you think X deserves the harsh punishment?	1	2	3	4	5	6	7

	Not at all			Neutral			Very much
b. Do you think X was *personally* responsible for receiving the penalty?	1	2	3	4	5	6	7

	Not at all			Neutral			Very much
c. Do you think X knew the probable consequences of his/her evasion?..	1	2	3	4	5	6	7

	Not at all			Neutral			Very much
d. Do you think X was justified in reducing tax?................	1	2	3	4	5	6	7

	Not at all			Neutral			Very much
e. Do you think X's tax evasion is a serious offence?.........	1	2	3	4	5	6	7

6. Now please assume you are the business owner and you had to pay a substantial fine or penalty. How likely is it that you would…

	Not likely			Neutral			Very likely
a. feel that what you had done was wrong	1	2	3	4	5	6	7
b. feel sorry/remorseful	1	2	3	4	5	6	7
c Ignore the penalty and take the risk	1	2	3	4	5	6	7
d. feel like you had won if you got away without paying the fine..	1	2	3	4	5	6	7

e. resent the ATO having control over you **1   2   3   4   5   6   7**

7 Have you ever been fined or penalised in some way by the ATO?

        Yes ....**1** --- *continue*
        No...**2** **--skip toQ 12**

8 If yes, for what type of offence? (i.e. Civil, criminal) For example

Making a false or misleading statement…………………………………………………… 1
Obtaining a financial advantage by deceiving the Commonwealth or Public Authority……2
Defrauding the Commonwealth……………………………………………………...3
Failure to withhold and remit tax………………………………………………4
Other…………………………………………………………………… .5

9. If you stated yes to 7, do you think the ATO's decision to penalise you was…

    Absolutely unfair   Indifferent   Absolutely fair
        1   **2**   **3**   **4**   **5**   **6**   **7**

10. Do you think the penalties against you were…

    Very mild   About   Very severe
                            right
        1   **2**   **3**   **4**   **5**   **6**   **7**

11. Were the reasons for the penalty clear or unclear to you?

    Totally clear   Neutral   Totally unclear
        1   **2**   **3**   **4**   **5**   **6**   **7**

SECTION C   TAX LAW ENFORCEMENT

12. In the following, there are some more general positions concerning the issue of law enforcement. Please indicate to what extent you disagree or agree with these views.

Scale:1 = Strongly disagree 2. = Mildly disagree 3. = Disagree 4. = Neither agree or disagree 5. = Agree 6. = Mildly agree 7. = Strongly agree

                                Neither agree   Strongly
                   Strongly disagree   or disagree   agree
a. The prospect of tough penalties would deter
people from evading tax...   **1   2   3   4   5   6   7**

                                                  Strongly
                   Strongly disagree   agree
b. Teaching tax evaders to deal effectively with
their taxes would reduce future offences.......................   **1   2   3   4   5   6   7**

13. How do you think tax evasion could be best handled?

                                                  Strongly
                   Strongly disagree   agree
a. Through informing and encouraging taxpayers
to comply voluntarily **1   2   3   4   5   6   7**

b. Through enforcing strict rules and disciplining the guilty. ....

	Strongly disagree						Strongly agree
	1	2	3	4	5	6	7

c. Through exposing people who cheat the tax system (eg, publishing names of tax evaders in the ATO annual report)

	Strongly disagree						Strongly agree
	1	2	3	4	5	6	7

d. Through providing incentives for paying the correct amount of tax ....

	Strongly disagree						Strongly agree
	1	2	3	4	5	6	7

14. The following statements are possible opinions about the tax system and the ATO. Indicate how much you disagree or agree with the statement.

a. The ATO can be trusted to administer the tax system so that it is good for the country as whole.........

Strongly disagree			Neither agree or disagree			Strongly agree
1	2	3	4	5	6	7

b. The ATO tries to be fair when making their decisions...

Strongly disagree						Strongly agree
1	2	3	4	5	6	7

c. People should follow the decisions of the ATO even if they go against what they think is right.............

Strongly disagree						Strongly agree
1	2	3	4	5	6	7

d. The ATO effectively upholds the principles of equal rights and opportunities ....

Strongly disagree						Strongly agree
1	2	3	4	5	6	7

SECTION D   TAX FAIRNESS

15 Personally, how many opportunities do you have to legally reduce your tax?...

Too few			Right amount			Too many
1	2	3	4	5	6	7

16. In your opinion, do the following groups have many opportunities to legally reduce their tax?

a. Chief executives of large corporations ....

Too few			Right amount			Too many
1	2	3	4	5	6	7

	Too few			Right amount			Too many
b. Judges and barristers	1	2	3	4	5	6	7

	Too few			Right amount			Too many
c. Unskilled factory workers	1	2	3	4	5	6	7

	Too few			Right amount			Too many
d. Trades people	1	2	3	4	5	6	7

	Too few			Right amount			Too many
e. Clerical workers	1	2	3	4	5	6	7
f. Small business owners	1	2	3	4	5	6	7

SECTION E   TAX MORALS

Please be completely honest in your responses to these questions. Remember all your responses are totally anonymous.

17. What is important to you?

	Not at all			Neutral			Very much
a. your individuality	1	2	3	4	5	6	7
b. your profession/industry	1	2	3	4	5	6	7
c. the Australian community	1	2	3	4	5	6	7
d. being an honest taxpayer	1	2	3	4	5	6	7

18. These questions ask you what YOU think.

	Not at all			Neutral			Very much
a. Do YOU think one should honestly declare all income on one's tax return?	1	2	3	4	5	6	7

	Not at all						Very much
b. Do YOU think it is acceptable to overstate tax deductions on one's tax return?	1	2	3	4	5	6	7
c. Do YOU think working for cash-in-hand payments without paying tax is a trivial offence?	1	2	3	4	5	6	7

19. People who evade tax probably do so for different reasons. If you ever evaded tax, what would be your main reason for doing so?

a. I would want to compensate myself for being unfairly disadvantaged by the tax system ....

Strongly disagree   Neutral   Strongly agree

1   **2**   **3**   **4**   **5**   **6**   **7**

b. I would look after my own interests first, as everybody else does ....

Strongly disagree   Neutral   Strongly agree

1   **2**   **3**   **4**   **5**   **6**   **7**

c. I would see it as a game against the ATO and thought I would get away with it.................................

Strongly disagree   Neutral   Strongly agree

1   **2**   **3**   **4**   **5**   **6**   **7**

d. I would find it rational to try and get the most out of any situation ....

Strongly disagree   Neutral   Strongly agree

1   **2**   **3**   **4**   **5**   **6**   **7**

e. I would have had a bad experience with the ATO and would want to get even ....

Strongly disagree   Neutral   Strongly agree

1   **2**   **3**   **4**   **5**   **6**   **7**

20. Did you rely on a tax agent or advisor (tax accountant or lawyer) in preparing your most recent income tax return?

Yes………………………………………..**1--continue**
No …………………………………………**2 --- skip to 22**

21 What would be your <u>primary</u> reason for using a tax agent?

Fear of making a mistake **1**
The tax system is too complex **2**
Insufficient time to prepare my own return....................................... **3**
To legitimately minimise the tax I had to pay................................... **4**
To avoid paying tax... **5**

22. Assuming you use a tax agent, you find he or she is unsure about whether one of your expenses is deductible on your tax return, as the tax law relating to this expense is ambiguous. Your tax agent tells you that if you claim the deduction there is a low probability that your tax return will be audited, and that if you are audited, the taxpayer penalty would be mild. After thinking about the situation, your agent advises you NOT TO CLAIM the deduction on your return.

a. Would you agree with the advice your tax agent has given you?

Definitely Yes   Probably Yes   Neutral   Probably No   Definitely No

1   **2**   **3**   **4**   **5**

b. Based on your tax agent's advice NOT TO CLAIM the ambiguous deduction, would you continue to use this agent?

Definitely Yes   Probably Yes   Neutral   Probably No   Definitely No

1   **2**   **3**   **4**   **5**

23. Think again of the scenario presented above. Now assume that your tax agent advises you to CLAIM the ambiguous deduction on your return.

a. Would you agree with the advice your tax agent has given you?

Definitely Yes	Probably Yes	Neutral	Probably No	Definitely No
1	**2**	**3**	**4**	**5**

b. Based on your tax agent's advice to CLAIM the ambiguous deduction, would you continue to use this agent?

Definitely Yes	Probably Yes	Neutral	Probably No	Definitely No
1	**2**	**3**	**4**	**5**

SECTION F   TAX DEMOGRAHPICS

This section asks questions about you. These characteristics are very important to our research on how different people in different circumstances feel about tax issues.

24. What is your gender?

Male **1**
Female **2**

25. What is your age in years?   _____ *years*

26. What is your nationality?

....

27. What was the highest level of education you completed?

Did not have any or much formal schooling **1**
Primary School... **2**
Junior/ Intermediate/ Form 4/ Year 10 .... **3**
Secondary/ Leaving/ Form 6/ Year 12 .... **4**
Trade certificate/Nursing Diploma... **5**
Diploma Course **6**
University/Tertiary Degree... **7**
Post-graduate Degree **8**

28. What is your current occupation? ……………………………………………………….

29. And your own **personal** income – about how many thousand dollars? (*Please circle a number*)

None	10	20	30	40	50	60	70	80	90	100	110	120	130	140+

30. If you are currently not working are you

Unemployed……………………………… ……1
Retired from paid work…………………………..2
Full-time student…………………………………3
Keeping house……………………………………4
Other...5

31. When was your last income tax return lodged or lodged on your behalf. What financial year was it for?

2003/2004 Financial year…………………………….. **1**
2002/2003 Financial Year.. **2**
2001/2002 Financial Year.. **3**
2000/2001 Financial Year.. **4**

Have not lodged a tax return in the last 5 years .... **5** **--**

THANK YOU VERY MUCH FOR FILLING OUT THE QUESTIONNAIRE!!

We know that it was a long questionnaire and that there have been some hard questions, but they were important and we really appreciate your dedication in seeing it through to the end.

Please put it in the return envelope and mail it back to us at Monash University. Your co-operation has been a great help. Thanks again!

If you have any comments which you would like to add, please write them below.

APPENDIX 2 CHI-SQUARE TESTS RESULTS

- * Statistically Significant at p< or =0.05
- **Marginally Significant where 0.05 < p< 0.15
- *** Insignificant at p>0.15

Question 3 Impression of penalties used by the ATO in cases of Tax Evasion

Q3 (a) Tradesperson underreporting

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	14.515	12	0.269***
2.Age	150.270	120	0.032*
3.Nationality	201.818	186	0.203***
4.Education	15.255	18	0.644
5.Occupation	173.286	180	0.627
6.Income level	62.291	60	0.395
7.If not employed			
8. Filing Experience			

Q3 (b) Academic exaggerating deduction claims

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	4.242	12	0.979***
2.Age	131.503	120	0.223
3.Nationality	160.328	186	0.914
4.Education	13.034	18	0.790
5.Occupation	129.394	180	0.998
6.Income level	25.829	60	1.000***
7.If not employed			
8. Filing Experience			

Q3 (c) small business owner not paying tax debts

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	9.077	12	0.696
2.Age	129.764	120	0.256
3.Nationality	168.466	186	0.817
4.Education	31.412	18	0.026*
5.Occupation	158.009	180	0.880
6.Income level	71.936	60	0.139**
7.If not employed			
8. Filing Experience			

Q3 (d) a large corporation shifting profits abroad.

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	6.840	12	0.868
2.Age	101.462	114	0.793
3.Nationality	158.841	180	0.870
4.Education	13.428	18	0.766
5.Occupation	190.639	180	0.279
6.Income level	54.185	60	0.687
7.If not employed			
8. Filing Experience			

Q3 (e) welfare recipient under declaring govt payments

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	12.228	12	0.428
2.Age	129.809	114	0.148**
3.Nationality	158.859	180	0.870
4.Education	18.893	18	0.398
5.Occupation	212.607	180	0.049*
6.Income level	68.279	60	0.217
7.If not employed			
8. Filing Experience			

Q3 (f) a manager under reporting taxes

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	17.336	12	0.137**
2.Age	126.913	114	0.193
3.Nationality	165.295	180	0.777
4.Education	33.036	18	0.017*
5.Occupation	170.248	180	0.687
6.Income level	55.727	60	0.632
7.If not employed			
8. Filing Experience			

Q3 (g) student/part-time worker failing to lodge

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	9.475	12	0.662
2.Age	107.779	114	0.646
3.Nationality	167.901	180	0.731
4.Education	17.489	18	0.490
5.Occupation	166.750	180	0.752
6.Income level	54.247	60	0.685
7.If not employed			
8. Filing Experience			

Q3 (h) a retiree under declaring investment income

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	13.237	12	0.352
2.Age	100.369	120	0.903
3.Nationality	171.931	186	0.762
4.Education	14.672	18	0.684
5.Occupation	182.887	180	0.426
6.Income level	49.993	60	0.818
7.If not employed			
8. Filing Experience			

Question 4 Appropriate Penalty for a Hypothetical case of tax Fraud

Q4 (a) Monetary Fine

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	129.449	120	0.261
2.Age	181.725	180	0.450
3.Nationality	23.731	18	0.164
4.Education	158.347	174	0.797
5.Occupation	62.624	60	0.383

6.Income level	19.787	12	0.071**
7.If not employed			
8. Filing Experience			

Q4 (b) Prison Sentence

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	19.787	12	0.071**
2.Age	129.878	114	0.147**
3.Nationality	129.881	180	0.998
4.Education	24.817	18	0.130**
5.Occupation	77.894	180	1.000***
6.Income level	50.524	60	0.803
7.If not employed			
8. Filing Experience			

Q4 (c) Community Service

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	7.898	12	0.793
2.Age	79.881	114	0.994
3.Nationality	136.803	180	0.993
4.Education	8.857	18	0.963
5.Occupation	153.301	180	0.926
6.Income level	43.623	60	0.945
7.If not employed			
8. Filing Experience			

Q4 (d) Educational Program

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	14.989	12	0.242
2.Age	131.275	114	0.128**
3.Nationality	173.804	180	0.616
4.Education	13.490	18	0.762
5.Occupation	224.744	180	0.013*
6.Income level	44.003	60	0.940
7.If not employed			
8. Filing Experience			

Question 6 Respondents reactions to a substantial penalty

Q6 (a) Wrong doing

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	13.411	12	0.340
2.Age	110.880	120	0.713
3.Nationality	198.662	186	0.249
4.Education	15.982	18	0.594
5.Occupation	188.204	180	0.322
6.Income level	65.655	60	0.287
7.If not employed			
8. Filing Experience			

Q6 (b) Feel sorry/remorseful

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	28.476	12	0.005*

2.Age	140.677	120	0.096**
3.Nationality	217.078	186	0.059**
4.Education	19.286	18	0.374
5.Occupation	177.680	180	0.535
6.Income level	68.057	60	0.222
7.If not employed			
8. Filing Experience			

Q6 (c) Ignore penalty and take risk

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	23.538	12	0.023*
2.Age	104.797	114	0.720
3.Nationality	194.495	186	0.320
4.Education	27.281	18	0.074**
5.Occupation	173.192	180	0.629
6.Income level	79.119	60	0.050*
7.If not employed			
8. Filing Experience			

Q6 (d) Feeling of getting away with it

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	25.472	12	0.013*
2.Age	127.665	120	0.299
3.Nationality	201.410	180	0.131**
4.Education	24.298	18	0.127**
5.Occupation	181.312	180	0.459
6.Income level	65.646	60	0.288
7.If not employed			
8. Filing Experience			

Q6 (e) Resent ATO control

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	13.458	12	0.337
2.Age	120.944	120	0.459
3.Nationality	246.159	186	0.002*
4.Education	24.563	18	0.137**
5.Occupation	199.989	180	0.146**
6.Income level	63.650	60	0.349
7.If not employed			
8. Filing Experience			

Question 16 Which groups have the opportunity to legally reduce their tax?

Q16 (a) Corporate CEO's

Demographic –Independent variable	Chi-Square	Df	Significance
1. Gender	25.592	12	0.012*
2.Age	115.663	120	0.595
3.Nationality	165.763	186	0.854
4.Education	16.707	18	0.543
5.Occupation	162.784	174	0.719
6.Income level	63.551	60	0.352
7.If not employed			
8. Filing Experience			

Q16 (b) Judges and barristers

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	15.514	12	0.215
2.Age	135.783	120	0.154
3.Nationality	218.982	186	0.049*
4.Education	9.219	18	0.954
5.Occupation	144.018	174	0.953
6.Income level	71.351	60	0.150**
7.If not employed			
8. Filing Experience			

Q16 (c) Unskilled factory workers

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	9.387	12	0.670
2.Age	121.929	120	0.434
3.Nationality	193.858	186	0.331
4.Education	25.368	18	0.115**
5.Occupation	179.191	180	0.503
6.Income level	67.145	60	0.246
7.If not employed			
8. Filing Experience			

Q16 (d) Trades People

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	9.574	12	0.653
2.Age	152.967	120	0.023*
3.Nationality	213.502	186	0.081**
4.Education	24.993	18	0.125**
5.Occupation	143.907	180	0.978
6.Income level	71.302	60	0.151**
7.If not employed			
8. Filing Experience			

Q16 (e) Clerical workers

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	6.018	12	0.915
2.Age	96.881	120	0.940
3.Nationality	124.928	186	1.000***
4.Education	20.174	18	0.323
5.Occupation	97.818	180	1.000***
6.Income level	59.633	60	0.489
7.If not employed			
8. Filing Experience			

Q16 (f) Small Business Owners

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	7.870	12	0.795
2.Age	143.160	120	0.073**
3.Nationality	172.178	186	0.758
4.Education	12.132	18	0.840
5.Occupation	174.290	180	0.606
6.Income level	50.705	60	0.798
7.If not employed			

8. Filing Experience			

Question 19 – Main Reasons For Evading Tax

Q19(a) Compensation

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	18.336	12	0.106**
2.Age	147.371	114	0.019*
3.Nationality	213.931	180	0.043*
4.Education	28.884	18	0.050*
5.Occupation	183.038	180	0.423
6.Income level	68.098	60	0.221
7.If not employed			
8. Filing Experience			

Q19 (b) Self Interest

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	14.649	12	0.261
2.Age	130.476	114	0.675
3.Nationality	205.004	180	0.097**
4.Education	16.726	18	0.542
5.Occupation	135.519	180	0.994
6.Income level	58.765	60	0.521
7.If not employed			
8. Filing Experience			

Q19(c) ATO Game

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	20.502	12	0.058*
2.Age	101.135	114	0.800
3.Nationality	185.078	180	0.382
4.Education	35.185	18	0.009*
5.Occupation	177.05	180	0.548
6.Income level	76.369	60	0.075**
7.If not employed			
8. Filing Experience			

Q19 (d) Rational

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	21.056	12	0.050*
2.Age	136.673	114	0.073**
3.Nationality	217.582	180	0.029*
4.Education	23.009	18	0.190
5.Occupation	174.212	180	0.608
6.Income level	68.126	60	0.220
7.If not employed			
8. Filing Experience			

Q19 (e) Getting even with the ATO

Demographic –Independent variable	Chi-Square	df	Significance
1. Gender	26.044	12	0.011*
2.Age	107.989	114	0.641
3.Nationality	167.258	180	0.743

4.Education	24.532	18	0.138**
5.Occupation	152.705	174	0.876
6.Income level	85.629	60	0.017*
7.If not employed			
8. Filing Experience			

APPENDIX 3 BAR CHARTS
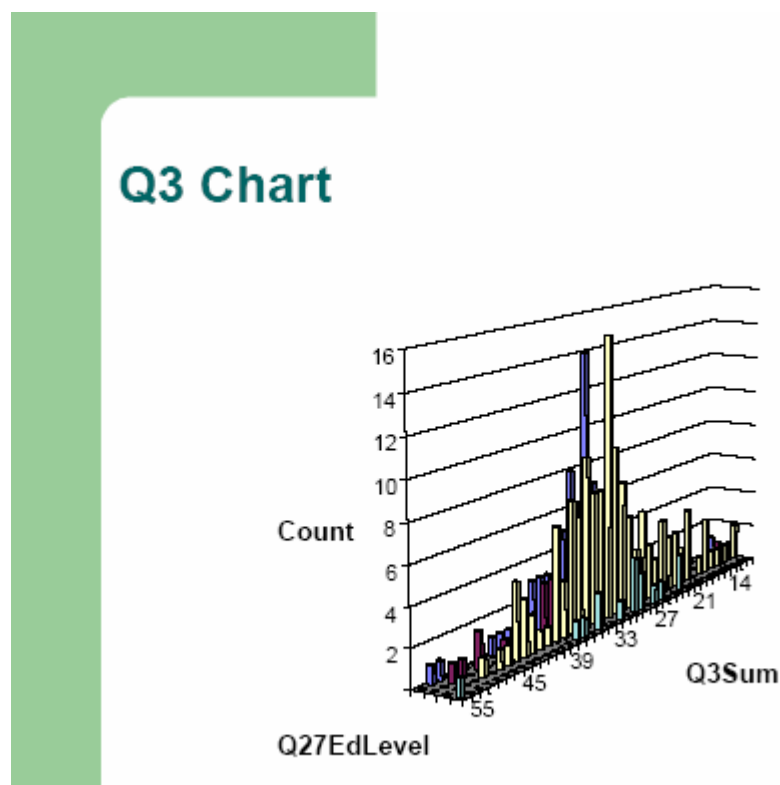
The chart indicates that for the sum of responses to Q3 there was a fairly normal distribution against level of education Q27 as depicted and in fact for all demographic variables tested Q24-29.

That is, the majority of respondents indicated, that regardless of the type of evasion by whatever occupational group, the penalties used by the ATO were about right. (ie between 39-30 on the axis which is indicated as response 4 on the Likert scale).

The other axis indicates the levels of education:

- Secondary (blue bars)
- Diploma (red bars)
- University Degree (yellow bars)
- Post –graduate degree (green bars)
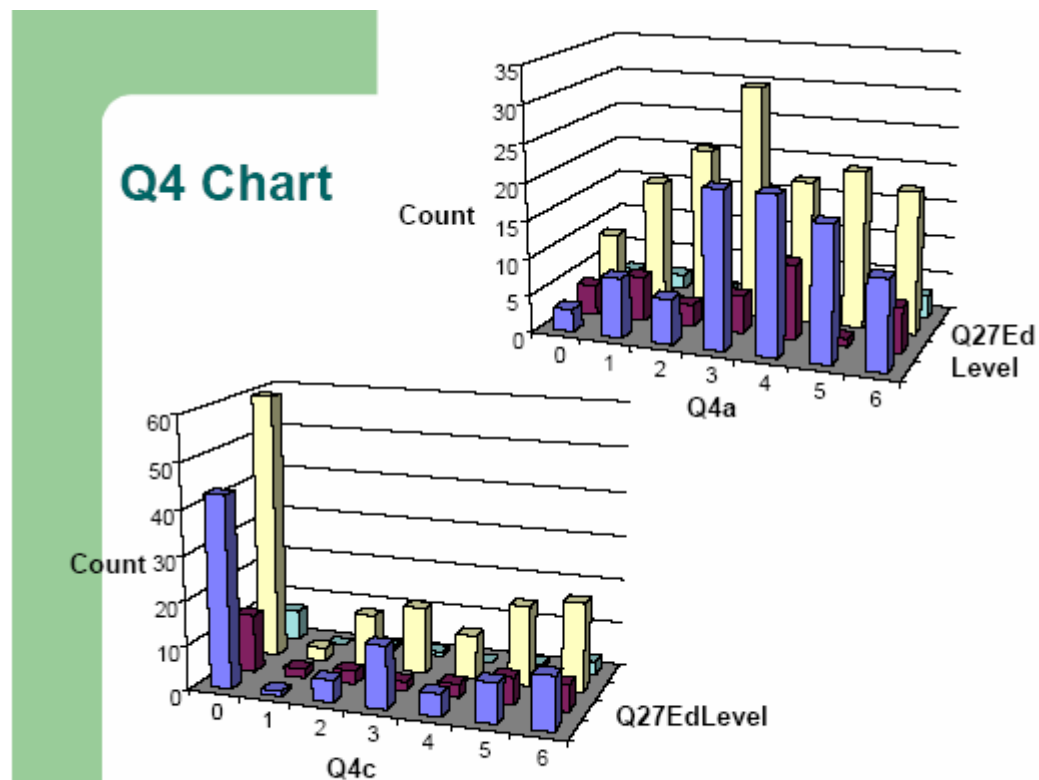
The **top chart** indicates the number of responses to Q4 (a) of the survey in relation to a monetary fine as the appropriate penalty for tax fraud with respect to the level of education Q 27.

Of those with a secondary level of education (blue bars) the majority indicated that a penalty in the range of $10,000- 15,000 was appropriate, with a definite skew to the right indicating heavier penalties. Those with Diploma level (red bars) were more evenly spread throughout penalty levels, while those with tertiary qualifications (yellow bars) also indicated that a heavier penalty of $10,000 or more was appropriate.

The **bottom chart** indicates the number of responses to Q4(c) of the survey in relation to a Community Service as the appropriate penalty for tax fraud with respect to the level of education Q 27.

Of those with a secondary level of education (blue bars) a large majority indicated a period less than one week of community service was appropriate. Those with diploma level education (red bars) were more evenly spread throughout penalty levels, although a higher proportion indicated little community service while of those with tertiary qualifications (yellow bars) a large majority indicated a period of less than one week of community service was appropriate.

Q6 Chart
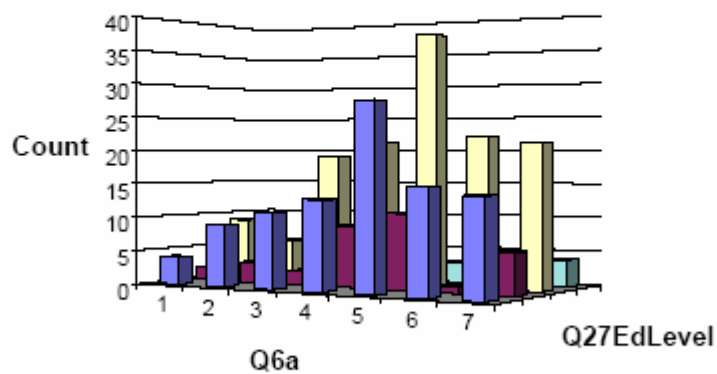
The chart indicates the number of responses to Q6(a) of the survey indicating whether respondents felt that their tax fraud was wrong, compared with their level of education Q 27

Of those with a secondary level of education (blue bars) a larger majority indicated a rating of likely to very likely. Those with Diploma level (red bars) were more neutral in this regard while of those with tertiary qualifications (yellow bars) a large majority indicated a rating of likely to very likely.
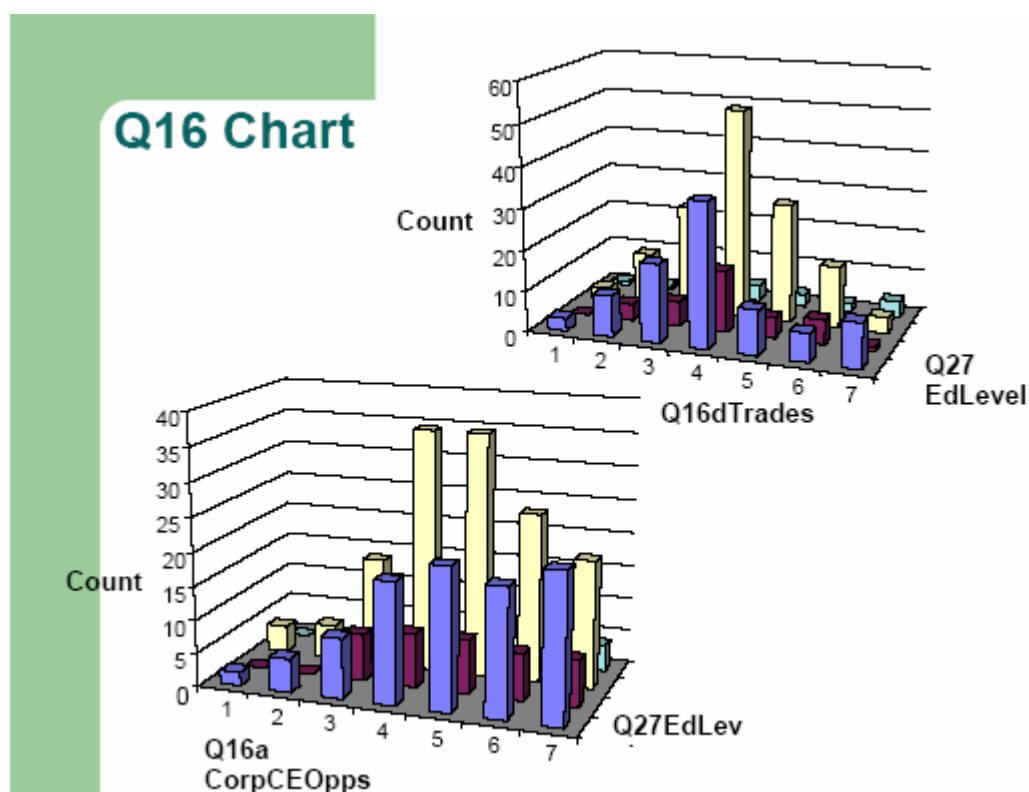
The **top chart** indicates the number of responses to Q16 (d) of the survey in relation to the opportunities to legally reduce tax for tradespeople with respect to the level of education Q 27.

Of those with a secondary level of education (blue bars) the majority indicated that tradespeople tend to have too few opportunities to legally reduce their tax with a definite skew to the left. Those with diploma level education (red bars) showed more of a normal distribution while those with tertiary qualifications (yellow bars) also indicated that tradespeople have about the right amount of opportunities.

The **bottom chart** indicates the number of responses to Q16(a) of the survey in relation to the opportunities to legally reduce tax for CEOs of large Corporations with respect to the level of education Q 27.

Of those with a secondary level of education (blue bars) the majority indicated that corporate CEOs tend to have too many opportunities to legally reduce their tax with a definite skew to the right. Those with diploma level education (red bars) showed more of a normal distribution but generally felt opportunities were more while those with tertiary qualifications (yellow bars) also indicated that CEO's have either the right amount or too many opportunities. Postgraduates (green bars) were similar in this regard.
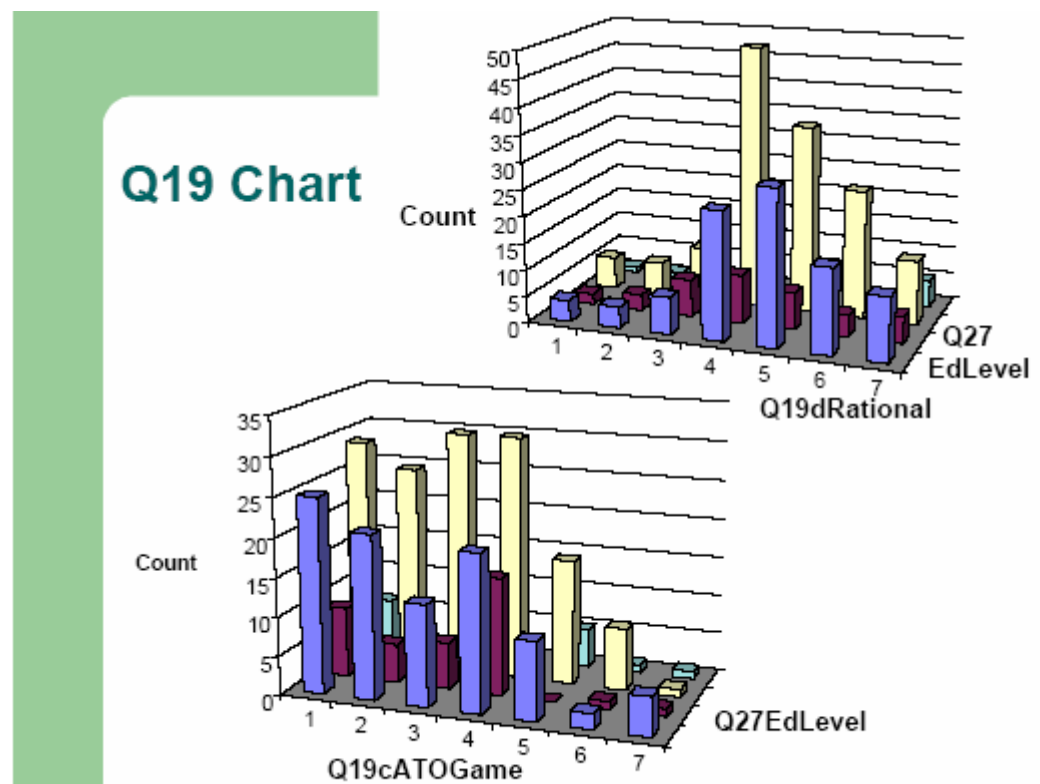
The **top chart** indicates the number of responses to Q19 (d) of the survey in relation to the main reason for evading tax as being rationality with respect to the level of education Q 27.

Of those with a secondary level of education (blue bars) the majority indicated that that they would be indifferent or likely to agree with rationality as being a reason for evasion (skew to the right). Those with diploma level education (red bars) showed more of a normal distribution while those with tertiary qualifications (yellow bars) also indicated that they were neutral or likely to agree with rationality as being a reason for evasion (skew to the right).

The **bottom chart** indicates the number of responses to Q19(c) of the survey in relation to the main reason for evading tax as being a game against the ATO with respect to the level of education Q 27.

Of those with a secondary level of education (blue bars) the majority indicated that they would be indifferent or disagree to strongly disagree with an ATO game as being a reason for evasion (skew to the left). Those with diploma level education (red bars) were consistent with this pattern while those with tertiary qualifications (yellow bars) were also consistent with this pattern and disagreed with the ATO game as being a reason for evasion (skew to the left).

Taxing Non-Fixed Trusts

Elaine Abery*

Abstract

Tax policy is evaluated according to three criteria: equity, efficiency and simplicity. This paper looks at the history of the withdrawn *New Business Tax System (Entity Taxation) Bill 2000*, which proposed to tax non-fixed trusts in a manner stated to be comparable to the taxation of companies.

The Bill attracted almost universal criticism. The three criteria for evaluating tax policy are applied to the Non-Fixed Trust Regime to understand why the Regime was not implemented.

The Non-Fixed Trust Regime did not succeed because it sought to apply a regime to non-fixed trusts that would have been much more onerous than that applying to other corporate entities. The Non-Fixed Trust Regime would have been less efficient, less equitable and less simple than the prevailing trusts taxation regime.

INTRODUCTION

The Ralph Review of Business Taxation[1] (the Ralph Report) recommended a fundamental change to Australian business taxation. One of its most important recommendations was for a Unified Entity Taxation Regime - whereby the taxation of corporate tax entities would be streamlined and improved.

The sheer volume of tax reform and public pressure resulted in a number of the Report's recommendations being abandoned shortly after the Report's release.

The Government's proposed method of implementing the Unified Entities Regime Recommendations was released as the *New Business Tax System (Entity Taxation) Bill 2000* (Exposure Draft) in October 2000. The Exposure Draft had a proposed date of effect of 1 July 2001 - a very short time frame for business to understand and apply the new law. It applied the Unified Entities Regime to tax non-fixed trusts in a manner that professed to 'substantially' approach the taxation of companies.

The Exposure Draft was an adapted version of the Ralph Review of Business Taxation's recommendations to fundamentally change the basis for business taxation in Australia. The Report proposed the introduction of a net income approach for calculating taxable income and a Unified Entities Regime to ensure that most corporate tax entities were taxed in a consistent manner.

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[1] The Report consisted of the following documents:
- Aust, *A Platform for Consultation* (Canberra: AGPS, 1999).
- Aust, *A Strong Foundation* (Canberra: AGPS, 1998).
- Aust, *A Tax System Redesigned* (Canberra: AGPS, 1999) (generally referred to as the Ralph Report).
- Aust, *Tax Reform: Not a New Tax, A New Tax System* (Canberra: AGPS, 1998).

The Exposure Draft was criticised for being overly complex, giving insufficient implementation time to taxpayers, and tarring all non-fixed trusts with the same 'tax avoidance' brush.[2] Not one submission praised it. The lifespan of the Exposure Draft was very short - it was withdrawn in February 2001.

In November 2002, the Board of Taxation released a report to the Treasurer and the Minister for Revenue and Assistant Treasurer on the Taxation of Discretionary Trusts. The Report recommended that discretionary trusts continue to be taxed in the traditional manner, with targeted anti-avoidance provisions where appropriate.

To understand why the Non-Fixed Trust Regime did not succeed, I first explore the background to Ralph's Unified Entities Regime. I continue by comparing the tax treatment of non-fixed trusts and companies before and under the proposed Non-Fixed Trust Regime. Then, I evaluate the proposed Non-Fixed Trust Regime according to the criteria for evaluating tax policy. Finally, I look at the Board of Taxation's Report on taxing discretionary trusts, before concluding that the Non-Fixed Trust Regime was not implemented because it was not equitable, efficient or simple.

BACKGROUND TO RALPH'S UNIFIED ENTITIES REGIME

'The essence of a well-constructed and operated tax system is that it is fair and is seen to be fair.'[3] In line with this goal, the Ralph Report recommended introducing a Unified Entities Regime whereby corporate entities (most trusts, companies, limited partnerships and unincorporated associations) be treated consistently, using a modified system of company taxation.

The Unified Entities Regime was one of the key recommendations of the Ralph Report, together with the Tax Value Method. The two were meant to together create a 'more certain, equitable and durable taxation system'[4]; one that would 'bring our system into the modern era and enhance the competitiveness of Australian business.'[5]

The following sections briefly discuss these two recommendations before proceeding to address their interactions with one another.

Unified Entities Regime

The principle underlying the Unified Entities Regime was that the same transaction should attract the same taxation treatment regardless of its form or structure. This accorded with the goals of taxation.

- Efficiency: the regime would have been more efficient through less interference with the free operation of the market.

- Equity: it would have been more equitable because taxpayers in the same position would have been treated in a similar manner.

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[2] See, for example, the following submissions to the Exposure Draft: PriceWaterhouseCoopers 3 November 2000; KPMG Tax, November 2000; CPA Australia, November 2000.
[3] McLay D, 'Tax issues for the charitable sector', [1999] *New Zealand Law Journal,* p 61.
[4] Aust, *A Tax System Redesigned* (Canberra: AGPS, 1999), p 2.
[5] Letter from John Ralph to the Treasurer accompanying *A Tax System Redesigned*, above n 4, dated 30 July 1999.

- Simplicity: it would have been simpler because it sought to avoid the existing complex structure of both law and transactions that exploited legal loopholes. It should therefore have reduced compliance and administrative costs.[6]

The Unified Entities Regime aimed to provide simple, clear and fair treatment of entities under taxation law and to reduce opportunities for tax avoidance.[7] As such, together with the Tax Value Method, it aimed to create a more certain, equitable, durable and modern tax system that would make Australian business more competitive.

Tax Value Method

As noted above, the Tax Value Method and the Unified Entities Regime were the cornerstones of the Ralph Review of Business Taxation. It is useful, in this context, to understand how the Tax Value Method would have worked.

The Tax Value Method, also called the 'net income model', broadly proposed to work out taxable income according to the equation:

income - liabilities +/- net change in the tax value of assets +/- adjustments.

This method succinctly expresses the current method for calculating taxable income. It was argued that it would thus have required less legislation.

The Ralph Report combined with the introduction of the Goods and Services Tax and a new Pay As You Go withholding regime in a very short time proved to be too much tax reform for Australia. The Tax Value Method was quickly abandoned[8] as too radical a change, due to concerns of taxpayers and their advisers that the Method was uncertain, complicated and would result in significant compliance costs.[9] Government also announced that the Unified Entities Regime would only apply to non-fixed trusts.

However, as pointed out in submissions on the Exposure Draft, the Tax Value Method and Unified Entities Regime complemented one another and were designed to be implemented together.[10] In addition, the Unified Entities Regime would have subjected all corporate entities, and not just non-fixed trusts, to the same taxation. Once the Tax Value Method was abandoned and the Unified Entities Regime rules were applied only to non-fixed trusts, the logic of implementing the Unified Entities Regime was becoming disjointed.

Rules that were to be contained in the Tax Value Method would have alleviated practical difficulties that were left unaddressed in the Non-Fixed Trusts Regime. For example, recognition of the practical difficulties in taxing the annual change in value

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[6] Aust, *A Platform for Consultation* (Canberra: AGPS, 1999), p 471.

[7] Aust, *Tax Reform: Not a New Tax, A New Tax System: Overview* (Canberra: AGPS, 1998), p 115.

[8] The Tax Value Method was put on hold indefinitely, pending the outcome of a review by the Board of Taxation. It was abandoned subsequent to the Board of Taxation's report: Aust, *Taxation of Discretionary Trusts: A Report to the Treasurer and the Minister for Revenue and Assistant Treasurer* (Canberra: AGPS, 2002).

[9] Announcement by the Treasurer on 28 August 2002, in 'Tax Treatment of Trusts', Issue 173 30 August 2002 *Latest Tax News*, paragraph 1.

[10] See, for example, the National Farmer's Federation Submission to the *New Business Tax System (Entity Taxation) Bill 2000*.

of all assets was addressed in Recommendation 4.1 (in relation to the Tax Value Method), which proposed that unrealised gains would not be taxed.[11]

It can thus be seen that once the Tax Value Method was abandoned and it was decided to apply the Unified Entities Regime only to non-fixed trusts, the logic of Ralph's system was becoming disjointed. Implementing the Non-Fixed Trust Regime out of context introduced new problems. The following section discusses this proposed Non-Fixed Trust Regime.

WHAT IS THE TAXATION TREATMENT OF NON-FIXED TRUSTS?

This section compares the tax treatment of companies and trusts prior to the Ralph Report with that proposed under the Non-Fixed Trust Regime.

Tax treatment before Ralph
Companies
Broadly, profits were taxed in the company at the company tax rate, whether or not those profits were distributed to shareholders. When these profits were distributed to shareholders, a franking credit applied to ensure that shareholders were able to benefit from the tax paid at the company level. However, if a company had tax preferred income (eg capital gains), the benefit of the tax preferences at the company level was lost to the shareholder, who paid tax at their marginal rate on the entire amount they received from the company.

Unrealised gains were not taxed.

Trusts
Broadly, as long as all trust income was attributed to an individual, 'flow-through' taxation applied. That is, the income was not taxed at the trust level. At the individual level, all trust income distributed to that individual retained its character. This meant that individuals received the full benefit of tax-preferred income.

Income that was not attributed to an individual was assessed to the trustee, who paid the top marginal tax rate plus the Medicare Levy on that amount (48.5%).

Unrealised gains were not taxed.

Treatment under Non-Fixed Trust Regime
The Exposure Draft purported to apply rules to non-fixed trusts 'comparable' to those applying to companies.[12] As such, the Exposure Draft would 'tax non-fixed trusts at the entity level and impute the tax paid to members of the trust... [M]ost tax preferences [would be] assessed in the hands of members when distributed.'[13]

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[11] National Farmer's Federation Submission, above n 10. However, the interaction between this aspect of the Tax Value Method and Unified Entities Regime is unclear. Recommendation 12.4 states that where 'a distribution exceeds profits recorded in the entity's accounts, it will be necessary to establish the fair value of assets in order to determine the extent to which there are profits (generally unrealised gains) not recognised in those accounts.' (Aust, *A Tax System Redesigned*, above n 3, p 434). It would seem that the taxation of unrealised gains in the hands of members is explicitly proposed in the Unified Entities Regime. This would have been alleviated by the Tax Value Method proposal that explicitly stated that unrealised gains would not be taxed to the entity.

[12] Aust, *Entity Taxation: Taxing Trusts like Companies Overview* (Canberra, 2000), p 3.

[13] Aust, *Entity Taxation*, above n 12, p 3.

Removing 'flow through' taxation for trusts would have addressed the major taxation difference between trusts and other corporate entities. It would have removed trusts' advantage of being able to pass tax preferences to their beneficiaries.

However, two major differences existed between the taxation of companies and the proposed Non-Fixed Trust Regime. These differences are sourced in the Ralph Report's Unified Entities Regime recommendations:

● the profits first rule; and

● the non-commercial loan rules.

The profits first rule and non-commercial loan aspects of the Non-Fixed Trust Regime received almost universal criticism in submissions on the Exposure Draft. The following sections briefly describe these two aspects of the Non-Fixed Trust Regime.

Profits first rule
The profits first rule was contained in recommendation 12.3 of the Ralph Report. It aimed to treat distributions from entities to members first as income of the members to the extent of the entities' available profits and then from contributed capital once available profits had been exhausted. The available profits of the entity were defined consistently with the Tax Value Method. That is, the excess of the entity's net assets over contributed capital.

The rule aimed to limit (a) streaming of dividend and contributed capital distributions depending on the tax positions of the entities' members and (b) deferring paying tax on the entity's income.

The rule met with almost universal condemnation.[14] The most contentious aspect of the rule was that it would have applied to effectively tax unrealised gains. This is because the definition of net assets included any unrealised gains or losses on those assets.

Non commercial loans
Recommendation 12.22 dealt with the non commercial loans. It recommended that rules substantially similar to the loan provisions relating to private companies in Division 7A of the *Income Tax Assessment Act 1936* apply to loans between all closely held entities and their members. It aimed to ensure that otherwise taxable distributions of profits to members could not be converted into non-taxable distributions.

Again, this rule met with almost universal criticism. In particular, the combination of the profits first rule and non commercial loan provisions was seen to impose a regime that was 'excessive and cumbersome'.[15] The Institute of Chartered Accountants submitted that '[w]ithout the profits first rule... the proposed rules for non-commercial loans from members to trusts...' would be unnecessary.[16]

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[14] The only exception I found was Richard Vann: Vann R, 'Australia's Policy on Entity Taxation', (2001) 16(1) *Australian Tax Forum*, 33-66.

[15] PriceWaterhouseCoopers Submission to the *New Business Tax System (Entity Taxation) Bill 2000*, p 2.

[16] ICAA Submission to the *New Business Tax System (Entity Taxation) Bill 2000*, p 5. It is interesting to note that non commercial loan provisions that apply to non-fixed trusts have since been introduced into Subdivision EA of Division 7A of the *Income Tax Assessment Act* 1936.

More so than any other part of the Non-Fixed Trust Regime, these two aspects and their interaction led to the widespread rejection of the Non-Fixed Trust Regime and its subsequent withdrawal. They stand in direct contrast to the established criteria of good taxation policy, explicitly accepted by the Ralph Report.

WHAT ARE THE CRITERIA FOR GOOD TAXATION POLICY?

Traditional analysis of alternative tax policies commonly employs three criteria: efficiency, equity and simplicity.[17] These criteria are regularly used in government enquiries to evaluate a tax and were adopted in the Ralph Report. For these reasons, I use these criteria to analyse the proposed Non-Fixed Trust Regime.

The criteria were widely used in submissions to the Exposure Draft to condemn the Non-Fixed Trust Regime as not being efficient, equitable or simple.

Efficiency

Economists favour this criterion, regarding it as more 'objective' than equity. Efficiency is evaluated by determining whether a change in taxation law results in changed individual behaviour. Any change in taxation law involves choices between which goods and services to purchase, or which activities to pursue. If a change in behaviour results then, unless the law specifically intends that change, the law is viewed as inefficient. The heterogeneity of society should not be altered by a tax system.[18]

Government expenditure and taxation affect most economic activity. The goal of efficiency is to ensure that these effects are kept to a minimum. Incorrect assumptions about efficiency often result in society foregoing annual benefits due to underinvestment. These tax-induced misallocations of resources include tax encouragements to invest through one vehicle rather than another.

The Unified Entities Regime was intended to treat corporate entities, including trusts, consistently. This would have met the Ralph Report's investment neutrality principle; the same investment should attract the same tax consequences, regardless of the vehicle employed. This would have removed tax incentives to conduct an investment through one vehicle type rather than another.

However, as discussed above, the Non-Fixed Trust Regime proposed to tax non-fixed trusts in a more onerous manner than any other entity was taxed, including taxing unrealised gains under the profits first rule. This led some submissions to the Exposure Draft to conclude 'that the Government is on a deliberate course to discourage Australians from using non-fixed trusts for any purposes, let alone effective tax planning.'[19]

It can thus be seen that the Non-Fixed Trust Regime contravened the criterion of efficiency, because trusts would have been taxed in a manner more onerous than other entity types. This would have encouraged taxpayers not to invest through trusts, but rather through a company or other vehicle.

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[17] Edwards, M, 'Relevance of Economic Analysis for Feminists', [1985] 1 *Australian Feminist Studies*, 55-66, at 57.

[18] YWCA of Canberra, *Senate Inquiry into the GST and A New Tax System: Submission to the Senate Community Affairs Reference Committee*, (Unpublished, 1999).

[19] ICAA Submission to the *New Business Tax System (Entity Taxation) Bill 2000*, p 14.

Equity

'Equity requires that tax contributions be socially just.'[20] Tax literature usually discusses two types of equity: horizontal equity and vertical equity. Economists favour horizontal equity, the idea that people who earn 'equal' amounts should pay the same amount of tax, so that they are in comparable positions after tax, whether earnings are received as capital or income. The notion of vertical equity is that tax liability increases with the welfare of the taxpayer, so that those with a greater 'ability to pay' pay more tax. However, one of the difficulties in tax design is that ability to pay is not easily measured.[21]

Just as the Non-Fixed Trust Regime would have contravened the criterion of efficiency, it would have contravened the criterion of equity. The Regime would have taxed some gains twice: an unrealised gain would have been taxed once under the profits first rule when a distribution was made to the member and a second time when the gain was realised and distributed to the member.[22] Effectively, subjecting unrealised gains to taxation (and perhaps double taxation) if they occurred through a non-fixed trust but not if they occurred through any other entity type is inequitable. A person with the same investment made through a non-fixed trust or through a company would have received very different tax outcomes.

Simplicity

A simple tax system is one where taxpayers clearly understand the nature of their tax liabilities, how much tax is to be paid and why the tax is imposed. Taxpayer costs of compliance with their tax obligations should be minimised and taxes should be easy and cheap to administer.

Although the existing rules applying to trusts could not be described as simple, they had the advantage of being 'business as usual'. As such, because the rules were broadly understood by taxpayers and their advisers and systems were already in place to assist compliance with the existing law, compliance costs were steady.

There will always be an initial increase in compliance costs in implementing any new tax regime. However, the simplicity aim is that once the regime becomes 'business as usual', compliance costs become smaller than under the previous system.

This could never have occurred for the Non-Fixed Trust Regime, as it would have required regular valuation of the trust's assets under the profits first rule. In fact, many submissions to the Exposure Draft suggested that valuation of all the trust's assets would have been necessary every time the trust made a distribution.[23] This is because many non-fixed trusts complete their accounts only once a year, but make distributions throughout the year. To know how much they could distribute and whether the distribution was from profits or capital, the trust would have had to ensure that its accounts were updated at the time of each distribution. This may have included a valuation of all of its assets.

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[20] Savage, E, 'Myths and misconceptions in the tax reform debate', [1985] *Legal Service Bulletin* (April), 55-60, at 55.
[21] Apps, P, 'Tax Reform and the Tax Unit', (1984) 1 *Australian Tax Forum*, 467-481, at 470.
[22] See, for example, the National Farmer's Federation and Stephen Page Submissions to the *New Business Tax System (Entity Taxation) Bill 2000*.
[23] See, for example, Arthur Robinson & Hedderwicks, 2 November 2000.

It can be seen that the Non-Fixed Trust Regime was not efficient, equitable or simple. It would have imposed high compliance costs on taxpayers and subjected investments conducted through trusts to higher tax than the same investment conducted through another business structure. The Board of Taxation submitted a report to the Treasurer on this.

THE BOARD OF TAXATION'S REPORT

The Board of Taxation reported on 22 November 2002, approximately two years after the Non-Fixed Trust Regime's release. It stated that 'any proposal for fundamental change to the taxation treatment of trusts must be justified by compelling policy arguments...'[24] The Board's enquiry focussed on identifying '"tax abuse in the discretionary trust area"... because that was the subject-matter of the withdrawn entities legislation...'[25] It recommended that:

- 'government consider options for amending the income tax law to improve the effectiveness and fairness of provisions intended to prevent individuals who are trust beneficiaries with high marginal tax rates accessing, without further tax liability, funds that have been taxed only at the company tax rate';[26] and

- 'the Commissioner of Taxation clarify and publish his views about the deductibility of interest on borrowings used to finance non-assessable distributions to beneficiaries of discretionary trusts.'[27]

Interestingly, despite rejecting the proposed new tax regime for non-fixed trusts, the Report stated that the proposed Non-Fixed Trust Regime would have taxed non-fixed trusts like companies. The significant differences between the proposed Non-Fixed Trust Regime and company taxation were not discussed.

CONCLUSION

It appears that taxing any trusts like companies has been definitively abandoned in Australia. It is a pity that the approach taken to attempt to introduce more integrity into the taxation of trusts culminated in the proposed Non-Fixed Trust Regime. This regime was inequitable, inefficient and far from simple.

The proposed Non-Fixed Trust Regime was an adapted version of the Ralph Review of Business Taxation's recommendations to fundamentally change the basis for business taxation in Australia. The Report proposed the introduction of a net income approach to calculating taxable income and a Unified Entities Regime to ensure that most corporate tax entities were taxed in a unified manner.

Although the proposed Non-Fixed Trust Regime was broadly true to the Unified Entities Regime, by divorcing the Unified Entities Regime from its context, the proposed Non-Fixed Trust Regime was bound for failure. First, the basic logic underlying the Unified Entities Regime was to tax most corporate tax entities in the

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[24] Aust, *Taxation of Discretionary Trusts: A Report to the Treasurer and the Minister for Revenue and Assistant Treasurer* (Canberra: AGPS, 2002), p 1.
[25] Aust, above n 24, p 3.
[26] Aust, above n 24, p 1-2, Recommendation 3.
[27] Aust, above n 24, p 1-2, Recommendation 4.

same manner. Second, the basic building block of the Review, the net income model, had already been abandoned.

By applying the Unified Entities Regime recommendations only to non-fixed trusts, the context of the Regime was lost. The result was a tax regime that discriminated against non-fixed trusts. Non-fixed trusts would have been taxed on income (sometimes twice) that other entities were not taxed on and would have been subject to higher compliance costs in implementing a regime that required regular valuation of the trust's assets.

The Non-Fixed Trust Regime could not succeed, because it contravened the basic principles of tax legislation: it was not efficient, equitable or simple.

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Record keeping practices and tax compliance of SMEs[1]

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Abstract

This paper reports upon a research project which was designed to explore the relationship between the record keeping practices of small businesses[5] and their potential exposure to tax and related business compliance problems. It was hypothesised that these problems might include increased tax audit exposure (combined with the potential for adverse tax audit outcomes where record-keeping practices are poor), higher tax compliance costs, and greater liquidity and cash flow problems that cause difficulties in remitting taxes collected on behalf of the Australian Taxation Office (ATO) which can lead to business failure.

The paper examines these issues and suggests that although there are a number of links between small business record keeping practices and tax compliance issues, these links are neither as straightforward nor as strong as the initial hypotheses might have suggested. The research used a mixture of qualitative (focus group) and quantitative (survey) methodologies and involved more than 500 small business owners and managers, over 300 tax practitioners[6], and a small number of ATO auditors.

Overall, the research showed that there was some dissonance between perceptions and reality. All of the key stakeholders – SME owners/managers, practitioners and ATO auditors – perceived (to varying degrees) direct relationships between poor SME record keeping practices and adverse tax compliance outcomes. But those perceptions were not always confirmed by the evidence of actual behaviour. Poor record keeping did not, of itself, necessarily lead to a higher vulnerability to audit (though once audited SMEs with poor records were more likely to suffer adverse audit outcomes). Nor did poor record keeping necessarily translate to higher compliance costs (though the data were ambivalent). Nor, finally, did poor record keeping necessarily lead to liquidity and cash flow problems.

The outcomes of the project suggest that further and more detailed research is required to explore these complex relationships. The current project was ambitious in its scope, and was ultimately limited in its findings by its reliance on the self-assessment of the quality of record keeping practices by SMEs themselves. Further research should be narrower in focus. For example, separate projects should investigate each of the three compliance relationships (audit; compliance costs and liquidity) with record keeping practice. In addition, future research should seek more objective measures of the quality of SME record keeping practice, utilising evaluations by advisers (as originally intended in this project) and by the researchers themselves.

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[5] Defined as an independently owned and operated business employing fewer than 20 people (ABS, 2002). The terms 'small business' or 'SME' (small and medium size enterprises) are used interchangeably throughout this paper.

[6] Selected from CPA Australia members who provide tax and accounting services to the small business sector. The terms 'CPA Australia members', 'advisers' and 'practitioners' are used interchangeably throughout this paper.

BACKGROUND

> *An appropriate record-keeping system can determine the survival or failure of a new business. For those already in business, good record-keeping systems can increase the chances of staying in business...(Cordano, 1991, p. 2).*

Small businesses play a pivotal role in modern industrial economies. There were 1,233,200 private sector small businesses operating in Australia in 2000-01, representing 97% of all businesses (ABS, 2002). Small businesses generate significant employment and output. In Australia the small business sector employed 3.6 million people in 2000-01, or 49% of all private sector employment (ABS, 2002). The contribution of the small business sector to GDP in that year was more than AUD$160,000 million, or 30% of GDP (Industry Tourism Resources, 2002). The small business sector plays such an important role that the Prime Minister has referred to it as the "the engine room of the Australian economy" (Howard, 1997, p. iii).

However, small businesses face many different compliance obligations, including occupational health and safety, workers' compensation and other employment legislation, licensing requirements, local council planning and a host of other regulatory responsibilities. Taxation is by far the most critical in terms of resources expended. It has been estimated that taxation accounts for roughly two thirds (or 141 hours per annum) of all time spent on compliance activities by small businesses in Australia (Small Business Deregulation Task Force, 1996, p. 12). Company and personal income tax accounted for half of the compliance time spent on tax matters in 1996, and other tax issues such as the operation of employee withholding tax (currently PAYG but formerly PAYE), Wholesale Sales Tax (WST)[7], Fringe Benefits Tax (FBT), payroll taxes and other tax types accounted for the other half.

The introduction of the GST and changes to the collection and remittance of withholding and related taxes considerably exacerbated the tax compliance problems encountered by the small business sector. As a result the record keeping requirements of small businesses have been the focus of even more public attention since 2000. The ATO has suggested that poor record keeping is one of the major causes of tax compliance problems for small business, particularly in relation to Business Activity Statements (BAS) and related returns. Businesses that make calculation and systems errors, use accounting packages incorrectly, or make coding errors are in danger of failing ATO audits (CPA Australia, 2003b, p. 10). Additionally, there is the real possibility that poor record keeping can cost SMEs dearly through non-intentional non-compliance, either through over-payment of tax or because refunds due are missed (McKerchar, 2003). It has also been suggested anecdotally that poor record keeping can translate into higher compliance costs, both in terms of increased fees to advisers and greater use of scarce small business proprietor time in sorting out taxation issues.

Tax compliance issues therefore loom large for small businesses in Australia. In recent years, considerable research has been undertaken into tax issues that affect the small business sector (Tran-Nam and Glover, 2002; Warren, 2003). That research has identified a number of key concerns that have been expressed by small business. Overwhelmingly, the sector is concerned at the complexity and ever-changing nature

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[7] Wholesale Sales Tax was replaced with the Goods and Services Tax (GST) from 1 July 2000.

of the tax system and the excessive burden of 'red tape' that it imposes upon small businesses. Closely allied to this is a concern with compliance issues – with 'getting things right and not falling foul' of the ATO, with not incurring penalties or being audited. This concern also feeds into the problem of excessive compliance costs, as taxpayers are obliged to spend more of their limited time on complying with their taxation obligations, and/or pay more to their tax advisers (see, for example, Evans, Pope and Hasseldine, 2001).

In addition, research indicates that small businesses have an on-going problem with cash flow issues. Their liquidity is constantly impacted by the tax system – and in particular by the arrangements under which they are required to pay their own tax liabilities and hand over taxes collected on behalf of others (PAYG etc).

In spite of this public attention and research, there has, to date, been little work done in Australia in measuring the benefits or potential costs of the failure to implement or operate an adequate record keeping system. In short, in a large literature in the area of tax and small business compliance, there is no academic work that directly evaluates the impact of small business record keeping on compliance risk, whether in the form of increased audit exposure, higher compliance costs, liquidity/cash flow issues or other compliance problems.

In a recent Discussion Paper CPA Australia has recognised the need for better information and sound empirical evidence on which to base small business policy (CPA Australia, 2003a, p.3). The overall objective of this research project, therefore, was to provide such empirical evidence about the relationship between the record keeping practices of small businesses and their exposure to greater problems relating to tax compliance.

At the outset of the research project it was hypothesised that small businesses with effective record keeping systems and practices would encounter fewer compliance problems than businesses with poor record keeping systems. The compliance problems encountered by SMEs with poor record-keeping practices would typically include:

- increased exposure to the risk of ATO audit and adverse outcomes (monetary penalties and time costs) as a result of such audits;
- higher than average compliance costs; and
- liquidity and cash flow problems that can, for example, cause difficulties in remitting taxes collected on behalf of the ATO.

This research project was therefore designed to evaluate the extent to which such observations could be confirmed by empirical evidence. In so doing it was hoped that it would help to establish the positive steps that tax practitioners (and particularly CPAs) could undertake to assist clients to minimise compliance risks and burdens.

Tax compliance issues for small businesses (and other businesses) are impacted by the actions of three major sets of players: the owner/manager; the external accountant/adviser, and ATO officers. This project sought the views of each of these sets of players, to gauge their independent opinion on the sorts of relationships outlined above. The following sections more fully explore these relationships.

Audit exposure and audit outcomes

Conceptually, the link between poor record keeping and audit exposure may be either direct, or indirect. The indirect relationship refers to the possibility that without accurate records, firms are more likely to come to the attention of tax authorities through late filing, conspicuous or abnormal financial ratios, seeking amended assessments etc. The direct relationship considers the hypothesis that while susceptibility to tax audit may be independent of the quality of the record keeping practices of the business, once selected for audit, SMEs with poor record keeping practices face higher probability of an amended assessment than those with better record-keeping systems and processes in place.

The ATO has become increasingly active in the records management of small businesses. The introduction of the GST in 2000, and other changes resulting in quarterly reporting, has meant that both the components of a record keeping system and the frequency of update have become critical in ensuring SMEs meet their tax obligations. In addition, the record keeping requirements of the GST have impacted on the cash economy, driving some elements into the tax system, and others further underground. Consequently, those businesses which previously operated outside the tax system have now found their record keeping ability to be somewhat short of tax office expectations.

Compliance costs of running a small business

The costs associated with complying with various statutory taxation obligations have been covered in studies in Australia (for example Evans, Ritchie, Tran-Nam and Walpole, 1997) and overseas (see, for example Sandford, Godwin and Hardwick, 1989, in the UK; Sandford and Hasseldine, 1992, in New Zealand; Slemrod and Venkatesh, 2002, in the USA). All such studies point to the significance (in absolute and relative terms) of these compliance costs, and to their regressivity – they impact disproportionately upon the small business sector. In Australia, for example, the compliance costs faced by a small business taxpayer with a turnover of $100,000 per annum is likely to be in the order of 25 times higher per $1,000 of turnover compared to the compliance costs of a business with a turnover of $10 million (Evans, Ritchie, Tran-Nam and Walpole, 1997, p. 81).

There has also been considerable debate on how best to reduce such costs (see, for example, Sandford, 1995; Evans, Pope and Hasseldine, 2001). However, the extent to which poor record keeping impacts upon these costs has not yet been examined to the same extent. The essential hypothesis here is that poor record keeping will have a significant impact on both the internal costs (essentially the time of the business owner and the time and monetary cost of other resources utilised on tax compliance within the business) and external costs (usually the fees to advisers) in complying with tax regulatory obligations.

With the increasing regulatory burden on businesses, ranging from superannuation, workers compensation to taxation, these costs are increasingly being felt by small businesses without the skills or knowledge to comply with the legislation. The ability of small business to cope with the increasing demands of business on their time means that their ability to keep adequate and accurate records will be fundamental to their ability to discharge their regulatory obligations.

For businesses without accurate records, the ability to accurately assess their superannuation requirements, insurance premiums, and tax obligations can be

seriously hampered. It is hypothesised that greater costs are likely to be incurred in preparation of materials, clarifying, locating and delivering information, and general stress on owners dealing with such issues. Taxation compliance is unlike other regulatory requirements as it is often thought to provide positive externalities to the business in the form of greater information and management control, thereby reducing the actual costs of compliance attributable to the tax system. The extent to which quality record keeping further reduces this cost is part of the focus of this study.

Liquidity issues

The failure to adequately manage cash flow as a result of poor record keeping has often been listed as a cause of small business failure. As long ago as the early 1930s, empirical research by Corstvet in the USA concluded that "inadequacy of records seems in all but the largest of businesses to be one contributing factor making toward failure" (1935, pp. 61-62). Similar conclusions have been derived more recently in Australia (see, for example, Productivity Commission, 2000). However, the importance of managing liquidity in a business extends beyond cash flow management, and encompasses issues such as the availability of finance, and debtor and creditor management. Such issues are at the core of successfully operating a small business, and the extent to which good record keeping systems assist in minimising liquidity risks is also examined in this project.

Research into the causes of business failure often identifies that tax issues play a significant role in this process. For example, a UK Department of Trade and Industry study of business failures in early 1999 indicated that the most frequent cause of business bankruptcy among the 1,412 cases reported by the Official Receiver was a failure to deal with income tax/corporation tax/VAT affairs (about 20% of the cases) (DTI, 2000). Similar results were identified in the USA in a longitudinal study of non-farm business bankruptcies in the mid 1990s (Sullivan, Warren and Westbrook, 1998).

Australian data on business failures do not separately identify tax as a catalyst of the failure, but given the similar legal and business environments, it is unlikely that the Australian experience would differ significantly from that in the UK and USA. In addition Australian research does indicate that "failure to keep proper books" is one of the ten major causes of business failure, although it only accounted for 2% of business related bankruptcies in 1998-99 (Productivity Commission, 2000, pp. 50-51).

The next section of this paper identifies the research design that was employed to test the hypothesised relationships between record keeping practice and compliance outcomes (Section 2). The paper then discusses the outcomes of the focus groups and surveys that were conducted (Sections 3 and 4), before drawing conclusions together in Section 5.

RESEARCH DESIGN

As has been noted, the aim of the project was to establish the relationship between record keeping practices and various tax compliance issues faced by the small business sector. The focus of the project was to obtain some qualitative and quantitative data that would facilitate a conclusion about the impact of poor record keeping on compliance issues of small business. In particular, the relationship between record keeping and audit, compliance costs, and liquidity concerns was examined.

The research used a mixture of qualitative and quantitative methodologies and involved tax practitioners, small business owners, and ATO auditors. The methodology that was originally proposed identified three distinct phases. The first phase was to comprise two focus groups of up to 12 tax practitioners in total, designed to obtain a practical benchmark for small business record keeping. It was proposed that phase two would consist of surveying small business clients of the focus group practitioners (8 from each practitioner, making 96 in total), in order to map the relationship between record keeping and compliance risk as perceived by both advisers and their clients. The third phase was to examine compliance risks from the ATO perspective, and ensure triangulation of the data, comparing the expectations of ATO officers, practitioners and small business taxpayers.

The original research design was altered as the project progressed as a result of both practical and theoretical constraints. The primary changes related to the data collection from practitioners and the sample selection of small businesses.

Following the first focus group, a necessary change in methodology was identified. It was decided that the second focus group would be replaced by a broader survey of practitioners. This change was made for a number of reasons. Firstly, the information from the first focus group was particularly comprehensive, providing useful background information for the project. However, the participant practitioners expressed a reluctance to offer clients for phase two, an important motivation for the focus group, because of client confidentiality. Secondly, while the information was useful as background information and provided the necessary practical insights for the project, the outcomes were not easily quantifiable.

As a result, it was decided to replace the second focus group of practitioners with a survey of 300 practitioners, drawn from the CPA Australia database.

As a flow-on effect, the small business sample, rather than being sourced from the lists of practitioners' clients, was accessed via a commercially available database. Consequently, the sample size of SMEs was increased from 96 to 500 to ensure reasonable population coverage.

The following paragraphs outline the research design more fully.

The Focus Groups
Focus group research is based on facilitating an organised discussion with a group of representative individuals. Discussion is used to bring out insights and understanding in ways which simple questionnaire items may not be able to tap. The focus groups served the additional purpose of acting as a 'cognitive laboratory' for the development of ideas and items for inclusion in the survey instruments in subsequent phases.

An initial focus group was conducted with accountants from a Sydney CPA discussion group. Its objectives were:

- To establish CPA practitioners views on the benchmarks that they considered appropriate for effective record-keeping practices for small business taxpayers;

- To identify their perceptions of the relationship between small business record-keeping and compliance risk (as evidenced by higher exposure to ATO audit, increased compliance costs, cash flow and liquidity problems, and any other compliance issues that may arise);

- To provide information useful for the design of a survey instrument to be used with small business taxpayers who may be their clients (in Phase 2); and
- To enlist their help in identifying up to 100 small business taxpayers prepared to assist in the survey phase.

The focus group of eight participants covered issues relating to small business and tax agent concerns about record keeping requirements and practices. The information gained from this group was used to develop the practitioner and SME surveys.

The second focus group comprised eight officials from the ATO engaged in audit and SME tax compliance. Its objectives were:

- To establish the views of Tax Officers involved in SME and Cash Economy[8] compliance activities on the benchmarks that they consider appropriate for effective record-keeping practices for small business taxpayers;
- To identify their perceptions of the relationship between small business record-keeping and compliance risk (as evidenced by higher exposure to ATO audit, increased compliance costs, cash flow and liquidity problems, and any other compliance issues that may arise);
- To compare those views with the views of tax practitioners and small business taxpayers (which have been obtained through focus groups and by survey).

This focus group was conducted as the last phase in the project on 30 November 2004. The focus group was held at the ATO Hurstville office, and covered a range of questions regarding the ATO experience of SME record keeping and their opinions on the linkage between record keeping and compliance issues. The information which resulted from the group was then compared to that provided from other sources.

Each focus group used an external professional moderator to facilitate (but not dominate) discussion, and each was attended by two members of the research team. The Atax researchers acted primarily as observers in the process, although an opportunity was given for the research team to pose specific questions or make specific comments at the end of each of the sessions.

Each of the sessions lasted approximately two hours, and was deliberately kept small in order to allow plenty of scope for deeper discussion than would have been possible had more participants been involved. It was decided that it would be inappropriate to audio or video record any of the proceedings, and this adoption of 'Chatham House rules'[9] encouraged greater freedom of expression than might otherwise have been the case. Notwithstanding this, it was made clear at the outset that the research team wished to take notes, and no participants objected to this. The identity of participants has remained confidential to those present at the focus group.

Participants (with the exception of the moderator) were not paid for their involvement, but all were happy to volunteer their time.

The principal outcomes of the focus group discussions are detailed in Section 3.

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[8] Both are ATO business lines dealing with small business
[9] This is where the researchers were free to use the information received but neither the identity of the individuals nor the geographical location of the CPA practitioners participants were to be disclosed.

The Mail Surveys

The mail survey methodology has been widely used in compliance costs and related studies. It is chosen primarily because it is the most cost-effective way of reaching a large number of targeted individuals residing in a wide geographical area. The research team was able to identify a stratified random sample of the population of both SMEs and practitioners. Further, respondents have the opportunity to complete the questionnaires at a time and place suitable to them, including access to historical information. There is also less risk of the interviewer/researcher influencing responses.

Questionnaire design and testing

The survey instruments were designed to meet the following objectives:

- User friendliness: The questions were kept short and language simple wherever possible to encourage legibility and maximise response rate.

- Administrative simplicity: A3 paper was folded to make an A4 booklet to minimise the amount of collating and stapling of the questionnaires. Data entry number boxes were employed to facilitate ease of data capture.

- Comprehensiveness: the number of questions was kept to a minimum to encourage responses. However, a large amount of relevant quantitative and qualitative data needed to be collected. There were therefore a total of 48 questions in the SME survey and 37 in the practitioner survey.

Using the input from the focus group study and informed by the academic literature in the area, two survey instruments were developed – one for SMEs with the required turnover and employee limits, and one for tax practitioners (CPA Accountants) who indicated SMEs were a significant focus of their practices.

Copies of the questionnaires are not included in this paper, although the detailed tables of results in Appendix A (SMEs) and Appendix B (practitioners), also include the actual questions that were used in the surveys.

The SME questionnaire had six identifiable parts:

1. Demographic and background information – questions about the business owners, the legal structure of the business, the length of time that the business had operated, the number of employees and turnover, and a self assessment of the quality of the record keeping practices of the business.

2. Record keeping details – questions about the types of records maintained by the business, together with other elements of the business record keeping practices.

3. Audit – this section explored issues relating to the business's audit history, including frequency, type of audit, and audit outcome.

4. Compliance costs – businesses were asked to estimate the internal and external costs associated with various record keeping activities.

5. Liquidity – this section explored issues relating to the liquidity history of the firm, covering any recent cash crises, the causes of previous cash crises, and ability to obtain finance based on records.

6. Attitudinal questions – participants were asked to respond on a five-point Likert scale to a range of questions relating to their attitudes towards the relationship between record keeping and various factors.

Respondents also had an opportunity to add any comments that they did not feel were otherwise covered in the survey, and to indicate the time that they had taken to complete the questionnaire.

The practitioner questionnaire followed substantially the same format as the SME survey in order to facilitate comparisons. Questions related to their small business clientele.

The questionnaires were sent out to a small number of SMEs and tax practitioners for pilot testing. No major comments were received as a result of this testing, and the research team's estimates of the time taken to complete each questionnaire were found to be accurate. However, some minor changes of wording of several questions in the tax practitioner questionnaire took place.

Sample selection
The participants of the SME survey were selected from a commercially available database. The tax practitioners sample was drawn from the CPA Australia membership database. The following parameters were placed on the selection:

- For the SME survey, small businesses were identified as having less than 21 employees (ABS definition) or turnover less than $10 million p.a (ATO definition). There was no restriction on age of the business, location, or industry. A sample size of 500 was identified, with an expected response rate of 30%[10].

- For the practitioner survey, tax practitioners on the CPA Australia membership database who identified an area of practice interest as small and medium enterprises were selected. A sample size of 300 was identified, with an expected response rate of 30%.

Response rates
The response rates for each of the two surveys are contained in Table 2.1. The SME survey achieved a response rate of 28%, while the response rate for the tax practitioner survey was 44%[11]. Both rates were considered satisfactory in the light of the target response rate of 30% that had been set for each survey at the outset of the project.

TABLE 2.1   RESPONSE RATES: TAXPAYER AND TAX PRACTITIONER SURVEYS

	SMEs	Tax practitioners
Gross sample	497	300
Out-of-frame responses	32	2
Net sample	465	298
Useable responses	129	130
Response rate	**28%**	**44%**

The out-of-frame responses were forms that were returned undelivered or where the respondents indicated they were no longer part of the target sample.

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[10] A 30% response rate was chosen for two reasons. Firstly this is comparable to prior studies, and secondly, a 30% response rate supports generalization to the population.

[11] The inclusion of a token gift for half (150) of the practitioner sample population resulted in a response rate of 53%. For those who did not receive the gift, the response rate was 34%.

Representativeness

One important aspect of survey methodology is to ensure, so far as possible, that those who respond to the survey (the effective sample) broadly reflect the categories of those taxpayers who were surveyed (the mail out sample). The SME survey was drawn from a commercial database, with identified selection criteria to ensure a representative sample of the population. In particular, characteristics such as business age, legal structure, operating industry, age of owners etc were identified so that they sample was broadly consistent with the Australian SME population.

The demographic information relating to the SME survey (Appendix A) indicates that the broad parameters that might be expected of small business respondents were satisfied. More particularly, respondents were generally representative of businesses in the small business sector in that they were predominantly drawn from secondary and service industry sectors, the businesses were operated mainly by middle aged and older citizens, they generally employed a relatively small number of people, and the turnovers ranged across all categories up to $10 million.

The respondents to the SME survey included a number of businesses (19) which, at the time of completing the survey, had more than 20 employees. However, because of the selection criteria provided to the data supply agent, their turnover was less than $10 million. Given the vagaries of employment trends in small business, the research team conducted further analysis on this sub group, and concluded that their responses were not statistically distinguishable from the remainder of the sample. As a result, the responses of those 19 businesses were included in the analysis.

The practitioner sample was drawn from the CPA Australia database, from those members who identified themselves as having a small business focus. Consequently, as expected, the respondents were typically from sole practitioners or small partnered firms. The respondents generally had a significant proportion of clients in the small business sector, and from a reasonable spread across primary, secondary and service industries.

Non-response bias

Despite the satisfactory response rates and degrees of representativeness achieved in the surveys, it is still important to consider whether there is any "response bias" in the study (and – if there is – to attempt to identify its extent and impact). Response bias arises if there are systematic differences in some key areas between respondents and non-respondents. Testing for non-response bias establishes whether, if non-respondents had responded, the outcomes of the survey would have been substantially changed. While there are a variety of methods available to test for non-response bias, the research team decided to employ a wave analysis.

Wave analysis is a process which identifies respondents' answers to certain central questions in the survey by reference to the point of time that they answered the survey. Analysis is then conducted to determine whether responses to key selected questions changed significantly from period to period. The procedure assumes that those who return surveys in the later part of the response period are 'almost non-respondents'.

A wave analysis was conducted on both the SME and the practitioner survey respondents. For the purposes of the analysis, responses were divided into two waves:

those who responded early in the survey process, comprising the first 70% of respondents, and those who responded later (the remaining 30%).

The questions selected for analysis were:

- Questions 11, 34 for SMEs.
- Questions 11, 23 for practitioners.

For SMEs, these questions examined to what extent respondents were exposed to audits or liquidity concerns, and their attitude to record keeping. For practitioners, the wave analysis tested for differences in attitude to record keeping and perceived link between record keeping and audit.

A chi-square test revealed that, at the 5% level of significance, there was no statistically significant difference between the perceptions of early and late SME respondents. For the practitioners, no difference between mean responses for the link between record keeping and audit was found at the 5% level. Similarly, there was no statistical difference between the main reasons for record keeping. In summary, the outcomes of these tests for non-response bias strongly suggest the absence of any such bias in the responses to either survey.

FOCUS GROUP OUTCOMES

The Practitioner Focus Group
The primary purpose of the tax practitioner focus group was to assist in identifying issues for inclusion in the SME and practitioner questionnaires. Issues raised in the focus group, listed from the most general and widely agreed upon to the more specific, and based on practitioner knowledge and experience, are detailed below.

The outcomes of the practitioners focus group were:

- SMEs were generally not interested in accounting or record keeping for the small business. Most SMEs saw such activities as a waste of time, rather than an essential part of operating a small business.
- The use of computerised accounting packages did not improve client records. In many cases, the lack of knowledge or understanding by the client resulted in just as many errors as a paper based system.
- Increasing fees to dissuade clients with poor record keeping practices was widely used, as was requiring up-front payments from those clients whose records would require a significant amount of work. There was a general consensus that those with poorer records incurred higher accountancy costs than those with good records.
- Most SMEs were concerned with the cash balance as an indicator of business health. This 'indicator' has been corrupted following the introduction of the GST, whereby some of this cash belongs to the tax authority rather than the business.
- Many of the practitioners had turned away clients who had poor record keeping, suggesting that they were 'not worth the hassle'. They believed such clients then went to unregistered accountants or tax agents. This point was also raised by one respondent to the practitioner survey.
- Factors that were believed to increase the business exposure to tax audit varied, and included:

- o   the SME operating a cash business;
- o   inconsistencies in financial performance between periods; and
- o   adjustments to prior returns.

- Liquidity concerns around SMEs concentrated on general cash flow management. Most notably, the collection of taxes, which had to be remitted to the ATO at some point in the future, was causing major cash concerns. In particular, because of the unsophisticated nature of their record keeping, the taxes collected were being spent as business income, and when it came time to remit the money to the ATO, it wasn't available. The removal of Prescribed Payment System was a significant shock to many SMEs.

The issues raised above were subsequently incorporated, in an objective manner, into the relevant questionnaires, to test the validity of the opinions expressed.

Tax Officer Focus Group
The tax officer focus group aimed to canvas the opinions of tax officials who have routine contact with a variety of SMEs across Australia. In general the results confirmed those of both the previous focus group, and the surveys.

Some of the broad findings of the focus group included:

- Tax changes were just a small part of the compliance issues of small business. The tax officers considered that changes in workers compensation, superannuation etc were equally important in the additional compliance burdens they placed on small business. Further, tax changes such as the GST were seen as creating positive externalities (such as improved management control) to the business, which workers compensation and superannuation record keeping does not.

- According to the ATO officers, the most important factor in a record keeping system was its appropriateness to the business. The system required for effective record keeping depends on legal structure, business nature, number of transactions and competency of the owner/manager. One-size fits all systems such as MYOB and QUICKEN were not necessarily the most appropriate responses to client needs. There was a general consensus that a basic level of bookkeeping was necessary to effectively run a small business.

- Tax officers suggested that the use of specific types of non CPA or ICAA qualified practitioners by small businesses with poor records put such businesses at a disadvantage when dealing with the ATO. In particular, those with poor record keeping who had been turned away from CPAs or CAs were often referred to lesser qualified practitioners precisely when they most needed the skills of fully qualified professionals. This suggests the existence of a 'quality trap' and a 'spiral effect', whereby those with poor record keeping skills were likely to compound their problems when they are forced to rely upon a less competent external adviser.

- The accuracy of returns was considered the most likely cause of audit. Mistakes in industry classification, errors in figures, and 'typos' on returns were likely to raise the interest of officials. Further, claiming refunds, or having ratios outside industry norms were also considered to add to audit vulnerability. The somewhat random nature of audits meant there was a perceived indirect link between record keeping and business audit.

- There was a perception that compliance costs have increased because of the increased audit activity. ATO officers indicated that, particularly since the introduction of the GST, the number of SME audits has been increasing rapidly. This results in further compliance costs imposed on small businesses as they need to spend time documenting and answering audit questions.

- The effect of poor record keeping on liquidity was considered to be felt through a number of channels. Most notably theft, poor stock control, debtor and creditor issues, and general financial management were believed to be the primary transmission mechanisms through which poor record keeping affected liquidity.

- Tax officials suggested that cultural differences have been a problem in ensuring tax compliance of small businesses. Those who have recently migrated or have language barriers find it difficult to comply with tax law, resulting in greater compliance costs for such business. The extent to which such issues are present Australia-wide should be taken in the context of the Hurstville population. Census data reveals that Hurstville has a significant migrant population (55% born overseas), and only 37% of the population speak English at home (ABS, 2001). This suggests that the revenue authority has significant work to do with people of non-English speaking background to ensure compliance.

The views taken from each of the focus groups are further explored in later sections of this paper.

SURVEY OUTCOMES

This section summarises the major outcomes of the two surveys, and uses the data provided in the surveys to examine the relationship between record keeping and various compliance issues faced by the small business sector.

SME Survey

The data provided from the 129 SME respondents provides a rich source of qualitative and quantitative information about the nature of the relationship between record keeping and the various compliance risks that are the subject of this project. Details of specific survey responses for all questions for the SME survey are contained in Appendix A.

Responses to the questions in Section A (Background Details) of the survey reveal that:

- two thirds of the SME respondents came from the service sector, with 22% from the secondary sector, 7% from the primary sector and 4% did not specify (Question 1: Appendix A);

- just over 60% of respondents were private companies, with the balance roughly equally divided between partnerships (14%), trusts (11%) and sole traderships (9%) (Question 3);

- respondents tended to be well established businesses (71% had been in operation for more than ten years), but there was a sprinkling of newly established (9% had been in operation for up to five years) and 'middle-aged' businesses (19% had been in operation for six to ten years) (Question 4);

- the surveys were predominantly completed by the business owners (74%) or by managers (17%) (Question 5);

- only 21% of the persons completing the surveys were aged 45 or under, and none were under 30. The surveys were predominantly (four out of five) completed by persons who were over 45 (and 13% were 60 or over) (Question 6);

- over 90% of the businesses had employees, and 58% had more than five employees (Question 7);

- more than three quarters of the SME respondents had an annual GST inclusive turnover of between $500,000 and $10,000,000 (Question 8).

Overall, therefore, the authors are satisfied with the spread and representativeness of the captured sample of SME respondents.

Record keeping
The respondents to the SME survey were generally satisfied with the quality of their business records, with over 72% rating (on a self-assessment basis) the quality of those records 8 out of 10 or better (on a scale of 10, where 1 is poor, 5 is average and 10 is excellent). Only 12% of respondents rated the quality of their business records as 5 or less (Question 9). This outcome was reinforced later in the survey, with 95% of respondents either agreeing or strongly agreeing that they were confident in the accuracy of their record keeping systems (Question 39), and 94% of respondents either agreeing or strongly agreeing that they were confident that they have the necessary record keeping systems in place to comply with the taxation law (Question 40). In addition, 99% of the SME respondents responded in the negative to the question: "Has an accountant or other professional refused you as a client on the basis of your record keeping?" (Question 13).

General business management was seen as the most important reason for keeping records (by 58% of respondents), followed by compliance with tax law (23%). Record keeping for profitability information and keeping track of the debtors and creditors rated lowly at 5% each. Thirty two per cent of respondents considered that compliance with the tax law was the second most important reason for keeping business records.

The emphasis that SMEs placed on the value of record keeping for general business management was interesting, as it appeared to contrast quite significantly with earlier research in related areas. For example, in an investigation of compliance costs relating to the 1994-95 fiscal year, Evans et al (1996: pp. 93-94) had established that business taxpayers saw the financial statements prepared for the business as overwhelmingly useful and used for tax purposes: 76.5% of respondents had indicated that this was the case, and only 16.1% indicated that the primary purpose of the financial statements was for internal management use.

The contrast, however, is not quite as surprising as might initially be thought. This research related to the base business records, not to financial statements such as the Profit and Loss Statement or the Balance Sheet. SMEs were clearly more likely to relate the former to their ongoing business management than would be the case with their financial statements, usually prepared externally and necessarily after the close of the year.

No respondents considered bank requirements the main reason or the second most important reason for record keeping, possibly as a consequence of the introduction of 'low doc' loans (Questions 11 and 12).

Almost 90% of respondents used either a computerised (65%), or partly computerised (23%) record keeping system, and only 5% used only a paper based system (Question 10). However, just 37% of those who used a computerised record keeping system did so on the advice of an external adviser (Question 21). Further, just over half of the businesses set up the program and chart of accounts themselves (Question 22). Almost all (94%) believed that the computerised system saved them money (Question 25), but only 35% actually experienced a decrease in external agent costs as a result of computerisation (Question 27).

Three out of four respondents maintained their business record keeping systems in house; 9% used a CPA/CA or other accountant to maintain the business records, and a further 9% used a bookkeeper (Question 14).

Whereas the maintenance of the business record keeping system was predominantly (74%) dealt with in-house, accounting and tax reports, as might be expected, were usually prepared outside the business. Cash statements were prepared for about two thirds of the businesses, and profit and loss and balance sheet statements were prepared for more than 80% of businesses (Question 17). About 40% of these accounting reports were prepared in-house, with the majority prepared by external accountants, tax agents and bookkeepers. Only 16% of tax reports (for example, the BAS or annual returns) were prepared in-house (Question 18).

Only one out of three SMEs thought that the time dedicated to record keeping exceeded the benefits (Question 38), but 69% still considered that the record keeping requirements of small business were too time-consuming (Question 41). This ambivalence was further confirmed by the fact that roughly equal numbers agreed and disagreed with the statement that "Required record keeping (eg the BAS) helps me manage my business more effectively" (Question 42).

In summary, therefore, the results of the survey is that the SMEs were satisfied with the quality of their records, which they kept primarily for general business purposes (and incidentally for tax purposes). Those records were more likely than not to be computerised and maintained in-house, and – despite concerns about the time that had to be spent on them – most businesses could see the value of the record keeping exercise. Although the basic business record keeping system was more likely than not to be set up and maintained in-house, preparation of accounting reports was primarily entrusted to external professionals. Tax reports were even more likely to be externally prepared.

Audit Risk

The research project hypothesised at the outset that the nature of the record keeping practices of the business could impact on tax audit risk in two ways. In the first place there was the possibility of a relationship between record keeping and exposure to audit. More specifically, those businesses with poor record keeping practices might be perceived as 'inviting' or leaving themselves open to a higher potential **exposure** to audit by the ATO than those with good record keeping practices. Secondly, it was considered that, once selected for audit, businesses with poor record keeping practices would be more vulnerable to adverse audit **outcomes** than those with good record keeping practices. Each of these hypotheses is examined in turn.

Audit exposure-
Roughly half of the respondents agreed with the statement that "Good record keeping reduces the likelihood of ATO audit". Less than 20% disagreed with this sentiment, while about one third remained neutral or unsure on the issue (Question 44). This would suggest that, on balance, small businesses are more likely to perceive a strong relationship between record keeping practice and exposure to audit than not. The evidence from the remainder of the survey, however, failed to provide data to support this conclusion.

Most respondents (63%) had not been the subject of an ATO audit. Roughly one third of businesses had undergone an ATO audit, with 20% of the total respondents having suffered an audit in the past three years (Question 28). Field audits were the most common types of audit for those who had been exposed to a tax audit (70%), although 18% had undergone a desk audit and 12% a telephone audit (Question 29). The nature of the audits varied considerably, although most (40%) were GST-focused. Income tax was the principal focus of 21% of those audited, Fringe Benefits Tax featured as the main focus in 12%, PAYG/Withholding was also 12%, and Capital Gains Tax was 7% (Question 32).

The 20% of SME respondents (27 businesses) who had been exposed to an audit in the last three years were grouped into a separate cohort to establish whether their responses differed to any statistically significant extent from the responses given by the cohort who had not been subject to audit (81 businesses). For the purposes of this testing the 12 businesses that had been audited, but not in the last three years, were excluded.

The two cohorts were first tested to establish if there were any clear or distinct differences in how they rated the quality of their record keeping practices. Table 4.1 summarises the outcome.

TABLE 4.1   RECORD KEEPING QUALITY AND AUDIT EXPOSURE

	Cohort not audited (n=81)	**Cohort exposed to audit (n=27)**
Mean rating of the quality of business records	7.8	8.3

The cohort of businesses that had been subject to recent audit rated the quality of their business records slightly higher (on the basis of mean scores) than those that had not been audited. This may indicate the impact of a 'recency' or 'educative' effect, whereby those that had been audited were able to feel more confident in the quality of their record keeping practices than those who had not. For some of the audited cohort this confidence may have stemmed from the fact that there were no adverse outcomes as a result of the audit – their existing practices were vindicated. For those businesses that had encountered adverse outcomes, they may have felt greater confidence as a result of improvements to the record keeping practices subsequently made as a direct or indirect consequence of the audit.

Table 4.2 compares the preparation of accounting reports between those businesses that had been exposed to audit in the previous 3 years, and those who had not been audited. Those businesses that had been exposed to audit were more likely to prepare

all accounting reports. A chi-squared test revealed that this difference was not statistically significant (p = .808).

TABLE 4.2   **PREPARATION OF ACCOUNTING REPORTS AND AUDIT EXPOSURE**

	Cohort not audited **(n=81)**	**Cohort exposed to audit (n=27)**
Cash Statement	60%	88%
Profit and Loss	86%	92%
Balance Sheet	80%	92%
Debtors and Creditors	76%	88%

In further analysis it was identified that there was no relationship between the elements of the record keeping system (Question 16) and exposure to audit (p = .986). Further, the frequency of maintenance of such records was also proved to be not statistically significant.

When comparing what respondents viewed as the main reason for keeping records, those that had been audited were twice as likely (40% versus 20%) to view tax compliance as the main reason for record keeping. There was a statistically distinguishable difference (p = .000) between the top three reasons[12] for record keeping. This suggests that the threat of audit may not be enough to induce a change of behaviour. It is only once a business has actually been audited that the importance of tax requirements become apparent and behaviour changes.

The hypothesis of a link between record keeping and audit exposure is therefore not statistically supported. Some evidence does point to minor differences in preparation of accounting reports and a difference in attitudes to record keeping, but overall it appears that differences in record keeping practice do not lead to greater or lesser likelihood of exposure to an ATO audit.

Audit outcomes-
The next consideration is of a direct relationship between record keeping practices and the audit outcome for those businesses that have been selected for audit. Selection for an audit can be based on a number of factors, including industry, turnover, random selection etc. The direct link implies that once an audit has taken place, those who have poor record keeping have a greater likelihood of receiving an amended (increased) assessment.

As noted above, roughly one third (29%) of SME respondents had been the subject of an audit, predominantly involving GST (40%) and income tax (21%). Only 20% (eight respondents) had received an amended assessment as a result of the audit. One quarter of the amended assessments involved a decrease in tax payable, while three quarters involved an increase in tax liability (Question 30). It should be noted that the deliberate policy of the ATO in the early years following the implementation of the GST was to use audits as an educational rather than penal tool. This may help to

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[12] Being Compliane with tax laws, general business management and keeping track of debtors and creditors.

explain the relatively small number of SMEs who experienced an amended assessment as a result of the audit.

Because of the low number of respondents with an amended assessment (n = 8), statistical tests to establish differences in the quality and nature of records for this limited cohort were not possible. Some broad comparisons from the data, however, may be indicative, though should be treated with caution.

There is a marked difference in preparation of accounting reports between those who had an amended assessment as a result of audit, and those who had none. Table 4.3 shows the relative percentages. It is clear that the cohort of businesses that received amended assessments as a result of the audit were less likely to prepare (or have prepared) basic accounting reports, particularly so far as cash statements and debtor and creditor reports were concerned.

TABLE 4.3   PREPARATION OF ACCOUNTING REPORTS AND AMENDED ASSESSMENT

	No change (n=29)	Amended assessment (n=8)
Cash Statement	89%	62%
Profit and Loss	100%	87%
Balance Sheet	100%	87%
Debtors and Creditors	96%	75%

Those respondents who had an amended assessment were almost twice as likely (25% versus 13%) to prepare their own tax reporting in-house, rather than seek the services of a professional. They were also far more likely to have their annual tax returns completed in-house than by a professional (50% versus 17%). This suggests that the use of qualified external practitioners reduces adverse audit outcomes, although the conclusion has to be treated with caution given the small numbers involved.

Compliance Costs
We initially hypothesised that businesses with poor record keeping practices would likely encounter higher taxation compliance costs than businesses with better record keeping practices. Extending the theme that emanated from the focus group, the research team examined this relationship between record keeping and compliance costs.

Initial support for the hypothesis was garnered from SME respondents' attitude to the statement that "Good record keeping reduces compliance costs of the business" (Question 45). Three times as many participants in the survey agreed with this statement compared to those who disagreed (69 respondents compared to 22). Note, however, that 30 respondents (25%) were either neutral or did not know. As a result, the 69 positive respondents represented only 57% of total responses – a majority, but not an overwhelming endorsement of the statement. These results indicate that the participants are not certain that good record keeping practices will reduce the taxation compliance costs.

Participants were also asked to estimate the annual internal and external costs associated with various tax reporting requirements of the business (Question 33). Comparisons were made on the basis of how respondents self assessed the quality of the records and the costs (internal and external) that they reported. Subsequent

analysis focused on the relationship of the types of records that were prepared in-house and externally, again related to costs of compliance.

Table 4.4 compares the mean and the median internal costs associated with the various record keeping activities. Those businesses that considered that they had better quality record keeping practices (measured as a self-assessed score of 8 to 10) had higher mean and median estimates for all internal costs except for payroll and other taxes compared to those who assessed the quality of their record keeping practice as less than 8. The mean internal costs relating to payroll and to other taxes is broadly similar.

TABLE 4.4   RECORD KEEPING QUALITY AND INTERNAL COMPLIANCE COSTS

	Self reporting 8 – 10 (n=93)		Self reporting < 8 (n=36)	
	Mean $	**Median $**	**Mean $**	**Median $**
BAS / GST	10298	4000	6283	3500
Tax Returns	11010	4000	2808	2000
Payroll	5615	2500	5721	3500
FBT	3841	2000	1803	1000
Other Taxes	3959	2500	4000	5000

Table 4.5 compares the external costs of record keeping, again based on a comparison between those with 'better' record keeping practices and the rest. Once again, those who claimed that the quality of their record keeping practices was 'better' (in the range of 8-10) appeared to pay more in external tax compliance costs than those with lesser quality record keeping practices.

The results suggest that the initial hypothesis is not proven – those with poor record keeping practices actually appear to suffer lower compliance costs than those with better record keeping practices. Intuitively one can see grounds for supporting this outcome: quality comes at a price, and that price involves both the costs of internal time and labour in setting up and maintaining quality record keeping processes, the costs of software etc and the costs of engaging quality external professionals. It should therefore not be entirely surprising that those businesses that apparently have better record keeping practices pay a higher price for them.

TABLE 4.5   RECORD KEEPING QUALITY AND EXTERNAL COMPLIANCE COSTS

	Self reporting 8 – 10 (n=93)		Self reporting < 8 (n=36)	
	Mean $	**Median $**	**Mean $**	**Median $**
BAS / GST	3237	2540	2950	3000
Tax Returns	7236	4000	5342	3750
Payroll	3284	950	833	500
FBT	1517	1000	807	325
Other Taxes	2350	1900	1375	750

The basis of preparation of external accounts and tax reports, namely the underlying records, together with their comprehensiveness, may help to determine the costs associated with compliance. Table 4.6 considers the principal record keeping elements (Cash Book, Invoices and Bank Statements) and their impact on record keeping. The table compares internal and external compliance costs when less than three elements are used with those respondent businesses that used all three elements. Only the median cost is cited.

TABLE 4.6   RECORD KEEPING ELEMENTS AND COMPLIANCE COSTS

	Internal all 3	Internal <3	External all 3	External <3
	Median $	Median $	Median $	Median $
BAS / GST	4500	1200	3000	1500
Tax Returns	3000	1000	4500	4000
Payroll	3000	4000	885	500
FBT	1400	2000	1000	100

The evidence for increased compliance costs as a function of the record keeping elements is mixed. In short, there is no consistent relationship between median estimates for report preparation between those who have a more comprehensive record keeping system than those who do not.

Liquidity Risk
The final area that was examined related to the relationship between record keeping practice and exposure to liquidity problems – and in particular to cash flow problems that cause difficulties in remitting taxes collected on behalf of the ATO. SME respondents acknowledged the likelihood of a strong correlation in two of the attitudinal questions in the survey (Questions 43 and 46). Ninety per cent agreed with the statement that "There is a strong relationship between poor record keeping and business failure", and 84% agreed that "Good record keeping helps to ensure that cash crises are avoided". As with the other areas, however, there was a marked difference between what SMEs thought and what the evidence of their behaviour actually showed.

Over half the respondents (62%) had suffered a cash crisis at some time (Question 34). Late payment by debtors was the most commonly stated primary cause (34%), followed by "Other" (25%) and "ATO/Tax obligations" (15%) (Question 35). "ATO/Tax obligations" was the second most important cause that was cited (22%) (Question 36).

Only 1% of respondents had been refused finance or credit because of a lack of business records.

In order to examine the impact of record keeping on liquidity, those respondents who had suffered a cash crisis in the last three years were separated from the rest of the respondents. The record keeping practices of each group were then compared. As expected, when compared to those who had not had a recent cash crisis, those that had:

- self assessed the quality of their record keeping at a lower level than the average;

- had generally been in business for a slightly shorter period of time; and

- had a lower business turnover on average.

Table 4.7 outlines the difference in preparation of accounting reports between those businesses that had experienced recent liquidity problems, and those that had not. Businesses without liquidity problems were more likely to have prepared (or have had prepared for the business) such accounting reports, with the exception of debtors and creditor reports. A chi-squared test revealed, however, that these differences were not statistically significant (p = .918).

TABLE 4.7   LIQUIDITY PROBLEMS AND PREPARATION OF ACCOUNTING REPORTS

	No liquidity problems in last 3 years (n=76)	Liquidity problems in last 3 years (n=60)
Cash Statement	68%	63%
Profit and Loss	90%	83%
Balance Sheet	87%	75%
Debtors and Creditors	77%	81%

Record keeping elements (Cash Statement, Invoices or Bank Statements) showed greater homogeneity in terms of preparation across the two groups. Consequently, no statistical difference was found between the two groups (p = .881).

A further aspect of the record keeping elements was the frequency of preparation of those records. The timeliness of the information was thought to be directly related to the usefulness of such reporting. Chi-Squared tests between frequency of reporting and liquidity issues, however, showed no statistically significant difference between the groups.

The empirical evidence, therefore, does not support a direct link between record keeping and liquidity issues. The research team also explored, however, the information content of record keeping. This is to acknowledge that preparation of reports may not prevent a cash crisis, as many of the causes were beyond the business's control, but reports may make it easier to identify the cause.

It was established that those respondents who listed "Debtors and creditors" as the main cause of the cash crisis had a greater likelihood of preparing debtors and creditor reports (95% versus 70%). A chi-squared test showed this to be statistically significant (p = .024). In addition those respondents who listed "ATO / Tax Obligations" as the principal cause of the cash crisis were more likely to view compliance with tax law as the main reason for record keeping (40% versus 22%).

These results suggest that the information content in reports may help a business pinpoint issues or concerns (such as late payment by debtors), but if the problem is external to the business, the reports are unlikely to be helpful in resolving the problem.

Tax Practitioner Survey

The tax practitioner survey also produced very useful qualitative and quantitative data from 130 respondents relating to their perceptions and experience of SME record keeping practices and exposure to the various compliance risks. Details of specific

survey responses for all questions for the tax practitioner survey are contained in Appendix B.

Responses to the questions in Section A (Practice Background) of the survey reveal that:

- just over two thirds (68%) of the responses came from self-employed sole practitioners, and just over a quarter (27%) from partners in practice. The partners were predominantly (80%) from partnerships with four or fewer partners (Questions 1 and 2: Appendix B);

- the GST inclusive turnovers of the respondents' practices were generally less than $1 million (88%). The practice turnovers for roughly a quarter were less than $100,000; for a further quarter were between $100,000 and $250,000; and for just over one third were between $250,000 and $1 million (Question 3);

- the number of clients in the practices ranged from less than 100 (16%), through 101 to 250 (15%) to more than 1,000 (22%). Nearly half (46%) had between 251 and 1,000 clients (Question 4);

- roughly three quarters of the clients of the respondent practices were classified as small business clients, and they came from the full range of business sectors and levels of turnover (Questions 5, 6 and 7).

Once again, the research team was satisfied with the relevance, coverage and representativeness of the practitioner respondents.

Record Keeping

Practitioners were asked a series of questions that related to their perceptions of the record keeping practices of SME clients. The first of these (Question 8) sought information on the number of potential clients that practitioners had turned away as a result of perceived poor record keeping practices within the business. Only 51 of the 130 respondents (39%) had never turned a client away on such grounds. Most (52%) had turned away between one and five clients per year, and 8% had turned away more than five annually. This tends to reinforce the notion of the existence of a 'quality trap' that was identified in the earlier practitioner focus group, and may contribute to a downward spiral effect that sees those businesses with poor records forced to engage lesser qualified professionals for their tax compliance obligations.

"Accuracy" and "simplicity" were perceived by practitioners to be the most important characteristics of a record keeping system (Questions 9 and 10). These two attributes were seen as significantly more important than the "comprehensiveness" and the "timeliness" of the record keeping system. Despite the perceived importance of the accuracy of the records, and despite the large percentage of practitioners who advised small business clients on their record keeping systems (95%: Question 12), nearly one third of practitioners (32%) were not confident or were unsure of the accuracy of their clients' record keeping systems (Question 29).

Nonetheless, nearly 80% of practitioners were confident that their clients' record keeping systems were sufficiently adequate to comply with tax obligations (Question 30). Further, some 71% believed that tax-induced record keeping (such as BAS obligations) improved the management of the business (Question 32). Confirming this, over 60% (79 out of 130 practitioners) considered that reporting obligations under the BAS/GST regime improved the management of the small business, and

57% thought that the filing of the annual tax return also improved business management (Question 21). Additionally, 60% of practitioners believed that computerised record keeping practices improved the accuracy of the records of more than half of their SME clients (Question 18).

Compliance with the tax law was identified by 60% of practitioners as the main reason for record keeping, exceeding general business management by a factor of two (Question 11). This symmetrically contrasted with the view of SMEs, who (in almost equal proportions: 58%) saw business management as the main reason for record keeping. This inevitably reflects the greater tax focus of the practitioners compared to the SME owners' and managers' focus on the business.

Almost all practitioners (95%) advised clients on record keeping systems, and then actually set up those systems for the clients (80%) (Questions 12 and 13). The number of transactions and perceived competency of the client were the primary factors that determined whether these systems were computerised (Question 15), which they tended to be for about 90% of clients (Question 16). MYOB was recommended by just over half (53%) of practitioners (Question 16), and more than half of the practitioners (58%) trained their clients in the use of those computerised programs (Question 17). Very few practitioners (9%) did not insist upon or suggest a computerised record keeping system for their small business clients (Question 16).

Practitioners were split as to whether the time spent by small businesses on record keeping exceeded the benefits, with 45% agreeing and 47% disagreeing (Question 28). Most (70%), however, agreed with the statement that "the record keeping requirements of small business are too time consuming" (Question 31).

Practitioners, in this survey, rated the profit and loss statement as the most essential of the various accounting reports for the successful management of the business, followed closely by a statement of debtors and creditors, the balance sheet and cash statement – all of which were also considered essential for successful management by the majority of practitioners (Question 19).

Audit risk

Practitioners were divided on the issue of whether there was a relationship between poor small business record keeping and the probability of audit by the Tax Office (Question 23). Roughly one in four considered there was little or no relationship (measured as a score of between 1-3 on a scale of 1-10, with 1 being no relationship and 10 being a strong relationship). About half assessed the relationship as being medium (4-8 on the scale), and only 11% saw a strong relationship between poor record keeping and probability of audit (9-10 on the scale). This ambivalence was confirmed by responses to two related questions. In Question 14, 64% of practitioners considered that good small business client record keeping reduced exposure to ATO audit; in Question 34 half of 129 practitioner respondents agreed that "good record keeping reduces the likelihood of ATO audit for small business clients". Overall, therefore, there is some reasonable support from practitioners for the nexus between poor records and increased exposure to audit, but that support is not overwhelming.

Being in a 'cash economy' industry was viewed as the most important factor in increasing the risk of audit (116 respondents), followed by more than average deductions (103 respondents). Being in the simplified tax system was seen as the least

likely of a number of factors to increase the risk of a small business being exposed to a tax audit (only 4 respondents) (Question 22).

Practitioners considered that, once exposed to an audit, small businesses were most likely to suffer an amended assessment (presumed to be adverse) as the result of poor advice from their agent, followed by the tax evasion or fraud of the SME (Question 24). Other reasons that were offered included a lack of awareness of the legislation, clerical error and insufficient evidence of the claim, but these were not scored as high as the first two mentioned factors.

Compliance Costs
More than four out of five practitioners believed there was a positive relationship between good record keeping and lower compliance costs (Question 35), although only 68% quantified this as a strong relationship in Question 14.

Interestingly, the estimates of compliance costs given by practitioners (Question 25) were significantly below those indicated by SMEs – in some cases up to ten times less. It appears that estimating the costs associated with compliance with tax law is difficult for both practitioners and SMEs. There is a wide variation in estimates not only within groups, but also across the two cohorts. It is likely that the costs fall somewhere between the two estimates, with SMEs overestimating the costs incurred, and practitioners underestimating the amounts they charge clients. Both estimates[13] showed significant variation, however, with some facing/charging very high costs, and others relatively low.

Further information about practitioners' views on SME compliance costs were derived from Question 18 of the survey, which related to perceived benefits of computerisation of SME record keeping for practitioners and SMEs themselves. Less than 40% of practitioners believed that computerisation of client record keeping either reduced bills or saved time for the majority of their clients. In contrast, nearly two out of three practitioners perceived that such computerisation saved the practitioner time so far as the majority of clients was concerned. In short, computerisation may not reduce client compliance costs (time or money) directly, though it may reduce practitioner time (which is not necessarily passed on to the client in reduced bills).

These attitudes to computerised records contrast with those expressed in the SME survey, where 94% of SMEs believed a computerised system saved them money.

Liquidity Risk
Three out of four practitioners supported the view that "there is a strong relationship between poor record keeping and small business failure" (Question 33), and 70% agreed that "good record keeping helps to ensure that cash crises are avoided by small business clients" (Question 36). Eighty five per cent assessed a similar relationship between good small business client record keeping and improved cash flow management as medium to strong (measured as between 3 and 5 on a scale of 5, where 1 indicated no relationship and 5 indicated a strong relationship) (Question 14).

However, "poor record keeping" was not identified as one of the primary factors causing cash crises for clients (Question 26). It ranked fourth out of five factors, being

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[13] Refer Appendix A SME survey Question 33 and Appendix B CPA practitioner survey Question 25 where the mean and medians are reported.

rated behind "late payment by debtors" (ranked highest), "ATO/tax obligations" (second highest) and "general business downturn" (third). Only "pressure from creditors" was rated less significantly than poor record keeping in causing SME cash crises.

The number of clients refused credit due to poor record keeping (2%) (Question 27) was not dissimilar to the outcome in the SME survey, where it was 1%.

Having identified the major outcomes of the two surveys, it now remains to draw the analysis together and derive appropriate conclusions based on the outcomes of both the focus groups and the surveys. This is done in the concluding section.

CONCLUSIONS

The project sought the views and experience of the three principal stakeholders involved in tax compliance issues for the SME sector – the owners/managers of small businesses, their accountants and advisers, and the tax officials who audit the sector. It was expected that by drawing on the insights of these groups and triangulating the results a comprehensive picture of the relationship between record keeping and tax compliance outcomes could be developed. The following paragraphs outline the conclusions reached in each of the areas that were explored.

Record keeping

A number of recurrent themes relating to record keeping practices emerged in the process of the project. Two of these – the value of the record keeping process in general, and the benefits of computerisation of record keeping practice – are explored in greater detail here.

The value of record keeping for the business

The initial focus group conducted with tax practitioners suggested that SMEs were generally not interested in record keeping, seeing such activities as a waste of time rather than an essential part of operating a small business. There was some support for this view from the larger group of practitioners that was surveyed. Just under half of that practitioner group tended to suggest that the effort put into record keeping by the SME sector did not – on the whole – produce commensurate benefits for the business. But a small majority of practitioners did consider that the benefits of record keeping (for SMEs) outweighed the costs (to SMEs). Overall, the combination of these sentiments suggested a fairly restricted view by practitioners of the value of record keeping to the business itself.

But this was not the whole picture as seen through the prism of practitioners. They considered that the primary purpose for SME record keeping was tax compliance related rather than an essential part of business management. But there was still an indirect impact of good record keeping practice on the business – many practitioners conceded that these tax reporting obligations could actually help to improve business management.

This somewhat indirect view of the value of business record keeping was not shared by the SME sector itself. It is true that the owners and managers of the small businesses were concerned at the amount of time and effort that they had to expend on maintaining record keeping systems. But, by a factor of about two to one, they saw the value of their record keeping systems as an essential tool in the business management process, with tax compliance a secondary outcome. And roughly half of them went

further and recognised that even those tax reporting obligations helped them manage the business more effectively.

This view of the possibility of positive externalities that SMEs could derive from record keeping and tax reporting was a theme that was also touched upon in the focus group conducted with ATO auditors. These tax officials were aware of the growing compliance burden imposed upon SMEs (and not just as a result of tax obligations), but also recognised that good record keeping practices, in part induced by tax obligations, could lead to improved management control for the SME.

Computerisation of record keeping
The practitioner focus group had also suggested that the use of computerised accounting packages did not improve client records. It was suggested that a lack of knowledge and understanding by many clients resulted in just as many errors as were occurring in paper based systems. The focus group view may reflect the types of businesses of their clients, many of who were trades people, who were perceived to be less au fait with computerised packages than other clients.

The 130 practitioners who responded to the survey did not endorse this view. Most believed that computerised record keeping practices improved the accuracy of the records for the majority of their clients, although there was a significant minority that did not share this view. Notwithstanding this, a very large majority of practitioners not only strongly urged their clients to adopt computerised record keeping practices, but most also set them up for the clients.

The SMEs also saw the value of such systems, with virtually all of them identifying that there were savings to be made as a result of their introduction and maintenance. Most businesses had either fully computerised or hybrid (paper based and computer based) systems in place and had little reason to doubt their value and their efficacy.

The relationship between record keeping and tax audit
At the outset of the project it was hypothesised that there was a direct link between the quality of SME records and the likelihood of audit by the ATO. The research has identified that the link is by no means as straightforward or certain as was anticipated.

The initial focus group with practitioners did not identify poor record keeping – per se – as a cause of selection for audit by the ATO. Rather, such factors as the operation of a cash business, inconsistent financial performance and adjustments to prior returns were considered to be far more likely to lead to audit. These observations were ultimately confirmed in the tax auditor focus group, and a number of other factors were also put forward, none of which was directly related to the quality of the underlying records.

The surveys of both the practitioners and the SMEs also failed to confirm that the quality of records was a key variable in determining exposure to audit, either in a direct or indirect fashion. What the surveys did confirm was that both practitioners and SMEs generally perceived that there was a direct relationship between poor small business record keeping practice and probability of tax audit, but that this perception was not confirmed by the evidence available (which primarily related to a small number of SMEs who had undergone an audit in recent years).

While the direct and indirect links between record keeping and audit exposure were not found, there was some evidence (albeit based on a rather small sample of SMEs)

of a direct relationship between record keeping and an amended assessment or other adverse audit outcome. The results suggested that once selected for audit, the probability of an amended assessment was related to the quality of record keeping. It was also apparent that having experienced an audit did induce an attitudinal change in affected businesses. Those that had been the subject of a recent audit generally rated tax obligations as a more important reason for record keeping, and were more likely to prepare (or to have prepared) accounting records.

The evidence also suggested that while the threat of audit did not induce improved record keeping activities, exposure to an actual audit may lead to a subsequent improvement in records. Consequently it is considered that the recent increase in audit and compliance activity by the ATO is likely to improve record keeping of small businesses over time. From the viewpoint of practitioners, therefore, their ability to improve the record keeping systems of small businesses can have a dramatic impact if the client is selected for audit.

The relationship between record keeping and compliance costs
It was also hypothesised at the outset of the project that there was a direct relationship between record keeping practice and compliance costs. Simply stated, it was considered that poor records were more likely to lead to increased compliance costs.

Some support for the initial hypothesis was gleaned at the practitioner focus group. Participants indicated that accountants widely used the practice of increasing fees to dissuade clients with poor record keeping practices, and there was a general consensus that SMEs with poorer records incurred higher accountancy costs than those with good records. Each of the surveys also showed that there was a perception of a direct relationship between poor record keeping and higher compliance costs: a large majority of practitioners and a majority of SMEs shared this view of a positive correlation.

Interestingly, however, analysis of the data from the survey revealed that there was no direct relationship between poor record keeping and increased compliance costs. Rather, the compliance costs varied independent of the quality of the business records. This may suggest that practitioners are not as successful as they think in using price (the fees they charge) to deter poor record keepers. It may also suggest that there are other, countervailing, forces at work to break the direct relationship between record keeping and compliance costs. For example, those SMEs with poor records may actually save resources (the value of their internal time) as a result of not maintaining good records. Given that the time spent by business owners and managers is a significant component of compliance costs[14], this may have the effect of causing lower compliance costs where poor record keeping practices prevail.

These results do suggest an ongoing uncertainty about just how much complying with legislative requirements actually costs a business, both internally and externally. There was wide variation in estimates of internal and external costs from SMEs, and these differed substantially from those provided by practitioners. This leads to a suggestion that key stakeholders are often unaware of the quantum and composition of business tax compliance costs.

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[14] Studies by Evans et al (1997) and Pope et al (1994) suggest that the internal costs of SME proprietors represent between 65% and 70% of total compliance costs.

The results also point to the need for surveys dealing with compliance cost issues to be very carefully constructed. In retrospect it is possible that the compliance cost questions in these surveys were too general in nature to be able to provide reliable estimates of the actual costs incurred by SMEs. Other surveys (for example, Evans et al, 1996; 1997) have focused solely on compliance costs and have been able to carefully obtain reliable estimates that have highlighted both the significance and the regressivity of compliance costs for the small business sector. The current survey may well have sacrificed a compliance cost focus in order to achieve its broader objectives.

The relationship between record keeping and liquidity
The final relationship between record keeping and compliance outcomes that was explored in the project related to liquidity and cash flow management, particularly as this related to the capacity of the business to properly account for tax withheld from various sources and due to the revenue authority. It was hypothesised that those SMEs with poor record keeping practices would be more exposed to liquidity issues than those with better quality records.

In the initial focus group, practitioners indicated that most SMEs were concerned with the cash balance as an indicator of business health. They also suggested that SMEs with unsophisticated record keeping practices were encountering cash flow problems as a result of spending cash that then needed to be remitted to the Tax Office. The ATO auditor focus group confirmed that there was evidence that SMEs were encountering cash flow difficulties as a result of poor record keeping practices.

Both SMEs and practitioners overwhelmingly confirmed the perception of a strong relationship between poor record keeping and liquidity problems in the surveys. Once again, however, that perception was not matched by underlying data derived from the surveys. In short, no strong or direct relationship between poor record keeping and cash flow problems was identified.

The main cause of liquidity concerns of small businesses, as indicated by both SMEs and practitioners, was the late payment by debtors. However, the preparation of creditors and debtors reports was considered the least useful accounting report by SME respondents. The evidence suggests that such reports provide information content only, as they highlight a problem external to the business. Despite identifying the cause of the cash crisis, such reports do not necessarily provide a workable solution. SMEs remain, in some cases, at the mercy of their debtors.

Proper and timely debtor management may be able to reduce the incidence or severity of the cash crisis in a small business. SMEs that are more proactive in recovering debts as they become outstanding may find they are able to improve their cash flow management. Advisers should be actively encouraging and guiding businesses on debt recovery options. It is clear that by the time such debts become lodged in the debtors and creditors reports, it is already too late for some to be recovered.

In summary, therefore, this research showed that there was some dissonance between perceptions and reality so far as the relationship between record keeping and a range of broad tax compliance issues is concerned. All of the key stakeholders – SME owners and managers, practitioners and ATO auditors – perceived (to varying degrees) direct relationships between poor SME record keeping practices and adverse tax compliance outcomes. But those perceptions were not always confirmed by the evidence of actual behaviour. Poor record keeping did not, of itself, necessarily lead to

a higher vulnerability to audit (though once audited SMEs with poor records were more likely to suffer adverse audit outcomes). Nor did poor record keeping necessarily translate to higher compliance costs (though the data were ambivalent). Nor, finally, did poor record keeping necessarily lead to liquidity and cash flow problems. In each case, however, the stakeholders were able to identify the positive value that professional advisers can bring to the systems and practices of record keeping that businesses adopt. The benefits that good record keeping practices can bring were evident throughout the research in a number of direct and indirect ways.

Further and more detailed research is required to explore the complex relationships that exist between record keeping and tax compliance outcomes. The current project was ambitious in its scope, and was ultimately limited in its findings by its reliance on the self-assessment of the quality of record keeping practices by SMEs themselves. Further research should be narrower in focus. For example, separate projects should investigate each of the three compliance relationships (audit; compliance costs and liquidity) with record keeping practice. In addition, future research should seek more objective measures of the quality of SME record keeping practice, utilising evaluations by advisers (as originally intended in this project) and by the researchers themselves.

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APPENDIX A   DETAILED TABLES: SME SURVEY

Section A BACKGROUND DETAILS

1   From which industry sector is your main business income derived?

	Number	**Percent**
Primary	9	7%
Secondary	29	22%
Services	87	67%
Other	4	3%
Non-Response	0	0%

3   Identify the legal form of your business.

	Number	**Percent**
A sole trader	12	9%
Partnership	18	14%
Private Company	80	62%
Trust	14	11%
Other	3	2%
Non-Response	2	2%

4   How long has your business been in operation?

	Number	**Percent**
Less than 1 year	0	0%
1 to 3 years	9	7%
4 to 5 years	3	2%
6 to 10 years	25	19%
More than 10 years	91	71%
Non-Response	1	1%

5   What is your position in the business?

	Number	**Percent**
Owner	96	74%
Manager	22	17%
Accountant / Payroll Officer	5	4%
Bookkeeper	4	3%
Other	1	1%
Non-Response	1	1%

6   What is your age?

	Number	**Percent**
Under 18	0	0%
18 – 30	0	0%
31 – 45	27	21%
46 – 60	84	65%
60 and above	17	13%
Non-Response	1	1%

7   Approximately how many full-time persons (including yourself) are employed in the business?

	Number	**Percent**
1	6	5%
2 – 5	47	36%
6 – 10	26	20%
11 – 20	30	23%
More than 20	19	15%
Non-Response	1	1%

8   What is the approximate annual turnover of your business (including GST)?

	Number	**Percent**
$0 - $100,000	5	4%
$100,001 - $250,000	10	8%
$250,001 - $500,000	12	9%
$500,001 - $2 million	40	31%
over $2 million	59	46%
Non-Response	3	2%

9   On scale of 1 to 10 (where 1 is poor, 5 is average, and 10 is excellent) how would you rate the overall quality of your business records?

	1 - 3	**4 - 5**	**6 - 7**	**8 - 9**	**10**
Number	4	11	21	68	25
Percent	3%	9%	16%	53%	19%

Section B RECORD KEEPING DETAILS

10   Which best describes your record keeping system?

	Number	**Percent**
Paper based system	7	5%
Hybrid system	30	23%
Computer based system	84	65%
Non-Response	8	6%

11   What do you see as the main reason for record keeping?

	Number	**Percent**
Compliance with tax law	30	23%
General Business Management	75	58%
Keeping track of debtors and creditors	7	5%
Profit and loss information	6	5%
Bank Requirements	0	0%
Other	2	2%
Non-Response	9	7%

12   From the list in question 11, what do you see as the second most important reason for record keeping?

	Number	**Percent**
Compliance with tax law	41	32%
General Business Management	25	19%
Keeping track of debtors and creditors	19	15%
Profit and loss information	30	23%
Bank Requirements	0	0%
Other	2	2%
Non-Response	12	9%

13   Has an accountant or other professional refused you as a client on the basis of your record keeping?

	Number	**Percent**
Yes	1	1%
No	128	99%

14   Who maintains your record keeping system?

	Number	**Percent**
Inhouse	96	74%
CPA/CA or other Accountant	12	9%
Tax Agent	0	0%
Bookeeper	12	9%
Other	1	1%
Non-Response	8	6%

15   In relation to question 14, why have you decided to manage financial records in this manner?

	Number
Size of the business	61
Internal expertise	58
Cost	32
Other	10

16 What are the main elements of your record keeping system and how often are they prepared/updated/reconciled?

	Never / NA		Daily		Weekly		Monthly		Quarterly		Yearly	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Cash Book	14	11	60	47	33	26	18	14	3	2	1	1
Invoices	15	12	52	40	40	31	22	17	0	0	0	0
Bank Statements	14	11	29	22	34	26	47	36	4	3	1	1
Non-specialised Computerised Software	59	46	25	19	16	12	16	12	9	7	4	3

17 Do you prepare, or have prepared, any of the following accounting reports?

	Number	Percent
Cash statement	86	67%
Profit and loss	113	88%
Balance sheet	107	83%
Debtors and creditors	102	79%
None of the above	3	2%

18 Do you use someone external to the business to prepare tax or accounting reports?

	Accounting Reports		Tax Reports	
	Number	Percent	Number	Percent
Inhouse	50	39%	20	16%
CPA/CA or other Accountant	50	39%	86	67%
Tax Agent	2	2%	12	9%
Bookeeper	12	9%	3	2%
Other	2	2%	0	0%

19 Please indicate which of the following are prepared inhouse or externally, and how often they are prepared:

	Inhouse		Externally		Weekly	Monthly	Quarterly	Yearly
	No.	%	No.	%	No.	%	No.	%
Maintaining computerised records	109	96	4	4	87	18	3	0
BAS/GST reporting	110	91	11	9	9	40	66	0
Annual tax returns	21	18	98	82	2	3	7	100
Bank/Creditor reporting requirements	93	90	10	10	28	35	12	24
Annual reports	76	62	47	38	6	35	8	63
Payroll	104	93	8	7	63	37	4	3

20 If you use a specialised accounting package, which one do you use?

	Number	Percent
MYOB	74	63%
Quicken	11	9%
e-records	1	1%
Other	31	26%

Note, the number of people who indicated they use a computerised or hybrid system is 114. Three responses indicated they use two systems. Percentages in this section are out of 114

21 Did an external advisor (eg accountant, tax agent) advise you to use a computerised accounting system?

	Number	Percent
Yes	42	37%
No	72	63%

22 Did an external advisor set up the software package (i.e. chart of accounts)

	Number	Percent
Yes	52	46%
No	62	54%

23 Did you or your staff undertake training on the software package?

	Number	Percent
Yes	82	72%
No	32	28%

24 If yes, what was the approximate duration and cost?

	Mean	Median
Duration (hours)	21	12
Cost ($)	1143	800

25 Do you think a computerised system saves your business money?

	Number	Percent
Yes	107	94%
No	7	6%

26 Do you think a computerised system saves your external advisor (e.g. accountant, tax agent) agent time?

	Number	Percent
Yes	85	75%
No	29	25%

27 Has your external agent cost decreased after implementing a computerised system (where relevant)?

	Number	Percent
Yes	40	35%
No	74	65%

Section C AUDIT

28   Has your business been the subject of an ATO audit?

	Number	Percent
Never / NA	81	63%
In the past year	16	12%
In the past 2 years	8	6%
In the past 3 years	3	2%
In the past 4 years or more	12	9%
I do not wish to answer this question	7	5%
Non-Response	2	2%

29   Please describe the type of audit.

	Number	Percent
Phone Call	6	12%
Desk Audit	9	18%
Field Audit	34	69%
Asset Betterment Assessment	0	0%
Other	0	0%

Note the number of responses (49) is greater because some had multiple types of audit

30   What was the outcome of the audit?

	Number	Percent
Decrease in tax payable	2	5%
No change in tax payable	29	74%
Increase in tax payable	6	15%
Unsure	2	5%
Non-Response	0	0%

31   What was the main cause of the outcome?

	Number	Percent
Unaware of legislation	2	11%
Poor advice from agent	0	0%
Clerical error	3	17%
Insufficient evidence of claim	4	22%
Unsure	0	0%
Other	1	6%

32   What was nature of the audit?

	Number	Percent
GST	23	40%
PAYG / Withholding	7	12%
Income tax (including company tax)	12	21%
Fringe benefits tax	7	12%
Capital gains tax	4	7%
Unsure	5	9%

Section D COMPLIANCE COSTS

33 Estimate the annual costs to the business of dealing with the record keeping and reporting requirements relating to each of the following activities

	Internal			External		
	Mean	**Median**	**Responses**	**Mean**	**Median**	**Responses**
BAS/GST	$9,137	$ 4,000	83	$3,147	$3,000	32
Annual income tax returns	$8,276	$2,500	42	$6,695	$4,000	77
Payroll	$5,646	$3,000	69	$2,234	$885	14
Fringe benefits tax	$3,266	$2,000	39	$1,306	$1,000	27
Other taxes	$3,965	$3,000	21	$2,025	$1,400	12
Other record keeping	$23,823	$10,000	55	$3,076	$2,000	19

Section E LIQUIDITY

34 Have you suffered a "cash crisis" or crises in the past?

	Number	**Percent**
1 year	32	25%
2 years	20	16%
3 years	8	6%
4 years or more	19	15%
Never	57	44%

Note: Totals add to more than 100% because some firms had cash crisis in more than 1 year

35 What do you believe was the main cause of the cash crisis?

	Number	**Percent**
Pressure from creditors	3	4%
Late payment by debtors	27	34%
ATO / Tax obligations	12	15%
Poor record keeping	1	1%
Other	20	25%
Non-Response	16	20%

36 What do you consider the second most important cause of the cash crisis from the list in question 35?

	Number	**Percent**
Pressure from creditors	10	13%
Late payment by debtors	12	15%
ATO / Tax obligations	17	22%
Poor record keeping	4	5%
Other	10	13%
Non-Response	26	33%

37 Have you been refused finance or credit because of a lack of business records?

	Number	Percent
Yes	1	1%
No	128	99%

ATTITUDINAL QUESTIONS

38 Time dedicated to record keeping exceeds the benefits

Strongly Disagree		Disagree		Neutral / Don't Know		Agree		Strongly Agree	
No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
33	28%	43	36%	8	7%	25	21%	11	9%

39 I am confident in the accuracy of my record keeping system

Strongly Disagree		Disagree		Neutral / Don't Know		Agree		Strongly Agree	
No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
1	1%	1	1%	4	3%	51	42%	65	53%

40 I am confident that I have the necessary system in place to comply with the taxation law

Strongly Disagree		Disagree		Neutral / Don't Know		Agree		Strongly Agree	
No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
1	1%	1	1%	5	4%	53	43%	62	51%

41 The record-keeping requirements of small business are too time-consuming

Strongly Disagree		Disagree		Neutral / Don't Know		Agree		Strongly Agree	
No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
3	2%	24	20%	12	10%	36	30%	47	39%

42 Required record keeping (e.g. BAS) helps me manage my business more effectively

Strongly Disagree		Disagree		Neutral / Don't Know		Agree		Strongly Agree	
No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
11	9%	44	36%	16	13%	38	31%	13	11%

43 There is a strong relationship between poor record keeping and business failure

Strongly Disagree		Disagree		Neutral / Don't Know		Agree		Strongly Agree	
No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
0	0%	2	2%	11	9%	63	52%	46	38%

44   Good record keeping reduces the likelihood of ATO audit

Strongly Disagree		Disagree		Neutral / Don't Know		Agree		Strongly Agree	
No.	%	No.	%	No.	%	No.	%	No.	%
10	8%	14	11%	42	34%	33	27%	23	19%

45   Good record keeping reduces compliance costs of the business

Strongly Disagree		Disagree		Neutral / Don't Know		Agree		Strongly Agree	
No.	%	No.	%	No.	%	No.	%	No.	%
3	2%	19	16%	30	25%	50	41%	19	16%

46   Good record keeping helps to ensure that cash crises are avoided

Strongly Disagree		Disagree		Neutral / Don't Know		Agree		Strongly Agree	
No.	%	No.	%	No.	%	No.	%	No.	%
5	4%	10	8%	5	4%	68	56%	34	28%

47   Poor record keeping has prevented me from obtaining an allowable deduction in the past 3 years

Strongly Disagree		Disagree		Neutral / Don't Know		Agree		Strongly Agree	
No.	%	No.	%	No.	%	No.	%	No.	%
40	35%	40	35%	24	21%	7	6%	4	3%

Section F FURTHER COMMENTS
48

Please provide an estimate of the time taken to complete this form: Average 16 min

Identified: 50% of respondents identified themselves

Appendix B   Detailed Tables: CPA Survey

Section A PRACTICE BACKGROUND
1   Are you?

	Number	Percent
A self-employed sole practitioner	89	68%
A partner	35	27%
An employee	4	3%
Other	1	1%
Non-Response	1	1%

2   If you are a partner, or an employee of a partnership, please indicate the number of partners in the practice.

	Number	Percent
2 - 4 partners	33	80%
5 - 7 partners	8	20%

3   In broad terms, what is the annual turnover of the practice (including GST)?

	Number	Percent
$0 - $100,000	35	27%
$100,001 - $250,000	34	26%
$250,001 - $1,000,000	45	35%
$1,000,001 - $2,500,000	12	9%
$2,500,001 - $5,000,000	1	1%
over $5 million	0	0%
Non-Response	3	2%

4   What is the approximate number of clients of the practice?

	Number	Percent
0 – 50	12	9%
51 -100	9	7%
101 – 250	20	15%
251 - 1,000	60	46%
more than 1,000	28	22%
Non-Response	1	1%

5   From which industry sector do your clients come?

	0	1 - 25 %	26 - 50 %	51 - 75 %	76 - 100 %	Non-Response
Primary	54	47	16	3	4	6
Secondary	14	65	41	4	3	6
Services	1	22	39	27	38	3
Other	30	22	13	5	4	54

6   What proportion of the practice's client base is comprised of small business clients (defined as clients with fewer than 20 employees or less than $10 million in turnover)?

Mean	77%
Median	99%

7   In broad terms, what proportion of your client base would fall into each of the following categories (including GST)?

	0	1 - 25 %	26 - 50 %	51 - 75 %	76 - 100 %
$0 - $100,000 pa	13	45	36	14	22
$100,001 - $250,000 pa	12	66	39	11	2
$250,001 - $500,000 pa	26	71	28	5	0
$500,001 - $2 million pa	38	77	9	1	5
over $2 million pa	76	52	2	0	0

8   How many potential clients have you refused because of poor record keeping?

	Number	**Percent**
None	51	39%
1 - 5 per year	68	52%
6 - 10 per year	7	5%
11 - 25 per year	1	1%
more than 25 per year	2	2%
Non-Response	1	1%

Section B ATTITUDES TO RECORD KEEPING

9   What characteristic do you consider the most important attribute of a good small business client record keeping system?

	Number	**Percent**
Accuracy	72	55%
Timeliness	9	7%
Simplicity	30	23%
Comprehensiveness	13	10%
Other	1	1%
Non-Response	5	4%

10   From the list in question 9, what do you see as the second most important attribute of a good small business client record keeping system?

	Number	**Percent**
Accuracy	29	22%
Timeliness	23	18%
Simplicity	33	25%
Comprehensiveness	31	24%
Other	0	0%
Non-Response	14	11%

11   What do you see as the main reason for small business client record keeping?

	Number	**Percent**
Compliance with tax law	78	60%
General Business Management	43	33%
Keeping track of debtors and creditors	1	1%
Profit and loss information	2	2%
Bank Requirements	0	0%
Other	1	1%
Non-Response	5	4%

12   Do you advise your small business clients on appropriate record keeping system?

	Number	**Percent**
Yes	124	95%
No	6	5%

13   Do you set up those systems?

	Number	Percent
Yes	104	80%
No	21	16%
Not Applicable	0	0%
Non-Response	5	4%

14   The following list contains some common assumptions about the benefits which result from good small business client record keeping. Please rate them on a scale of 1 – 5, where 1 indicates no relationship, and 5 indicates a strong relationship.

	No Relationship				Strong Relationship						Non-Response	
	1		**2**		**3**		**4**		**5**			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Improved cash flow management	1	1	12	9	31	24	52	40	27	21	7	5
Greater stock/inventory management	7	5	27	21	32	25	43	33	15	12	6	5
Lower compliance costs	7	5	8	6	19	15	56	43	33	25	7	5
Better access to credit	2	2	9	7	32	25	62	48	19	15	6	5
Reduced exposure to audit by ATO	7	5	13	10	21	16	51	39	32	25	6	5

15   What factors would encourage you to advise a small business client to set up a computerised record keeping system?

	Number	Percent
Turnover	50	17%
Staff levels	42	15%
Numerous transactions	97	34%
Perceived competency of client	88	31%
Other	10	3%

16   What computerised record keeping system do you insist upon or suggest for small business clients?

	Number	Percent
None	14	9%
MYOB	78	53%
QUICKEN	20	14%
e-records	7	5%
Other	29	20%

17   Do you train small business clients in the use of computerised programs?

	Number	Percent
Yes	75	58%
No	55	42%

18 The following are some of the financial benefits that computerised systems are suggested to achieve. Can you indicate, in your experience, what percentage of small business clients achieve the listed benefit.

	0% of clients		< 25% of clients		26% - 50% of clients		51% - 75% of clients		76% - 100% of clients		Non-Response	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Saves client time	12	9	29	22	31	24	36	28	14	11	7	5
Improves client accuracy	5	4	17	13	24	18	58	45	20	15	6	5
Reduces client bills	7	5	34	26	33	25	41	32	9	7	6	5
Saves you time	5	4	19	15	32	25	48	37	20	15	6	5

Section C ACCOUNTING RECORDS

19 Which accounting reports (which you may or may not prepare) do you consider essential to successful management of a small business?

	Number
Cash statement	77
Profit and loss	117
Balance sheet	84
Debtors and creditors	94

20 Please estimate the percentage of clients who prepare (or you prepare on their behalf) the above reports.

	0% of clients		< 25% of clients		26% - 50% of clients		51% - 75% of clients		76% - 100% of clients		Non-Response	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Cash statement	18	14	59	45	14	11	15	12	8	6	16	12
Profit and loss	2	2	16	12	14	11	24	18	72	55	2	2
Balance sheet	2	2	19	15	20	15	28	22	55	42	5	4
Debtors and creditors	13	10	37	28	22	17	27	21	21	16	10	8

21 Do you consider any of the following reports which are required by third parties (e.g. government / creditors) improve the management of a small business?

	Number
BAS/GST	79
Annual tax return	74
Bank / Creditor reporting requirements	35
Payroll	29
Other	3

Section D AUDIT

22 What factors do you think increase the risk of a small business being exposed to a tax audit?

	Number
Being in a "cash economy" industry	116
More than average deductions	103
Being in the simplified tax system	4
Fluctuating revenues/deductions	66
Refunds	40
Seeking an amended assessment	16
Other	7

23 On a scale of 1 -10, with 1 being no relationship and 10 being a strong relationship, please indicate the strength of the relationship between poor small business record keeping and the probability of audit by the tax office.

	Number	Percent
1 – 3	28	22%
4 – 6	37	28%
7 – 8	36	28%
9 – 10	14	11%
Non-Response	15	12%

24 When considering those small business clients who have been audited by the ATO, please rank (in order of importance) the following reasons that resulted in an amended assessment, from 1 to 6 (with 1 being most important).

	Mean
Unaware of legislation	3.23
Poor advice from agent	4.38
Tax evasion/fraud	3.65
Clerical error	2.23
Insufficient evidence of claim	2

Section E COMPLIANCE COSTS

25 Please indicate the average cost that you charge a small business client for preparation of the following reports.

	Average Cost		
	Mean	**Median**	**Responses**
BAS/GST	$ 455	$ 250	112
Annual income tax returns	$ 907	$ 785	116
Payroll	$ 338	$ 200	42
Fringe benefits tax	$ 398	$ 300	54
Other taxes	$ 332	$ 150	19
Other record keeping	$ 579	$ 500	44

Section F LIQUIDITY

26 When considering those small business clients who have had a "cash crisis" in the past two years, please rank (in order of importance) the following reasons that resulted in a cash crisis, from 1 to 6 (with 1 being most important).

	Mean
Pressure from creditors	3.67
Late payment by debtors	2.45
ATO/Tax obligations	2.72
Poor record keeping	3.26
General business downturn	3.00

27 Please estimate the percentage of small business clients that you are aware of who have been refused credit because of a lack of records.

Mean	6%
Median	2%

ATTITUDINAL QUESTIONS

28 Time dedicated to record keeping by small business clients exceeds the benefits

Strongly Disagree		Disagree		Neutral / Don't Know		Agree		Strongly Agree	
No.	%	No.	%	No.	%	No.	%	No.	%
18	14%	42	33%	11	9%	37	29%	21	16%

29 I am confident in the accuracy of the majority of my small business clients' record keeping systems

Strongly Disagree		Disagree		Neutral / Don't Know		Agree		Strongly Agree	
No.	%	No.	%	No.	%	No.	%	No.	%
3	2%	18	14%	21	16%	78	60%	9	7%

30 I am confident that my small business clients have the necessary system in place to comply with the taxation law

Strongly Disagree		Disagree		Neutral / Don't Know		Agree		Strongly Agree	
No.	%	No.	%	No.	%	No.	%	No.	%
1	1%	11	9%	15	12%	89	69%	13	10%

31 The record-keeping requirements of small business are too time-consuming

Strongly Disagree		Disagree		Neutral / Don't Know		Agree		Strongly Agree	
No.	%	No.	%	No.	%	No.	%	No.	%
4	3%	21	16%	13	10%	56	43%	35	27%

32 Required record keeping (e.g. BAS) helps small business manage the business more effectively

Strongly Disagree		Disagree		Neutral / Don't Know		Agree		Strongly Agree	
No.	%	No.	%	No.	%	No.	%	No.	%
5	4%	16	12%	16	12%	69	53%	23	18%

33 There is a strong relationship between poor record keeping and small business failure

Strongly Disagree		Disagree		Neutral / Don't Know		Agree		Strongly Agree	
No.	%	No.	%	No.	%	No.	%	No.	%
3	2%	15	12%	17	13%	53	41%	41	32%

34 Good record keeping reduces the likelihood of ATO audit for small business clients

Strongly Disagree		Disagree		Neutral / Don't Know		Agree		Strongly Agree	
No.	%	No.	%	No.	%	No.	%	No.	%
4	3%	25	19%	35	27%	49	38%	16	12%

35 Good record keeping reduces compliance costs for small business clients

Strongly Disagree		Disagree		Neutral / Don't Know		Agree		Strongly Agree	
No.	%	No.	%	No.	%	No.	%	No.	%
2	2%	8	6%	12	9%	79	62%	27	21%

36 Good record keeping helps to ensure that cash crises are avoided by small business clients

Strongly Disagree		Disagree		Neutral / Don't Know		Agree		Strongly Agree	
No.	%	No.	%	No.	%	No.	%	No.	%
3	2%	15	12%	20	16%	70	56%	18	14%

Section F FURTHER COMMENTS

37 Please add any other comments you may have about the relationship between record keeping and the probability of audit, compliance costs, and cash flow for small business clients that you do not think were covered by the survey

Please provide an estimate of the time taken to complete this form: Average 23 minutes

Identified: 48% of respondents identified themselves

Book Review

Global Challenges in Tax Administration. **edited by Rodney Fisher and Michael Walpole (Fiscal Publications*, UK, 2005).**

Reviewed by Dale Pinto[+]

'*Time has ceased, space has vanished. We now live in a simultaneous happening.*'[1]

Every era is characterised by 'vogue' words that suddenly become ubiquitous. Since the 1990s, this word has undoubtedly been 'globalisation' and this book has as its central theme, 'Challenges of Globalising Tax Systems'. The chapters in this book are drawn from papers that were presented at the Sixth International Conference of Tax Administration in April 2004, which was hosted by the Australian Taxation Studies Program (Atax) at the University of New South Wales.

The book is organised into Parts comprising sub-themes which represent areas of challenge within the overall tax administration system. The diversity of audiences is reflected in the great breadth and variety of topics that are covered, which is certainly one of the strengths of the book. Despite this variety, the papers forming part of this book are common in that they deal with extremely relevant, topical and 'cutting edge' legal and taxation issues which globalisation has created. The subject matter covered by the papers is well-written, and tests the boundaries of legal thought, and this is another strength of the book.

Part One of the book focuses on the challenges of administering tax systems and as such offers a 'view from the top'. Interesting perspectives are presented by the Commissioner of Taxation in Australia, as well as the Inspector General of Taxation. Also, an important community aspect is included with a paper on the role of the Ombudsman from Philip Moss, Special Tax Advisor to the Ombudsman.

Part Two examines the challenges and opportunities that are presented by globalisation. As Justice Michael Kirby AC said in the introduction to his book *Through the World's Eye*, 'Once we saw issues and problems through the prism of a village or nation-state … Now we see the challenges of our time through the world's eye …'[2] There are some very interesting and thought-provoking papers in this part of

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[*] Website: http://www.accountingeducation.com/subsites/fiscalpublications/index.html.

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[1] This quote, by Marshall McLuhan, is descriptive of the 'global village' coined by him in 1960 in recognition of the fact that new technologies and communications have effectively 'shrunk' world societies to the level of a single village: see generally the definition of 'global' in Robert Burchfield, *The New Fowler's Modern English Usage* (3rd ed, 1998) 333.

[2] Michael Kirby, *Through the World's Eye* (2000).

the book which explore this issue in a taxation context and indeed many of the papers in the book generally undertake globalisation as their underlying theme.

Part Three of the book proceeds to examine legal and legislative challenges that globalisation creates for taxation systems. In this part very interesting papers are included on areas including the role for judicial review of tax decisions; judicial control of tax negotiation; the changing nature of work and whether the Australian Taxation Office (ATO) has kept pace and the effect of the *Human Rights Act 1998* (UK) on taxation policy and administration.

Part Four examines tax system design challenges and conceptual constructs are presented in this part on areas ranging from a tax model for the future to the more specific proposal of reduced annual filing for personal income taxpayers in Australia. Some innovative, novel and challenging ideas are contained in these papers and I would commend them all to readers. In terms of models for tax administration in an increasingly globalised world, consideration may need to be given – sooner rather than later – to broaden the extent of international co-operation in tax matters so that it truly becomes multilateral. This might be achieved through the establishment of some form of international World Tax Organisation (WTO) – an idea canvassed and developed by some of the papers in this book. In the words of Woellner and Burns:

> Perhaps a significant impact on the activities of multi-national companies will only be made when the multi-national managing director is called upon to face the multi-national Commissioner acting under a multilateral treaty.[3]

Part Five turns to compliance challenges. Administration of tax systems only represents one side of the story; the other side being compliance and the *means* by which compliance may be ensured. A varied collection of papers provides some fascinating insights and observations as to the costs of compliance, its perceptions and how compliance might be best addressed in an increasingly integrated world. It would seem that some degree of harmonisation or uniformity of taxation laws and international co-operation is essential to effectively achieve compliance. Indeed, one of the central roles of a WTO for tax might be to try to achieve greater international co-operation in the administration of taxes.

In conclusion, this book represents a seminal work in the area of challenges that taxation administration systems face in the light of globalisation. The papers that form part of this book represent a most interesting collection of insights and views within the broad ambit of the theme of the book. There is not a paper in the book that can be read without interest and some degree of enlightenment, if not occasional surprise. We can be disturbed but never bored; or as someone once said, 'alert but not alarmed'. I shall end this review by saying that the papers forming part of this work raise many relevant and interesting issues and the book as a whole represents an important contribution to the literature in this developing area of taxation law.

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[3] Robin Woellner and Lee Burns, 'International Information Flows – The Tax Implications' (1989) 6 *Australian Tax Forum* 143, 200.