Fiscal Misperceptions Associated with Tax Expenditure Spending: The Case of Pronatalist Tax Incentives in Singapore

Poh Eng Hin[*]

Abstract

connection between the benefits of public sector output and the tax costs of such output[3]. Econometric analyses of archival data[4] as well as experimental research techniques[5] have also been used to investigate the extent, sources and consequences of fiscal illusion. Fiscal illusion (which potentially results from the lack of fiscal consciousness) is described in the literature (e.g. Oates, 1988) as voters' systematic misperception of important fiscal parameters, leading possibly to their inability to make informed decisions and hence the distortion of their fiscal choices. Various structural or institutional elements of the fiscal system have long since been identified as potentially contributing to fiscal illusion (see e.g. Puviani, 1903 and Buchanan,

this regard, some specific issues that are rarely addressed empirically include the following:

1. To what extent is there public cognisance of the hidden (opportunity) cost

programs. These deficiencies therefore may be overcome by appropriate design of the tax expenditure provisions, and by subjecting tax expenditure proposals and legislation to formal budgetary control and periodic review. In short, there appears to be no reason why tax expenditures cannot be designed to replicate the effects of direct subsidies on resource allocation and income distribution. However, tax expenditures do differ from direct expenditures in that different government agencies or departments are vested with jurisdiction over the spending programs – a tax expenditure program inevitably requires the involvement of the tax administration whereas a direct expenditure program is administered by a separate spending agency. Weisbach and Nussim frame the question of whether a spending program should be implemented through the tax system or via a direct expenditure program as one of institutional design, wherein the concern should be with how best to implement.iho

generalisability given the specific nature, objectives and structure of the particular tax expenditure program studied and in view of jurisdictional-specific variables that may have a bearing on the general level of fiscal consciousness. This paper presents one such specific inquiry in investigating the extent and determinants of fiscal misperceptions arising from the use of tax expenditures in the context of pronatalist policy in Singapore.

PRONATALIST TAX POLICY IN SINGAPORE

Fertility rates in Singapore declined dramatically between the 1960s and the mid 1970s as a result of social and cultural transformation brought about by economic development, the availability of labour market participation opportunities for women, and a comprehensive antinatalist policy on the part of the Government. However, persistent below-replacement fertility rates in the 1980s led to fears that a shrinking and ageing population would adversely affect the sustainability of economic growth and the adequacy of existing health-care and social support systems. Furthermore, a trend emerged whereby many highly educated women were either remaining single or marrying later and having significantly fewer children than their less-educated counterparts. This raised concerns that the higher-educated and more talented strata of the population were not adequately replacing themselves.[15] These concerns led eventually to a reversal in the national fertility policy in the 1980s from one of antinatalism to one of selective pronatalism, with various specific financial and non-financial incentives announced in 1984 and 1987.[16]

The 1984 changes consisted of eugenic measures aimed at improving the quality of the population. These measures were an attempt at correcting the observed lopsided fertility pattern mentioned abous15(ad4.5(c0.121-3.4(nc 1hf951t6.2(ag(-6.5(e .6111 Tc-0.ou6.5(o)-141d45ci

concerns, had resulted in a vehement public debate, widespread resentment, and even protest votes cast against the governing political party at the 1984 General Elections.

STR took the form of non-refundable tax credits that could be set off against the gross income tax liabilities of the eligible parent/s over a stipulated number of years. These tax credits were first introduced in 1987 in respect of the third child of the family born in/after that year. The incentive was subsequently extended to the fourth child of the family born in/after 1988, and to the second child born in/after 1990. The rebate for the second child comprised a one-time non-refundable tax credit, which could be shared between the child's parents for set-off against their respective gross tax liabilities. The amount of the tax credit ranged from S$0 to S$20,000, depending on the mother's age at the time of delivery of the child. The rebates for the third child and for the fourth child consisted of two components. Each component also took the form of a one-time non-refundable tax credit. The first component was a lump sum S$20,000 tax credit, which could be shared between the child's parents. The second component amounted to 15% of the mother's earned income in the year of birth of the child, and this tax credit could be set off only against the mother's gross tax liabilities.

In most cases, the parent's/parents' gross tax liability/liabilities for the first year after the birth of the child would be insufficient to fully utilise the STR tax credit. In this regard, any balance of the tax credit remaining unutilised could be carried forward for set-off against the future tax liabilities of the

Significant reforms to the personal income tax system in the 1990s and early 2000s contributed to a further skew of the pronatalist tax subsidies in favour of the rich. In particular, the major structural tax reform of 1994, which saw the introduction of the Goods and Services Tax in place of significant cuts in income tax, resulted in some 70% of resident individuals dropping out of the scope of income taxation (IRAS, 1995). This meant that all low-income and some middle-income couples effectively were excluded from enjoying any of the pronatalist tax subsidies from the mid 1990s. Although the significant income tax cuts in the 1990s and 2000s also reduced the tax subsidies enjoyed by high-income and upper middle-income couples, the effect was relatively minimal for high-income couples while the effect for upper middle-income couples was mitigated by an amendment in 1994 that extended the maximum set-off period for the non-refundable tax credits from seven years to nine years.[22]

In summary, the use of tax expenditures to deliver fertility incentives appears to be an administratively and politically expedient way for the Singapore Government to implicitly pursue its policy of selective pronatalism. Other factors that facilitate this strategy include the political dominance and perceived credibility of the governing political party, the culture of top-down policy decision-making, and the absence of any form of tax expenditure reporting that might have highlighted the costs of the

The survey was conducted in December 2001 through visits made to various randomly selected households living in public flats and private residential properties across the city-state. Respondents were asked to complete a five-page questionnaire available in either English or Mandarin. The survey administrators were on hand to render any clarifications/assistance required by the respondents.

Sample Profile

The socio-economic profile of the sample of 350 respondents who participated in the survey is presented in Table 1, together with the profile of the relevant population of

eJournal of Tax Research

intended by the researcher given the specialised and technical nature of the subject matter of the survey. Intuitively, those with low education (and incomes) are less likely to gain from the tax incentives, less aware of their existence and less knowledgeable of their effects. It therefore made sense to sample proportionately more of higher-educated (and higher-income) respondents since it is this group to whom the incentives are targeted and who will enjoy the largest proportion of the benefits. For this same reason, those in the lowest income group (annual incomes not exceeding S$24,000) are under-represented – in fact, since the major tax reform of 1994 (discussed earlier in Section 3), these individuals generally are not liable to pay any income tax and will almost certainly not benefit at all from the tax incentives. Finally, there is also a slight over-representation of married individuals who are younger, who have no children, and who are in white-collar occupations.

Survey Questions

The survey questionnaire incorporated a number of questions that sought to ascertain respondents' awareness, knowledge and perceptions of the STR and ECR tax incentives. Five of the questions elicit respondents' perceptions on various aspects pertaining to the cost and distributive effects of the incentives and these responses are of particular relevance to this paper. The five questions are reproduced below and are numbered Q1, Q2, Q3, Q4A and Q4B for ease of reference:

Q1: "Tax incentives, such as STR and ECR, reduce the taxes paid by those benefiting from the incentives. Unlike a direct cash subsidy, the Government does not directly pay out any money to those benefiting from the tax incentives. Which statement below do you agree with?

- Tax incentives, such as STR and ECR, are provided at a cost to taxpayers at large since the Government is spending (i.e. allocating and re-distributing) resources.

- Tax incentives, such as STR and ECR, are provided without any cost to taxpayers at large since the Government is not spending (i.e. not allocating or re-distributing) any resources.

- I don't know."

Q2: "Malay couples form about 15% of all married couples of child-bearing age. Which statement below do you agree with?

- Malay couples enjoy more than 15% of the total tax savings under the STR and ECR tax incentives because a Malay couple, on the average, has more children than a non-Malay couple.

- Malay couples enjoy less than 15% of the total tax savings under the STR and ECR tax incentives even though a Malay couple, on the average, has more children than a non-Malay couple.

- I don't know."

Q3: "Which statement below do you agree with?

- Generally, a higher-educated married individual enjoys more tax savings from the STR and ECR tax incentives than does a lower-educated individual with the same number of children and in the same circumstances.

- Generally, a higher-educated married individual enjoys less tax savings from the STR and ECR tax incentives than does a lower-educated individual with the same number of children and in the same circumstances.

- I don't know."

Q4: "Assume that there are two married individuals, H and L. Both are allowed STR and/or ECR for the same number of children and are in exactly the same circumstances, except that H's annual income (say, $60,000) is two times L's annual income (say, $30,000).

[A] Which statement below do you agree with?

- H's tax savings from STR and/or ECR will be more than L's tax savings.

- H's tax savings from STR and/or ECR will be less than L's tax savings.

- I don't know.

[B] Which statement below do you also agree with?

- H's tax savings from STR and/or ECR will be more than two times L's tax savings.

- H's tax savings from STR and/or ECR will be less than two times L's tax savings.

- I don't know."

Responses to Q1 will reveal if there is misperception on the part of respondents in thinking that a tax expenditure is costless and, in that sense, not equivalent to a direct expenditure. Responses to Q2, Q3 and Q4 will reveal if respondents are able to perceive the distribution of the pronatalist tax subsidies as effectively biased against Malay couples but favouring higher-educated and higher-income couples. Q4A presents the distribution of the tax subsidies in absolute dollar terms whereas Q4B frames the distribution of the subsidies in terms of whether it is income-regressive or income-progressive.

Limitations

A couple of limitations to this study ought to be noted. These stem from the fact that the original objective of the survey was not to investigate fiscal misperceptions but rather to gain an insight into the extent to which the pronatalist tax incentives are taken into account in married couples' decisions to have children. The first limitation relates to the survey sample, which excludes, amongst others, all single persons even though findings relating to their awareness and perceptions of the tax expenditures are

In examining the correlation between respondents' ability to perceive the cost/ distributive effects and their socio-economic characteristics, both bivariate and multivariate approaches are adopted. From a bivariate perspective, two measures of association, Cramer's V and Somer's d, are reported. Cramer's V is a symmetric measure of the strength of the association between two nominal variables. On the other hand, Somer's d provides a directional measure of the strength of the association between two ordinal variables, with respondents' ability to perceive as the dependent variable in the analysis. From a multivariate perspective, a logistic regression is run to regress the log odds of respondents' ability to perceive against various predictor variables that take into account respondents' socio-economic characteristics. The regression equations are arrived at using the backward stepwise method based on the Likelihood Ratio Test and significance levels of 5% and 10% respectively for entry and removal of variables.

Eight socio-economic variables are used as independent variables in the exploratory research:[23]

- GEN: Gender (female v male).
- AGE: Age (<30 v 30-39 v

- o Middle-income beneficiaries, i.e. respondents with annual incomes from S$24,001 to S$60,000 who have qualifying children; and

- o High-income beneficiaries, i.e. respondents with annual incomes exceeding S$60,000 who have qualifying children. In view of the features of the STR incentive described in Section 3, high-income beneficiaries enjoy disproportionately more tax savings than middle-income beneficiaries with the same number of children. In particular, and unlike for middle-income beneficiaries, high-income beneficiaries are able to fully utilise their statutory STR tax credits over the nine-year set-off period).

FINDINGS

Awareness of the existence of the pronatalist tax expenditures

Out of the 350 respondents surveyed, 275 (78.6%) claimed to be aware of the STR incentive and 264 (75.4%) of the ECR incentive. 318 (90.9%) knew of at least one of the two incentives, with the remaining 32 (9.1%) having not heard of either incentive.

because they could not logically be expected to provide any useful responses of their perceptions of the distributive effects of the tax expenditures.

General

Table 3 reports the numbers and percentages of respondents who are, and who are not, able to perceive the five different aspects relating to the cost and distributive outcomes

distribution of the subsidies is income-progressive or income-regressive, only 18% of the respondents knew that it is income-regressive. A higher percentage of the respondents (38%) were able to perceive the elitist slant of the tax expenditures favouring higher-educated couples. There are two plausible reasons for this relatively higher level of consciousness. Firstly, educational qualification was an explicit qualifying condition for the ECR incentive and the prescribed minimum qualification was clearly stated in Inland Revenue literature referred to by taxpayers when completing their annual income tax returns. Secondly, the very intense and, to some extent, acrimonious public debate that followed the announcement of the controversial pronatalist measures in 1984 had very much focussed public attention on the fertility imbalance between the higher and lower educated, and had highlighted the eugenic bias of the incentives. The distributional aspect least perceived is the implicit bias of the tax expenditures against Malay couples. Only 17% of respondents were perceptive of this ethnic bias, and more than double this number (i.e. 36%) were in fact deluded into thinking that Malay couples enjoy benefits commensurate with the number of children they have. The relatively low perceptibility rate is unsurprising given that the ability to perceive this aspect required respondents not only to be aware that the incentives do not favour the lower educated and the lower income, but also to be cognisant of the fact that the lower educated and lower income are disproportionately Malay.

It may also be observed that issues relating to the distribution of the pronatalist tax subsidies by income had the highest percentages of 'don't know' responses. 63% of respondents stated that they did not know whether the benefits of the tax expenditures are distributed in an income-progressive or income-regressive manner while, somewhat surprisingly, as many as 55% of respondents stated that they did not know whether higher-income couples enjoy more or less dollar savings than lower-income couples in the same circumstances.

In the remaining analyses that follow, responses relating to each aspect will be classified into two categories – 'perceptive' and 'not perceptive', with the latter category incorporating the 'deluded' and 'don't know' responses.

Perceptibility of the spending implications and hidden cost
Table 4 reports the bivariate association between respondents' ability to perceive the spending implications and hidden cost of the pronatalist tax expenditures and each of the socio-economic variables.

TABLE 5: ABILITY TO PERCEIVE THE SPENDING IMPLICATIONS AND HIDDEN COST OF THE PRONATALIST TAX EXPENDITURES AMONGST HIGH-INCOME RESPONDENTS (

TABLE 6: LOGISTIC REGRESSION – ABILITY TO PERCEIVE THE SPENDING IMPLICATIONS AND HIDDEN COST OF THE PRONATALIST TAX EXPENDITURES

N = 288   Nagelkerke R^2 = .218

Likelihood Ratio Test for Overall Model:

-2LL for final model = 141.395   Chi-square = 46.605   df = 5   p-value = <.0005

Hosmer and Lemeshow Test for Goodness-of-Fit:

Chi-square = 9.369   df = 6   p-value = .154

Variables in the Equation:

	Parameter estimate	Std error	Wald	df	p-value	Odds ratio
EDU [1]	1.016	.381	7.120	1	.008	2.762
TRAIN [2]	.892	.351	6.454	1	.011	2.440
OCC_PRO [3]	.711	.301	5.563	1	.018	2.036
Income			9.514	2	.009	
- LOW_INC [4]	-1.536	.573	7.175	1	.007	.215
- MID_INC [5]	-.788	.322	6.001	1	.014	.455
INTERCEPT	-1.539	.434	12.576	1	<.0005	.215

Likelihood Ratio Tests for Individual Variables:

	-2LL of reduced model	Chi-square	df	p-value
INTERCEPT	141.395	.000	0	
EDU	149.239	7.844	1	.005
TRAIN	147.736	6.341	1	.012
OCC_PRO	146.907	5.512	1	.019
Income (LOW_INC and MID_INC)	151.345	9.950	2	.007

[1] EDU (0 = Non-tertiary-educated, 1= Tertiary-educated)
[2] TRAIN (0 = Not tax trained, 1 = Tax trained)
[3] OCC_PRO (0 = Other occupation, 1 = Professional/managerial occupation)

Perceptibility of the ethnic bias

All bivariate associations between respondents' ability to perceive the bias of the tax expenditures against Malay couples and the various socio-economic variables (except for beneficiary status) are weak and statistically insignificant. One conclusion therefore is that Malays are not significantly more, or less, likely than non-Malays to perceive that the incentives are effectively biased against them.[25]

The data (Table 7), however, provides some statistical support for the contention that beneficiaries are more perceptive than non-beneficiaries of the hidden ethnic bias of the tax incentives (although this association is a relatively weak one).

TABLE

TABLE 8: ABILITY TO PERCEIVE THE EUGENIC BIAS OF THE PRONATALIST TAX EXPENDITURES BY VARIOUS SOCIO-ECONOMIC VARIABLES

		Cramer's V [1]		Somer's d [2]	
Ability to perceive (No v Yes)	N	Value	p-value	Value	p-value
by the following socio-economic variables:					
Gender (Female v Male)	318	.033	.554	-.033	.555
Age (<30 v 30-39 v 40) [3]	310	.187	.004	.136	.007
Ethnicity (Non-Malay v Malay)	318	.037	.508	.058	.517
Education (Non-Tertiary v Tertiary)	318	.008	.884	-.008	.885
Tax training (Not trained v Trained)	318	.218	<.0005	.282	<.0005
Income ($24K v >$24K-$60K v >$60K)	312	.077	.400	-.057	.241
Beneficiary status (Non-ben v MI ben v HI ben)	313	.069	.475	.007	.903
Occupation (Other v Professional)	299	.054	.350	.057	.354
Occupation (Other v Finance-related)	299	.158	.006	.207	.010
Completion of married woman's tax return (No v Yes)	316	.151	.007	.148	.006

TABLE 9: L

publicity given to the heated exchanges in the 1980s appear, more than fifteen years on, to have left an imprint on older respondents of the present survey. Respondents old enough to recall the controversies and acrimony of the mid 1980s are found to be more likely to perceive the eugenic bias of the incentives. Younger respondents to the survey would have been too young back then to appreciate or rem 2 689.ut-4.9(a)(y)-18(to)5tT-

TABLE 11: LOGISTIC REGRESSION – ABILITY TO PERCEIVE THAT HIGHER-

Tables 12 and 13 report respectively the bivariate associations and the logistic regression relating to respondents' ability to perceive that higher-income couples enjoy more tax subsidies as a percentage of income than do lower-income couples in the same circumstances.

TABLE 12: ABILITY TO PERCEIVE WHETHER HIGHER-INCOME COUPLES ENJOY MORE TAX SUBSIDIES AS A PERCENTAGE OF INCOME (I.E. THE INCOME-REGRESSIVE BENEFIT DISTRIBUTION) BY VARIOUS SOCIO-ECONOMIC VARIABLES

		Cramer's V [1]		Somer's d [2]	
Ability to perceive (No v Yes) **by the following socio-economic variables:**	N	Value	p-value	Value	p-value
Gender (Female v Male)	317	.003	.962	-.002	.962
Age (<30 v 30-39 v 40)	309	.034	.833	.003	.947
Ethnicity (Non-Malay v Malay)	317	.022	.701	.026	.713
Education (Non-Tertiary v Tertiary)	317	.020	.727	.016	.724
Tax training (Not trained v Trained)	317	.103	.067	.105	.109
Income ($24K v >$24K-$60K v >$60K) [3]	311	.193	.003	-.052	.249
Beneficiary status (Other v HI ben) [4]	313	.127	[5] .034	.172	.077
Occupation (Other v Professional)	298	.028	.627	-.024	.619
Occupation (Other v Finance-related)	298	.050	.390	.052	.422

[1] Symmetric measure of nominal-by-nominal association.
[2] Directional measure of ordinal-by-ordinal association, with ability to perceive as the dependent variable.
[3] Respondents with incomes up to $24,000 are more perceptive than those in higher income groups. The 2x2 classification ($24K v Other) yields the following statistics: N = 311; V = .176 (p = .002); d = -.180 (p = .011).
[4] There is no statistically significant difference in ability to perceive between non-beneficiaries and middle-income beneficiaries. These two groups are collapsed into one labelled 'Other' in order to obtain a 2x2 classification to which Fisher's Exact Test is applied.
[5] Using Fisher's Exact Test (rather than Chi-square Test) due to one cell having an expected frequency of less than 5.

TABLE 13: LOGISTIC REGRESSION – ABILITY TO PERCEIVE THE INCOME-REGRESSIVE BENEFIT DISTRIBUTION

N = 309		Nagelkerke R^2 = .083				

Likelihood Ratio Test for Overall Model:
-2LL for final model = 23.494   Chi-square = 15.880   df = 2   p-value = <.0005

Hosmer and Lemeshow Test for Goodness-of-Fit:
Chi-square = .015   df = 1   p-value = .902

Variables in the Equation:

	Parameter estimate	Std error	Wald	df	p-value	Odds ratio
LOW_INC [1]	1.254	.358	12.278	1	<.0005	3.504
HI_BEN [2]	1.283	.455	7.938	1	.005	3.607
INTERCEPT	-1.976	.202	96.025	1	<.0005	.139

Likelihood Ratio Tests for Individual Variables:

	-2LL of reduced model	Chi-square	df	p-value
INTERCEPT	23.494	.000	0	
LOW_INC	34.971	11.477	1	.001
HI_BEN	30.571	7.076	1	.008

[1] LOW_INC (0 = Other income levels, 1 = Income not exceeding S$24,000)
[2] HI_BEN (0 = Other respondent, 1 = Beneficiary with income exceeding S$60,000)

The main findings from Tables 10 to 13 may be summarised as follows. Firstly, TRAIN and OCC_FIN are important determinants of whether a respondent can perceive the absolute dollar distribution of the tax subsidies (Tables 10 and 11). However, neither variable is statistically significant as a determinant of the ability to perceive the income-disproportionate distribution of the tax subsidies (Tables 12 and 13). It does appear that many people do not think in income-proportionate terms when evaluating the distribution of tax subsidies, and that this is the case even for those trained in personal income taxation and/or whose work involve dealing with finance-related matters (including taxation). Secondly, there is some evidence (at the 10% significance level) that Malays are more perceptive (than non-Malays) of the absolute dollar distribution of the tax subsidies, but they are not any more perceptive of the income-disproportionate distribution of those subsidies.

Thirdly, there is no statistically significant difference between lower-income

T

incentives. These findings highlight the potential of tax expenditures as a politically useful covert spending instrument to target and deliver benefits to a select few while ensuring that the underlying distributive ef

COP(2001c), *Singapore Census of Population 2000 – Statistical Release 5: Households and Housing* (Singapore: Department of Statistics)

Collier P and R Luther (2003), The Use of Tax Regulations as Covert Political Policy Variables: A Case Study of Tax Expenditures during the Thatcher Years, *Financial*

OECD (1996), *Tax Expenditures: Recent Experiences* (Paris: Organisation for Economic Co-operation and Development)

Oates W E (1988), On the Nature and Measurement of Fiscal Illusion: A Survey, in G Brennan, B S Grewal and P Groenewegen (eds.), *Taxation and Fiscal Federalism: Essays in Honour of Russell Mathews* (Sydney: Australian National University Press), 65-82

Page B (1983), *Who Gets What from Government* (Berkeley: University of California Press)

Pechman J A (ed.) (1977), *Comprehensive Income Taxation* (Washington DC: Brookings Institution)

Poh E H (2004), Procreation Tax Incentives and the Decision to Have a Child: A Survey of Married Couples in Singapore, *Electronic Tax and Accounting Briefing*, 5(July), 1-14

Poh E H (2005), Pronatalist Tax Expenditures in Singapore: Quantifying the Subsidies and the Disparity between Actual and Expected Subsidies, *International Tax Journal*, 31(1), 43-65

Puviani A (1903), *Teoria della Illusione Finangiaria* (Palermo)

Report of the Royal Commission on Taxation (1966), (Ottawa: Queen's Printer)

Salamon L M (1981), Rethinking Public Management: Third-Party Government and the Changing Forms of Government Action, *Public Policy*, 29(3), 255-75

Salamon L M and M S Lund (eds) (1989), *Beyond Privatization: The Tools of Government Action* (Washington DC: The Urban Institute Press)

Sandford C (1993), *Successful Tax Reform* (Bath: Fiscal Publications)

Sausgruber R and J-R Tyran (2004), Testing the Mill Hypothesis of Fiscal Illusion, *University of Copenhagen Economics Working Paper No. 04-18*

Saw, S H (2005), *Population Policies and Programmes in Singapore* (Singapore: Institute of Southeast Asian Studies)

Schokkaert E (1988), Fiscal Preferences and Fiscal Knowledge at the Local Level, *Journal of Economic Psychology*, 9, 29-46

Shaviro D N (1990), Beyond Public Choice and Public Interest: A Study of the Legislative Process as Illustrated by Tax Legislation in the 1980s, *University of Pennsylvania Law Review*, 139(1)

Shaviro D N (2004), Rethinking Tax Expenditures and Fiscal Language, *Tax Law Review*, 57(2), 187

Steel B and N Lovrich (1993), *Causes and Consequences of Public Knowledge Concerning State and Local Taxes*, Paper presented at the Western Political Science Association meeting, Pasadena, California, United States

Steurle G (1995), Some Thoughts on the Status of Tax Expenditures, *Tax Notes*, 68(Jul), 485-6

Sullivan M (2000), Tax Expenditure Budget, Now More Than Ever, *Tax Notes*, 86(Feb), 1187-8

Surrey S S (1973), *Pathways to Tax Reform: The Concept of Tax Expenditures* (Cambridge, Massachusetts: Harvard University Press)

Surrey S S and P R McDaniel (1985), *Tax Expenditures* (Cambridge, Massachusetts: Harvard University Press)

The Straits Times (15.12.1986), Disaster if Sparse Birth Patterns Remain Unchanged

The Straits Times (2.3.1987), Affordability Level Counts, not the Education Level

Toder E J (2000), Tax Cuts or Spending – Does It Make a Difference?, *National Tax Journal*, 53(3), 361-71

Traub S and C Siedl (1999), *Framing and Judgments of Fairness in Taxation*, available at http://citeseer.ist.psu.edu/211022.html

US Department of the Treasury (1984), *Tax Reform for Fairness, Equity and Simplicity* (Washington DC: US Government Printing Office)

Van Wagstaff J (1965), Income Tax Consciousness under Withholding, *Southern Economic Journal*, 32 (July), 73-80

Wanna J (2003), Invisible Hands? The Non-Budgeting of Tax Expenditures in Australia and Canada, *Paper presented at the Australasian Political Studies Association Conference*

broader issue of how the structure of individual countries' tax systems, and of the international tax system, might evolve in future.

The paper is divided into five further sections. The next section considers recent criticisms of the tax, and why these have become more pronounced in recent years. The paper then discusses why, in spite of these complaints, the tax remains widely in use. It does this by analysing the more conventional justifications put forward for its existence and then considering further explanations for its durability. The future of the tax is then considered, while a final section concludes.

THE CORPORATE TAX UNDER ATTACK

Recent economic, political and technological developments have provoked renewed criticisms of the corporate tax. These criticisms are now outlined in turn.

Allocational Issues Across Jurisdictional Boundaries

When companies operate in more than one taxing jurisdiction, the question is raised of how to allocate the profits raised between those jurisdictions. In particular, policies and practices need to be established on how to charge transfers of physical goods, services and intangible property between business units within a multinational group (transfer pricing). Over time, an international consensus has been built up, establishing the "arm's-length principle" for transfer pricing, i.e. that intra-group transactions should be priced as though they were being transacted by independent persons. This international consensus culminated in the OECD's Transfer Pricing

Problems Posed by Electronic Commerce

Electronic commerce compounds the problem of income allocation mentioned above. E-commerce enables MNEs to further integrate their operations, making it difficult for tax authorities to identify and measure contributions to profit and allocate them to different jurisdictions. This problem is augmented by the often unique features of electronic contributions to profit, which make it difficult to determine their economic value.

Further, as mentioned by Warren (2002), the growth of the Internet and of secure global company-based intranets has enabled companies to shift profits more easily from one tax jurisdiction to another to avoid tax. The lack of a secure and verifiable audit trail makes it difficult for tax authorities to identify transactions and trace where they take place, expanding the scope for both tax avoidance and evasion.

The advent of e-commerce creates an even more fundamental problem for the administrators of the corporate tax. Commonly, companies that are held to be resident in a country are taxed on their worldwide income. Non-resident corporations are normally subject to tax in that country only if their operations constitute a "permanent establishment" there, and then only on domestically-sourced income. Thus the concepts of residence, permanent establishment, and the source of income are essential in the assessment of income to tax. However, with the borderless technology of the Internet significantly reducing the relevance of geographical considerations, the above concepts have become increasingly obsolete (indeed, the advent of e-commerce puts the entire traditional concept of jurisdiction to tax into question). In particular, there is a growing need for a new international consensus on the definition of a permanent establishment, although some headway has been made on this by the OECD.[3]

A final problem that electronic commerce creates for the corporate tax concerns the characterisation of income. A further international consensus has been built in that the nature of the income in question determines the extent and form of the tax applied to it. In particular, royalty income is commonly taxed through withholding taxes in the source country when the payment is made to the non-resident. Sales income, on the other hand, is normally taxed as profits in the country where the seller is resident or has a permanent establishment (see Ho et al., 2004). Electronic commerce blurs the already hazy distinction between these two types of income. For example, if a digital product is purchased over the Internet, does the consideration involved constitute income from sales or is it a royalty from the right to use or for the use of the product's copyright? The difficulties involved in providing a definitive answer to this question allow considerable opportunity for tax avoidance.[4]

Distortions to the Optimum Global Allocation of Resources

The tax systems of individual countries, almost without exception, have developed primarily to address domestic concerns, such as the redistribution of income and

---

[3]

wealth, the macro-economic stabilisation of the economy, and the allocation of productive resources within the economy. Like any tax, the level at which the corporate tax is imposed in a country is therefore a reflection of the political, economic and social realities of that nation. Thus, as corporate taxes were introduced throughout the world, tax differentials between countries inevitably materialised. Although individual countries' tax systems have always affected and been affected by other economies, policy makers usually paid little attention to international tax differentials, as their effects were comparatively insignificant. Now, with the removal of non-tax barriers to investment and the integration of national economies, and the resultant increase in the mobility of international capital, corporate tax differentials are much more consequential, as they have an increasingly important role in determining

over the period 1982 to 2003, Simmons (2006) showed that the dispersion of statutory corporate tax rates fell by approximately one-third, while similar results were recorded for effective tax rates.

Nevertheless, recent evidence on effective tax rates (Baker and McKenzie, 2001; European Commission, 2001) suggests that international tax differentials currently remain high and represent a strong incentive for companies to choose the most tax-favoured locations for their investments. If tax competition is reducing distortions to investment, it clearly still has some way to go. Also, there are conceptual problems on relying on tax competition to reduce distortions to investment. As Musgrave and Musgrave (1990) argue, there is no clear theoretical backing for the supposition that tax competition will eventually result in a more efficient allocation of resources through reducing tax differentials. An equally likely scenario is that tax competition will foster a climate in which countries aim to attract capital through being tax-efficient rather than being least-cost locations, leading to greater rather than less distortion.

Distortions to Corporate Capital Structure
The corporate tax has long been criticised in that it favours one kind of finance (interest-paying debt) over another (shareholders' equity), since debt interest is usually deductible in the calculation of taxable profits, whereas dividends are normally not.[8] The separate tax treatment of debt and equity capital creates a tax-induced distortion to the optimum capital structure of corporations, since the tax confers a benefit onto the raising of funds through debt. This distortion also raises corporate risk, as it increases the chances of excessive gearing and bankruptcy.[9]

More recently, the distinction in the treatment of debt and equity has resulted in artificial investment forms that can be classified as debt but have the desired characteristics of equity (Cooper and Gordon, 1995). The difficulties that this situation has created have in recent years been exacerbated by the development of derivatives and other financial instruments that make the distinction between debt and equity much less clear than in the past. As Alworth (1998, p.512) explains:

> "The tax systems of most countries are wont to subdividing transactions into
> particular categories which are then subject to specific provision… Since

The Corporate Tax and Equity

There are two issues involved with regard to the fairness of the corporate tax. The first of these concerns the effective incidence of the tax, the second the problem of international double taxation.

The first issue rests upon the perception that a company per se cannot bear tax: only individuals can do so. Tax on corporate profits will thus ultimately be borne by the individual stakeholders in the company. Customers may bear the tax through an increase in the prices they are charged, the extent of the increase depending upon the degree of imperfection in competitive conditions. Employees may bear the tax through a reduction in their remuneration or an increase in unemployment, depending on the degree of imperfection in the labour market. Suppliers of capital may suffer the tax due to a reduction in the returns they are willing to accept. However, in a completely open economy, suppliers of capital will require the "world rate of return" or they will invest their money elsewhere. In this scenario, the corporate tax cannot reduce investors' returns below that world rate, but can only lead to a decrease in the ad to a-8.7(w)a5fopenphe ca(a)-5(r).6 4(h)-1 Bo-6.9(p)4.e co3p

of these systems. A fully neutral treatment of investment income requires that countries not discriminate between domestic and foreign shareholders by denying to the latter the tax credit that the imputation system provides. Nonetheless, in practice there is a natural strong reluctance to grant foreign shareholders the tax credit, as it would have to be given by a different tax authority from the one levying the corporate tax. Thus imputation systems disfavour the foreign ownership of share capital. In times when the ownership of corporations was mostly domestic, this aspect of imputation did not constitute a major problem. Now, with the diffusion of share ownership throughout the world, the inequity of this situation is more apparent. In the EU, the European Court of Justice has recently ruled this aspect of imputation incompatible with single market freedoms.[10] This has recently resulted in many countries, such as the UK, moving away from imputation, generally towards some form of shareholder relief system. Some countries, for example Ireland, have reverted to the classical system, with its attendant double taxation implications for shareholders in those countries.

As the above analysis suggests, recent economic and technological developments have transpired to accentuate and draw attention to the inherent weaknesses of the corporate tax. In light of this, it is useful to review the justifications that have been traditionally put forward for the tax. These are identified and critically analysed in the following section.

EMERGENCE OF AND CONVENTIONAL JUSTICFICATIONS FOR THE CORPORATE TAX

The first taxes specifically on corporate income were introduced by individual states of the US in the mid-19th century. A federal tax on corporate profits was introduced in the US in 1909. In the UK, incomes, including the profits of societies and corporate entities, were first taxed under the Income Tax Act of 1799. Excess Profits Duty was introduced in 1915, representing an additional tax on company profits to that already imposed upon individuals' income from capital. This duty was replaced in 1920 by Corporation Profits Tax.[11] In the early years of the 20th century, many countries began a process of moving away from their tr

TABLE TWO: COPORATE TAXES: STATUTORY[1] AND EFFECTIVE MARGINAL TAX RATES (EMTRS)[2]: OECD SELECTED COUNTRIES (TEN YEAR INTERVALS, 1983-2003)

	Statutory Rates			EMTRs		
	1983	1993	2003	1983	1993	2003
	%	%	%	%	%	%
Australia	50	33	30	32	21	24
Belgium	45	39	34	31	26	22
Canada	44	35	36	16	25	25
France	50	33	35	26	18	22
Germany	63	58	40	43	38	30
Japan	55	51	41	42	38	29
Portugal	55	40	33	48	24	19
USA	50	39	39	22	24	24
OECD 19 (mean)	48	36	33	28	23	20

Notes:

1) Statutory rates are on undistributed profits. For individual countries where the tax rate depends on the type of industry, the manufacturing rate is used. The rate includes local taxes (or average across regions) where they exist. Supplementary taxes are included only if they apply generally.

2) EMTRs calculated on the following assumptions: investment is in plant and machinery, financed by equity or retained earnings; depreciation at 12.5%; common inflation rate of 3.5%; real interest rate at 10%; no personal taxes.

Source: IFS

At one stage, it seemed that corporate tax competition might be curbed through the development of international initiatives aimed

upon whether tax rates still currently dwell on the inverse portion of the curve. Lower tax rates might also increase tax revenues by reducing the incentive for international tax avoidance and evasion, although increased opportunities for such activities are likely to mitigate against this.

There is, nonetheless, a possibility that tax competition may reduce corporate tax revenues to a level at which the economic costs of compliance and enforcement outweigh the benefits of retaining the tax, leading to government reconsideration of its viability. However, there is likely to be strong support, at least in some countries, for at least some level of corporate taxation. As mentioned earlier, the tax enables host governments to take a share of the profits

In spite of these challenges, the corporate tax is likely to survive in some form, at least for the foreseeable future. Today it represents a long-established, significant and welcome source of revenue for governments. It can be collected from an easily identifiable source, and is widely seen as justified by the general public. As the IFS Capital Taxes Group (1991, p.9) succinctly put it:

> "Perhaps the most persuasive reason for retaining a separate tax on profits is not only that we do, but that we can."

Worldwide abolition is not possible in the foreseeable future as it would require international tax co-ordination on a scale that has not been in evidence to date. A more likely scenario is that a major economy such as the US would take the lead in abolishing the tax, in which case smaller countries would have a strong incentive (or

Doernberg, R. and L. Hinnekens (1999), *Electronic Commerce and International Taxation*, Kluwer Law International, The Hague.

Eden, L. (1998), *Taxing Multinationals: Transfer Pricing and Corporate Income Taxation*, University of Toronto Press, Toronto.

European Commission (1997), *Towards Tax Co-ordination in the European Union: A Package to Tackle Harmful Tax Competition*, COM(97), 495 final.

European Commission (2001), *Company Taxation in the Internal Market (Executive Summary)*, SEC (2001), 1681.

Gammie, M. (2001), "Corporate Taxation in Europe: Paths to a Solution", *British Tax Review*, 4: 233-249.

Gordon, R.H. and J. MacKie-Mason (1995), "The Importance of Income Shifting to the Design and Analysis of Tax Policy", in M. Feldstein, J.R. Hines, and R.G. Hubbard (eds.), *Taxing Multinational Corporations*, University of Chicago Press, Chicago.

Harris, P.A. (1996), *Corporate/Shareholder Income Taxation and Allocating Taxing Rights between Countries*, IBFD, Amsterdam.

Ho, D., A. Mak and B. Wong (2004), "Taxation of E-commerce in a Source-based Jurisdiction: A Study of Hong Kong", *Journal of Business Law*, March: 247-261.

IFS Capital Taxes Group (1991), *Equity for Companies: A Corporation Tax for the 1990s*, IFS Commentary No.26, IFS, London.

James, S. (2000), "The Difficulties of Achieving Tax Harmonisation: The Case of the European Union", *Asia-Pacific Journal of Taxation*, 4(4): 42-52.

James, S. and C. Nobes (2003), *The Economics of Taxation: Principles, Policy and Practice* (7th ed.), Financial Times Prentice Hall, Harlow.

Kay, J. and M. King (1991), *The British Tax System*, Oxford University Press, Oxford.

Keen, M. (2001), "Preferential Tax Regimes Can Make Tax Competition Less Harmful", *National Tax Journal*, 4(4): 757-763.

Krever, R. (1985), "Companies, Shareholders and Tax Reform", *Taxation in Australia*, 10(3): 163-175.

Lee, D.R. and R.B. McKenzie (1989), "The International Political Economy of Declining Tax Rates", *National Tax Journal*, 41(1): 79-83.

Mead, J.E. (1978), *The Structure and Reform of Corporate Taxation*, Allen and Unwin, Boston, MA.

Musgrave, P.B. and R.A. Musgrave (1989), *Public Finance in Theory and Practice*, McGraw-Hill, New York.

Musgrave, P.B. and R.A. Musgrave (1990), "Fiscal Co-ordination and Competition in an International Setting", in *Proceedings of the 8th Munich Symposium on International Taxation*, Kluwer Academic Publishers, Deventer.

Oates, L. (2002), "Taxing Companies and their Shareholders: Design Issues", in A. Lymer and J. Hasseldine (eds.),

Charities for the Benefit of Employees: Why Trusts for the Benefit of Employees Fail the Public Benefit Test

Fiona Martin[*]

Abstract

Charities are granted significant financial benefits through the exemption from income tax and deductibility of donations under the provisions of the *Income Tax Assessment Act, 1997* (Cth). The concept of what is a charity or a charitable purpose which is a fundamental requirement of the income tax exemption is not defined in any taxation legislation and must be found in the common law. The courts have concluded that a charitable purpose includes charities for the benefit and assistance of

definition was recommended by the 2001 'Report of the Inquiry into the Definition of Charities and Related Organisations'.[5]

They are also words that have a technical legal meaning and which have been discussed and elaborated on over the years by the courts.[6] Two important issues arise from this, for an entity to be charitable under the 1997 Act its activities must be the promotion of charitable objectives and these charitable objects must come within the legal meaning of charitable.

This article analyses the legal meaning of the words 'charity' and 'charitable' for the purposes of Division 50 of the 1997 Act and explains why an entity established to administer compensation payments to employees and former employees of a company who are suffering from a work related illness does not fall within this meaning as currently established by the Australian and English courts. Such an entity could include a fund established by a company if the fund is limited to compensation for its employees and former employees suffering from a work related illness or injury. The article also examines the public policy rationale for this conclusion and looks at alternative approaches to the current application of the public benefit test to charities.

LEGAL MEANING OF "CHARITABLE"

As far back as 1601 the English courts and legislature were considering the issue of when an entity's objectives were charitable for income tax purposes. The Preamble to the *Charitable Uses Act 1601*[7] is possibly the earliest record of an analysis of what types of activities may constitute charitable purposes. This Act is referred to as the *Statute of Elizabeth* and its Preamble set out the following charitable purposes:

- relief of the aged, impotent and poor;
- maintenance of sick and maimed soldiers and mariners;
- schools and scholars in universities;
- repair of bridges, ports, havens, causeways, churches, sea-banks and highways;
- education and preferment of orphans;
- maintenance of prisons;
- marriages of poor maids;
- aid and help of young tradesmen and handicraftsmen;
- aid and help of persons decayed;
- the relief or redemption of prisoners or captives;
- the aid or ease of any poor inhabitants concerning payment of fifteens; and
- setting out of soldiers and other taxes.

---

[5] Commonwealth of Australia, 'Report of the Inquiry into the Definition of Charities and Related Organisations ' (2001) 18; Treasurer's Press Statement "Final Response to the Charities Definition Inquiry" 11 May 2004, http://www.treasurer.gov.au/tsr/content/pressreleases/2004/031.asp at 30 November 2006.

[6] For example refer *Commissioners for Special Purposes of Income Tax v Pemsel* [1891] AC 531, 583 (Lord Macnaghten); *Re Hilditch deceased* (1986) 39 SASR 469, 475 (O'Loughlin J); *Alice Springs Town Council v Mpweteyerre Aboriginal Corporation* (1997) 139 FLR 236, 251-252 (Mildren J).

[7] 43 Eliz I c4.

This Preamble was not considered, even at that time, to be exhaustive as significant charitable areas such as charities for the advancement of religion and of some educational institutions were not included.[8]

In *Morice v Bishop of Durham,*[9] an English case that was decided two hundred years later, the court ruled that for a purpose to be 'charitable' it had to be within the spirit and intendment of the Preamble to the *Statute of Elizabeth.*[10]

Subsequently, in 1891 Lord Macnaghten in *Pemsel's* case stated that the legal meaning of 'charity' could be classified into four separate divisions. He stated that a charity should be a trust for one of the following:

- the relief of poverty;
- the advancement of education;
- the advancement of religion; or
- for other purposes beneficial to the community. [11]

The classification of charitable purpose into these four areas was seen as a milestone and has been consistently used in judicial considerations ever since.[12]

Subsequent Australian cases have confirmed the principle that the classes of charities referred to in the Preamble to the

benefit of the public.[28]

their personal relationship but their physical location.[51]   The argument is that as anyone can (theoretically) move to a particular location the section of the public benefited is not restricted by something outside its control such as an employment or family relationship.

Lord Greene MR expressed it in *Re Compton; Powell v Compton*:

> [T]hey do not enjoy the benefit, when they receive it, by virtue of their

connection through common employment does not make the group a section of the community, the trust was not charitable.[58]

The court's thinking in this and other cases which have confirmed this line of reasoning was clearly influenced by the fiscal advantages that arise from being granted charitable status. Lord Greene MR makes several references to the tax free status of charities in his comments in *Re Compton, Powell v Compton*[59] as the rationale for restricting charities to those that benefit the public as does Lord Cross in *Dingle v Turner.*[60] Lord Cross stated in this case:

> In answering the question whether any given trust is a charitable trust the courts – as I see it - cannot avoid having regard to the fiscal privileges accorded to charities…To establish a trust for the education of the children of employees in a company in which you are interested is no doubt a meritorious act; but however numerous the employees may be the purpose which you are seeking to achieve is not a public purpose. It is a company purpose and there is no reason why your fellow taxpayers should contribute to a scheme which by providing 'fringe benefits' for your employees will benefit the company by making their conditions of employment more attractive.[61]

ARGUMENTS AGAINST THE PUBLIC BENEFIT RESTRICTION IN ALL SITUATIONS

It is arguable that there are other approaches that will allow distinctions between trusts that are based on a personal relationship and which therefore fail the 'public benefit'

If the rationale for refusing to grant charitable status to a trust for the benefit of sick employees and former employees of a company is that this would grant a fringe benefit to these persons the argument seems illogical. The grant of money in this situation is to enable these employees and former employees to obtain medical assistance and support in cases where they are unable to work. It is very different from a trust for the education of employees' children. Furthermore, public policy would suggest that ambiguous cases should favour assistance towards the sick as this is an important charitable purpose.

CONCLUSION

The law relating to charities needs to be flexible in order to meet the needs of potentially charitable situations that develop due to changes in society. When Lord Macnaghten first considered the four charitable headings he articulated in *Pemsel's* case it was virtually impossible for a successful action to be brought by an employee for an injury suffered at work against his or her employer.[70] The situation is now very different.

If the scenario is instead considered from the perspective of purpose, then it is e ln ne(u)6.5(r)ire5lack-5.(r5o)0r(eeds.7( )5.v-5.8(2.4((J/TT2 8(b5.)-10.1a safe w)rkcharities14.9/nvJ/TT2 ro

Responsive Regulation and the Uncertainty of Tax Law – Time to Reconsider the Commissioner's Model of Cooperative Compliance?

Mark Burton[*]

Abstract

Over the last decade the Australian Taxation Office has adapted the model of 'responsive regulation' in developing its cooperative compliance model. This model seeks to promote voluntary compliance with Australia's taxation laws by tailoring the administrative treatment of taxpayers in accordance with the individual taxpayer's tax compliance posture. The fulcrum of this model of tax administration is the proposition that taxation law is determinate, such that 'complying' and 'non-

eJournal of Tax Research

Responsive Regulation and the Uncertainty of Tax Law – Time to
Reconsider the Commissioner's Model of Cooperative Compliance

- the expansion of the public scrutiny of government, arising from the open government reforms of the 1980s, including freedom of information laws and the creation of additional avenues for public sector review;[3]

-

compliance. Regulators need to be able to identify non-compliance so that they can adopt an appropriate regulatory response. However, even when proponents of responsive regulation acknowledge that the law is indeterminate, they do not consider the implications of legal indeterminacy for the responsive regulation paradigm. If the law is indeterminate, and in section 3 I argue that there are good reasons for accepting that at least some tax law is of indeterminate meaning, then the operation of the responsive regulation model in the domain of taxation law is open to question. If a significant challenge confronting tax administ

model, in terms of tax administration efficiency, is open to question given that the cost of raising each $100 of tax revenue has increased over the past decade.[15]

One purpose of this paper is to explore the implications for the responsive regulation paradigm if one accepts, as I argue we must, that at least some tax law is of indeterminate meaning. The second purpose of this paper is to suggest future directions for quantitative and qualitative research with a view to quantifying the significance of these implications for the cooperative compliance model in its day to day operation.

2. WHAT IS RESPONSIVE REGULATION?

2.1 A definition

The concept of 'responsive regulation' entails administration of determinate law by officials who tailor their regulatory behaviour according to the compliance posture adopted by individuals subjected to the relevant law.[16] The hallmark of responsive regulation is the pursuit of cooperation by the regulatee with the regulator:

> Regulatory pyramids offer the advantage of handing tax officers a set of tools that can be applied without having to have a detailed understanding of why non-compliance has occurred. One starts with the expectation of co-operation; escalation on the pyramid occurs only when one sees the other defaulting and becoming non-co-operative.[17]

The compliance pyramid depicted by the Commissioner in his *Compliance Strategy*[18] reflects his interpretation of responsive regulation in the taxation domain.[19] For taxpayers who adopt a posture of 'voluntary compliance',[20] responsive regulation entails the provision of assistance in enabling taxpayers to understand and comply with the law. However, for taxpayers who adopt a posture of 'resistance', the tax administrator will consider deploying an escalating range of enforcement measures in achieving compliance. As taxpayers exhibit increasing resistance to 'cooperation', under the 'tit for tat' principle[21] the Commissioner responds with escalating enforcement powers.

2.2 Voluntary Compliance and Legitimacy

Promoting voluntary compliance generates public sector efficiency gains because the governed become voluntarily complying self-governors, thereby enabling the

---

[15] Commonwealth of Australia, *The Commissioner of Taxation Annual Report 2004-05*, Australian Taxation Office, Canberra, 2006, 11 (Fig 1.9). Of course, there is an infinite array of v0003 Tcof0.8(20w[(Proolecr4

eJournal of Tax Research

Responsive Regulation and the Uncertainty of Tax Law – Time to
Reconsider the Commissioner's Model of Cooperative Compliance

regulatory agency to devote its limited enforcement resources to those exhibiting resistant postures. Tyler's work suggests that voluntary compliance is enhanced by legitimacy, and in turn that legitimacy is enhanced if procedural fairness is adopted by regulatory agencies.[22]

There are various factors which might induce compliance with the law: the perceived risk of sanctions, peer/social pressure to comply, normative motivation founded upon a sense of obligation to comply with laws which accord with a person's sense of morality and/or a belief that the law/government is legitimate such that the law must be obeyed.[23] Tyler notes that reliance upon sanctions alone will be ineffective in achieving effective and efficient regulation of compliance. Further, Tyler notes that moral norms offer an unreliable basis for governments seeking to achieve compliance with the law – moral heterogeneity within any community makes it virtually impossible that most will agree with the morality of all law. Similarly, peer/social pressure are unreliable. By contrast, Tyler argues that legitimacy offers governments the promise of discretionary authority – people will obey the law, even if they disagree with the law, simply because they believe that the law must be obeyed.[24]

Accepting that individuals continue their membership of social groups for self-interested reasons, Tyler observes that individuals use their perceptions of procedural fairness as a proxy for substantive fairness:

> The model that has been developed rests on an assumption that people
> ultimately care about issues of self-interfairn03 459.h l h1.8c7 ( )-5.8(o)-6.6h(es of).5(a)-5.o(e)-5.5(r)-1.x(c)-

> with i3(u)-0.8(mpt)6.8(in)53(t)-6-9.5(mpt)62(ur)-5(t)-6.(p)-0.v(ur)-5ee(in)53(tim(d)-6.ll)8((in)53(P(e)083(st)(

eJournal of Tax Research

Responsive Regulation and the Uncertainty of Tax Law – Time to
Reconsider the Commissioner's Model of Cooperative Compliance

areas of tax compliance risk. Trusting the tax administration not to impose penalties arbitrarily, such taxpayers would seek the a

who, apparently routinely, would argue for an untenable interpretation of the relevant law.[43]

3. WHAT IS COMPLIANCE? LIBERAL L

holds that the state must be neutral as to competing conceptions of the good life, because favouring one conception over another would be oppressive and hence be an illegitimate exercise of state power.[52] There are competing understandings of how this principle of state neutrality should be adopted in practice, with some accepting it entails state compliance with formal procedures laid down in a 'rule of recognition'[53] while others hold that state legitimacy hinges upon compliance with some substantive principle of neutrality (ie promoting efficient private markets). Nevertheless, it is clear that the norm of state neutrality dictates that 'the law' is applied uniformly across all legal subjects because the imperfect administration of a 'neutral' law is as evil as a non-neutral law.

This requirement that the law be administered neutrally means that a community must be able to define compliance by reference to an objective standard which is independent of the behaviour of the participants in the process. That is, the meaning of the law must be clear such that state oppression through wrongful exercise of state

- the definition of compliance suggested by James and Alley is adopted. This definition holds that compliance entails 'the willingness of individuals and other taxable entities to act … within the spirit as well as the letter of tax law and administration, without the application of enforcement activity';[56]

- the Australian Taxation Office adopted what John Braithwaite labeled a literalist approach[57] to defining compliance, quite possibly drawing upon the definition adopted by Roth, Scholz and Witte;[58]

- on occasion the Australian Taxation Office adopts a 'purposive' approach to the interpretation of taxation law;[59]

- the Australian Taxation Office appears to adopt a theory of legislative meaning which incorporates both pragmatic and purposive elements;[60] and

- the Commissioner ofsj/TTaxatifmsn

noted that if the 'right' interpretation is governed by the regulator's interpretation of the law, it is difficult to see how the rule of law is definitional of responsive regulation, because this would make regulators judges in their own cause and lay the way for autocratic power, which Ayres and Braithwaite expressly disavow.[67]

However, for present purposes it is clear that determinate meaning of authorized legislative texts, as determined by one means or another, is central to the operation of responsive regulation. There is little point in revisiting the substantial literature regarding the limitations of this liberal legalism.[68] However there are two salient aspects of liberal legalism which are particularly relevant to the ensuing discussion of responsive regulation:

1. a central aspect of liberal legalism is the proposition that a legislative text, created in accordance with the appropriate 'rule of recognition', constitutes law and is the focus of any interpretive inquiry. The interpretation of the text is not an open-ended inquiry into what is 'right' – it is the quest for the one 'right' legislative meaning. Finding the one right meaning of the text means that the consideration of the moral aspects of competing interpretations is just as irrelevant as perceptions of the various pragmatic consequences of differing interpretations.

    Under the paradigm of responsive regulation, then, a person is not a 'cheat' if they 'buy' a legislated tax favour through 'lobbying' and/or clandestine political deals.[69] From this perspective, such legislated deals are legitimate because they are 'the law' and are therefore apparently assumed to express the 'democratic will'.[70] The opacity of the legislative process and the myopia of 'the people' are ignored.[71] By contrast, a person who does not procure such legislative favours is a 'cheat' if they do not 'cooperate' with what they perceive to be a defective law which has emerged from a defective process driven by the machinations of powerful interest groups.

    Liberal legalism therefore dictates that we ignore the prospect that people might be cynical about the origins of a law and hence be cynical about the justice and fairness of a law. By adopting this legal formalism, Tyler and others within the responsive regulation fold have focused our attention upon the legitimation of the tax administration, rather than upon the legitimacy of the government's taxation institutions and the substantive law more generally.[72] However, if the law is indeterminate, it is possible that taxpayers look beyond administrative procedural fairness; and

2. legal formalism lends itself to a top-down, command and control theory of state power. Under this paradigm, state power is concentrated in state institutions

---

[67] Ayres and Braithwaite, above n 21, 53.

[68] For discussion of the concept of legal formalism, and its limitations, see Duncan Kennedy, 'Legal Formality' (1976) *Journal of Legal Studies* 351; J. Shklar, *Legalism*, Cambridge Mass 1964.

[69] Dan Roberts, 'GE surges as tax breaks cut in', *The Australian*, 24 January 2005, 28.

[70] Ayres and Braithwaite, above n 21, 82.

[71] The limitations of the legislative process in Australia were considered, albeit in the limited context of small business tax concessions, in: Mark Burton, 'The Australian small business tax concessions – public choice, public interest or public folly' (2006) 21 *Australian Tax Forum* 91. See also Mark Burton, 'Chaos, Rhetoric and the Legitimisation of 'Democratic' Government – A Critical Review of the Australian Tax Legislative Process" (2007) *Sydney Law Review* (forthcoming).

[72] Tom Tyler, *Why People Obey the Law*, Princeton University Press, Princeton, 2006, 262.

Apparently in recognition of this threat to responsive regulation, John Braithwaite has argued that the tax law can be made 'more certain' by adopting a combination of legislative principles and legislative rules. This legislative framework, Braithwaite suggests, would promote a purposive approach to legislation.[80] Under this approach,

and who is driving a fully laden old car which has outmoded brakes and suspension. It is possible Braithwaite's interpretive model means that the law is no more certain than under any of the existing interpretive approaches adopted by the courts.

4.2 No consensus regarding interpretive standpoint

The second source of legal indeterminacy is that there is no consensus regarding the appropriate interpretive standpoint.

In view of the various approaches to defining the context of legislation for the purposes of ascertaining its meaning, it would be possible for a community to (somehow) agree that ambiguity should be resolved by recourse to one interpretive standpoint such as 'adopt the meaning which is most efficient in an economic sense'. Thus, Ayres and Braithwaite describe their concept of 'regulatory republicanism' in which an 'enlightened' private sector and an informed public sector engage constructively in deliberative dialogue.[86] This draws upon the communicative theories of Habermas[87] and Sunstein[88] which posit that rational conversations will tend to produce determinate meaning. However, there is good reason to question whether consensus can be reached when the participants in a shared conversation hold incommensurable standpoints.[89] Ayres and Braithwaite seem to acknowledge this issue, without adequately addressing it, when they express a preference for small group decision making upon the basis that it would 'maximise the prospects of genuine dialogue around the table leading to a discovery of win-win solutions, instead of a babble of many conflicting voices talking past each other.'[90]

Such standpoint incommensurability may be seen in the literature regarding taxation law. Within this literature there are diametrically opposed standpoints regarding the interaction of the concept of private property with the nature of taxation:

- for those who adopt a communitarian perspective, all property belongs to the state and so 'tax' is not an imposition upon individuals but merely the portion of the

rules, poorly framed tax concessions and tax loopholes continue to cloud any putative purpose, if one exists at all.

The Commissioner compounds the problematic identification of the underlying purpose of the law by sanctioning some arrangements which appear, at least to many tax practitioners, to have all of the hallmarks of 'aggressive tax avoidance'. For example, in his Media Release[118] regarding superannuation recontribution

The favourable treatment of superannuation by the Commissioner may be explicable on public policy grounds, but this favourable treatment has no clear legislative basis. By sanctioning a formalist approach in the case of superannuation recontribution arrangements, the Commissioner is signaling that, in circumstances of his choosing, he will vary his usual approach to the general anti-avoidance rules. This apparently arbitrary application of the general anti-avoidance rules may foster cynicism among tax advisors. Indeed, anecdotal evidence indicates that at least some tax advisors had advised clients against superannuation recontribution arrangements before the Commissioner's press release upon the basis that such arrangements were too aggressive. One point which the research literature does not explore is whether such arbitrary administration of the taxation law causes tax advisors to lose confidence in the integrity of the taxation system and/or whether they take courage to explore other opportunities for minimizing tax on behalf of their clients.

5. PARTNERSHIP OR STRATEGIC ALLIANCE? LEGAL INDETERMINACY AND WHAT IT MEANS TO BE "COOPERATIVE" UNDER THE COOPERATIVE COMPLIANCE MODEL

voluntary compliance. This link is fundamental to the cooperative compliance model. However, it is possible that Tyler's findings are inapplicable in the context of taxation law because of differing public perceptions of criminal law and taxation law respectively. Although Tyler noted the limitations of his study, and in particular the absence of literature demonstrating the applicability of his findings in other legal contexts,[128] little has been done to address this shortcoming with specific reference to taxation law.

 An integral aspect of Tyler's study was the accuracy with which it was assumed that survey participants would self-report their compliance with the laws in question.[129] Tyler perhaps too readily accepts that the public are in a position to judge whether they have complied with such rules. Nevertheless, it might be that these rules of criminal law have assumed a relatively determinate meaning in Tyler's subject population. However, there is reason to doubt the relevance of Tyler's work to taxation law, given that 52% of the respondents in one recent survey agreed that they felt 'very confused about taxation matters'icipants would

Given that many Australians seem to view taxation law differently to the way in

5.4 Partnership and the problem of incommensurability

The indeterminacy of law also problematises the implementation of the compliance pyramid because of the fact that the Commissioner and taxpayers might have quite different understandings of what it means to comply with the tax law in specific contexts. By contrast to the adversarialism discussed in the preceding paragraph, such conflicting interpretations might be genuinely held in the sense that both parties genuinely believe that they have arrived at the 'correct' amount of tax to pay. This was acknowledged, for example, by the Senate Economics References Committee in its consideration of the mass marketed tax minimization arrangements of the 1990's.[144]

If 'cooperation' with the Commissioner is central to the concept of compliance, taxpayers who are not in a financial position to challenge the Commissioner's interpretation will feel coerced into complying with what they consider to be an incorrect interpretation of the law. Here, the Commissioner's adherence to the proposition of determinate law can cause real damage to the perceived legitimacy of the tax system at an individual level because the Commissioner fails to acknowledge that incommensurable interpretive standpoints may lead to different, plausible interpretations. By enforcing what he considers to be the correct interpretation of the law, it is possible that taxpayers will submit to the Commissioner's coercive power but move to a different compliance posture in the future. Again, such an outcome would be destructive of any partnership with the taxpayer.

5.5 Indeterminacy and the diffusion of social power – the genesis of strategic alliances

The third implication of legal indeterminacy for the concept of partnership is that officers within the Australian Taxation Office might be less secure about what compliance means in a particular case. Meaning will be contingent upon the interpretive stance adopted by the particular tax officer in the specific case and having regard to other contextual factors. Thus the neat dichotomous categorization of taxpayers depicted in the compliance pyramid, between compliers and non-compliers, will be problematic. Instead of black and white, there will be many shades of grey. As different tax officials interpret the law and taxpayers' circumstances differently, there is the possibility that the Australian Tax Office will speak with multiple dissonant voices as its officers grapple with the indeterminacy of the rules they are meant to enforce.[145]

5.5.1 Strategic alliances and diffuse social power

If there is no mutual understanding upon which a partnership between the taxation

paying no tax who therefore have no interest in trading off higher
compliance for lower company tax rates. However, floating the possibility of
a *compliance-tax-rate-spiral* as something that might work in future could
encourage public-regarding business taxpayers to see that in the long run
there is much that Australian business could gain from a more cooperative
compliance culture.[152]

Presumably public regarding businesses are already voluntarily complying with the
law, so it is not clear how this compliance tax rate spiral would induce non-taxpaying
taxpayers to pay tax. It is possible that lower tax rates will induce non-taxpayers to
pay some tax because the perceived costs of minimizing tax are greater than

clients prefer low risk tax returns, it may be that in the context of ambiguous law advisors and clients have differing understandings of the meaning of 'low risk.'[162]

Therefore a number of questions are worthy of further investigation:

1. in selecting a tax advisor and seeking advice, do taxpayers clearly express their tax risk preference, such that the significance of tax advisors' influence is diminished? This is important because the personal opinions of tax advisors regarding the tax system might be outweighed by market forces – tax advisors would have to meet the tax advice market rather than tax advisors shaping that market;

2. whether the Commissioner's cooperative compliance program has induced a communitarian ethic on the part of tax advisors, such that ambiguous law is interpreted less 'aggressively'. Alternatively, have tax advisors adopted/maintained a self-interest ethic, under which they selectively negotiate strategic alliances with the ATO when in their clients' respective interests, while adopting 'aggressive' stances when this is perceived to be in their clients' respective interests; and

3. if such an ethical shift has arisen, what were the drivers and inhibitors of this shift and if such an ethical shift has not arisen, what might prompt such a shift? In particular, what is the significance of Taxation Office actions such as the publication of more inform

eJournal of Tax Research

Responsive Regulation and the Uncertainty of Tax Law – Time to
Reconsider the Commissioner's Model of Cooperative Compliance

However, given the preceding discussion regarding the indeterminacy of the compliance concept, it is clear that there are shades of grey which the survey data does not tease out. After all, it should be remembered that many of those who participated in 'aggressive tax minimization arrangements' claimed to have taken appropriate steps in ensuring that their arrangements were 'within the law' and were not 'aggressive'.[165]

165

obtain assurance that they are within the law has been supported by a number of studies in several jurisdictions.[173] However, the literature in this field indicates that clients and tax advisors often talk at cross purposes when discussing relative levels of audit risk with respect to particular items on a tax return.[174]

Third, the Braithwaite/Sakurai study does not indicate whether taxpayers would adopt a 'minimum fuss' approach where to do so created a higher perceived tax burden than would apply if some tax minimizing advice were followed. As Braithwaite notes, survey responses are context dependent.[175] With this in mind, it would be useful to know whether those who opted for a 'minimum fuss' approach would have responded similarly if told that this approach would effectively cost them $10,000 by comparison to a 'legitimate' restructuring of their affairs akin to the formalism of a superannuation recontribution arrangement. Braithwaite's conclusions as to taxpayer attitudes to compliance must be read cautiously, owing to the significant prospect that taxpayer attitudes towards compliance may vary with the context in which those attitudes are formed.

5.5.4 Coooperative compliance and tax advisors – the need for further research
Assuming that tax agents do play a significant role in shaping their client's risk profiles, responsive regulation posits that tax agents will adopt the cooperative, communitarian ethic of the responileraolatio9.1(ar)TJ18.8888 0 TD0.0007 Tc0.102 T3w[(to arnd)(thd, u)ce

eJournal of Tax Research

Responsive Regulation and the Uncertainty of Tax Law – Time to
Reconsider the Commissioner's Model of Cooperative Compliance

lifting the veil of secrecy. Indeed, Braithwaite speculates that such action may be appropriate in the case of large corporate taxpayers,[183] although he does not explain why restricting tax system transparency to this demographic group would be appropriate. The most obvious benefit of such an approach would be that the Commissioner would not need to devote as many resources to integrity assurance measures designed to promote community confidence in the tax administration. Further research needs to be undertaken with a view to identifying the relative merits of a relaxation of the Commissioner's secrecy obligations.

6. CONCLUSION

There can be little doubt that the cooperative compliance model represents a quantum shift in the taxpayer/tax administration relationship, and it is doubtful that many would argue for a return to the adversarial approach of the past. Nevertheless, the cooperative compliance model is still under developmen

importantly, adherence to the legal determinacy thesis enables the Commissioner to adopt a 'don't shoot the messenger' discourse – 'I am only applying the law'- when confronted with allegations of partial tax administration or when subjected to political pressure.[185] More cynically, endorsing the proposition that 'the law is the law' means that the Commissioner is able to promote his interpretation of law, which he most probably knows to be contingent, as the 'right' interpretation. By doing so, he maintains the faith in impartial administration while in fact adopting contingent interpretations of ambiguous law. Further, by adopting this message, the Commissioner hopes to reassure the general public that all really are equal before the tax law, despite the evidence of regulatory capture which suggests the contrary.

Significant parts of the tax law are indeterminate and the implications of this indeterminacy for the cooperative compliance model must be the subject of further quantitative and qualitative research. In the absence of such research, it is possible that responsive regulation is not fulfilling its promise. It is possible, for example, that tax administration does not entail a partnership. Instead, Commissioner and taxpayer alike might pursue their respective interests as they best see them in specific contexts. In specific contexts, the interests of taxpayer(s) and tax Commissioner might overlap and so a strategic alliance will be formed. In other contexts, the interests of taxpayer(s) and Commissioner might diverge and any former strategic alliance will dissolve. It is possible, therefore, that effective tax administration is undermined by the failure to acknowledge the significance of law's indeterminacy for the cooperative compliance model. The limited evidence available suggests that these possibilities cannot be discounted. It is time to reconsider this model by undertaking further research.

---

[185] Michael Carmody, 'Administering Australia's Tax System' Monash University, Law School Foundation Lecture, 30 July 1998; see also George Megalogenis, 'Cheats lobbying politicians to pressure the ATO' *The Australian*, 31 July 1998, 5.

Unravelling the Mysteries of the Oracle: Using the Delphi Methodology to Inform the Personal Tax Reform Debate in Australia

Chris Evans[*]

Abstract

The paper explores key outcomes relating to personal income tax (PIT) reform in Australia derived from the use of a Delphi methodology conducted during 2006. The Delphi methodology combines quantitative and qualitative techniques to explore

(CGT), negative gearing, wealth taxes, work-related expenses and artificial tax minimisation.

In terms of tax rates and thresholds, and despite recent reforms, Australia's high marginal rates still apply from relatively low income thresholds by international standards. In addition, social security recipients face very high effective marginal tax rates on earnings.

In terms of administration, the costs of complying with the PIT in Australia are relatively high. The most recent comprehensive study (Evans et al, 1997, Table 5.3, p 65) estimated the compliance costs of individual taxpat c3(di)-86eeI15 TD- rates 102h18c3(di]tralia a5 al)

eJournal of Tax Research

Unravelling the Mysteries of the Oracle: Using the Delphi Methodology
to Inform the Personal Tax Reform Debate in Australia

methodology) in order to establish strengths and potential weaknesses in the models and seek to establish a consensus around one single model;

- survey tax community attitudes to this expert-derived model in order to establish levels of potential resistance/acceptance by key stakeholders including tax payers, tax practitioners, tax professional bodies and tax administrators; and

- fine-tune or revise the model to reflect community feedback.

This paper focuses only upon the Delphi methodology and explains how it is being used as a critical component of the overall research project. The Delphi methodology combines quantitative and qualitative techniques to explore future possibilities in systematic and iterative rounds of anonymous testing involving a panel of international experts in the field of personal taxation. The experts have been drawn from Australia and from countries with comparable PIT regimes, such as the UK, the USA, Canada and New Zealand. Over a four month period the panel has responded to a 2.8(c008 T(h)-1./-1. .3(e()69p)4.5(e)-11(n)4.5(-(c008 e)-5.2(nd(e()69ed)-5.8(p8(c008 op(e()69ositi)-8.6(o

Tw[(ns)6.9(ta)4.2((W)9oject.6974y9.3(d, 11.4o)-91.4onsth2(e The D1(-4.8p)1(6.8(re n)1(6ons-8.7.e   mo)-fro.8ic. m)121 pu)0esta2

eJournal of Tax Research

Unravelling the Mysteries of the Oracle: Using the Delphi Methodology
to Inform the Personal Tax Reform Debate in Australia

Rayens and Hahn (2000) outline the major characteristics of the Policy Delphi. It is a multistage process involving the initial measurement of opinions (first stage), followed by data analysis, design of a new questionnaire based on group response to

eJournal of Tax Research
Unravelling the Mysteries of the Oracle: Using the Delphi Methodology
to Inform the Personal Tax Reform Debate in Australia

The third underlying principle – controlled feedback – emphasizes the iterative nature of the Delphi. The results of one activity or question are used to inform the development of the next. It is obviously critical to the success of the Delphi to ensure that results are fed back to panelists in as unbiased a manner as possible.

Studies comparing the Delphi's results with other methods have confirmed the effectiveness of the methodology on the basis of both its capacity to generate ideas and its effective use of participants' time (Ulschak, 1983), as well as its capacity for accuracy when forecasting is involved (HERO, 2001). But the methodology is not without its critics. Makridakis and Wheelwright (1978, cited in Gunaydin (2006)) summarise the general complaints against the Delphi method in terms of (a) a low level reliability of judgements among experts and therefore dependency of outcomes on the particular judges selected; (b) the sensitivity of results to ambiguity in the questionnaire that is used for data collection in each round; and (c) the difficulty in assessing the degree of expertise incorporated into the forecast. Among the major concerns listed by Martino (1978, cited in Gunaydin (2006)) are:

- the simplification urge: experts tend to judge the future of events in isolation from other developments. A holistic view of future events where change has had a

eJournal of Tax Research

Unravelling the Mysteries of the Oracle: Using the Delphi Methodology
to Inform the Personal Tax Reform Debate in Australia

identifying tax academics with a specific interest (evidenced through research and writing) in the field of personal taxation. The research team also wanted to ensure that the panel it chose was capable of reflecting a variety of disciplinary perspectives, and therefore looked for personal tax academics from a mixture of legal, accounting and public finance backgrounds. Finally, the research team was interested in recruiting tax academics from both Australia and overseas, and particularly from broadly comparable tax jurisdictions such as the UK, USA, Canada and New Zealand.

An initial list of some 35 eminent personal tax academics was compiled by the research team, subsequently short listed (on the basis of the research team's own knowledge of, and contacts with, the persons on the list) to 18. All 18 academics were contacted in late 2005 or early 2006 to establish their willingness to participate. Thirteen agreed to participate.[7] The panel of 13 experts comprised six academics from Australia, three from the UK, two from the USA and one from each of New Zealand and Canada. In terms of broad disciplinary background, six would be considered as having a primarily legal background, five come from an economics/public finance perspective and two would be categorized as being from an accounting background –

four headings identified above. Panel members were also given clear instructions about what they were required to do, and some details about the Delphi methodology itself and about personal tax reform in Australia (considered to be vital for international experts). It was decided to administer the survey instrument using email technology – largely on the basis of timeliness, ease of access and general acceptance of that medium within the academic community. At that stage it was anticipated that there would be up to three rounds of questioning involved in the Delphi.

In line with the literature relating to the Delphi process, the 21 questions comprised a mixture of "forecast", "issue", "goal" and "option" questions, with an emphasis on the latter two categories. In fact, only one question (Question A3) would readily be classified as a "forecast" question, and only two questions (Questions A2 and B7) are specific "issue" questions. The 18 remaining questions fit broadly equally in either the "goal" or the "option" categories.

Panel members were asked to complete and return the first round surveys within two weeks – by 31 March 2006. Responses were received from nine of the 13 panel members within that timeframe and from the other four within five days of 31 March. This was a somewhat unexpected and exceptionally positive rate of response, perhaps accounted for in part by the novelty of the methodology within the taxation discipline, but perhaps also attributable to the careful priming of the panel by the research team over preceding months.[8] The covering information had suggested that panel members would need about 30 minutes to complete the instrument. This proved to be a significant under-statement, with some panel members indicating that they had spent over an hour on the first round responses.

The information contained in the Round One responses was then collated and analyzed in the period through to mid-June 2006, at which point (18 June 2006)

eJournal of Tax Research

Unravelling the Mysteries of the Oracle: Using the Delphi Methodology
to Inform the Personal Tax Reform Debate in Australia

TABLE ONE   R

TABLE TWO   **RANKING OF DISTORTIVE IMPACT OF TAX EXPENDITURES (QUESTION B2)**

	Ranked first	Ranked second	Ranked third	Ranked fourth

TABLE THREE RANKING FOR REMOVAL OF TAX EXPENDITURES (QUESTION B6)

	Ranked first	Ranked second	Ranked third	Ranked fourth	Ranked fifth	Weighted score
50% CGT discount	**7**	**3**	**1**	**-**	**-**	**50**
Negative gearing	**2**	**3**	**4**	**-**	**-**	**34**
Super concessions	**1**	**2**	**1**	**5**	**-**	**26**
Work related expenses	**1**	**2**	**3**	**1**	**1**	**25**
Others	**1**	**-**	**-**	**1**	**-**	**7**

Weighted score is 5 for 1st, 4 for 2nd, etc.

The final question in Section B (B7) sought

eJournal of Tax Research

Unravelling the Mysteries of the Oracle: Using the Delphi Methodology
to Inform the Personal Tax Reform Debate in Australia

particular circumstances. But six experts rejected the idea for Australia outright. Given the relatively clean split of opinion on this issue, it was decided that this was another question that would be included in Round 2 of the Delphi.

The final question in Section C was also identified for follow-up in Round 2. Question C8 sought the experts' views as to whether a properly implemented negative income tax could provide a viable solution to the problem of high effective marginal tax rates (EMTRs) in Australia. Five experts considered that it could; two considered that it could in particular circumstances; three felt that it could not; and three expressed no view.

Tax Administration

The final section of the Round 1 Delphi contained three questions relating to tax administration. The first (Question D1) was designed to elicit the experts' views on what advantages and disadvantages might arise if the Australian PIT were re-designed to remove the obligation to file for most personal taxpayers. As might be expected, on

Table Four summarises the outcomes of the second round of the Delphi. Although the process of summarizing is necessarily impressionistic, qualitative and somewhat simplistic, it does accurately capture the sense that the opinions of the experts, once formulated, were hard to shift, even when confronted with defending a minority position in the face of peer pressure. There is very little evidence of views being changed, and where changes did occur they were often relatively insignificant or minor in nature, and sometimes explained on the basis of a misunderstanding in Round 1.

TABLE FOUR   SUMMARY OF CHANGES IN ROUND 2 FROM ROUND 1

Question	B4	B5	B6	C2	C7	C8
No change	11	11	9	10	10	12
Change	1	1	3	2	2	0

Only five of the twelve experts who participated in Round 2 changed a position in relation to any one of the six questions. One respondent recorded a change of opinion on three separate questions; two respondents recorded changes on two separate questions; and two respondents recorded a change on one question. Most respondents, however, maintained their positions on all questions.

In summary, therefore, there was little evidence of changes in opinion as a result of the second round of the Delphi, and little evidence of the likelihood of a consensus emerging on the six questions that were under review. On that basis it was decided not to continue with a third round of the Delphi.

CONCLUSIONS

It is relatively simple to offer conclusions about the process of the Delphi methodology, but more difficult to provide definitive conclusions about the value of the data derived from that process.

So far as methodology is concerned, the De

and development of the PIT in an open developed economy, and has also highlighted other areas where there is no consensus. It has established, inter alia that:

- there is broad support from the experts for the generally accepted criteria of equity, efficiency, simplicity and revenue adequacy as appropriate criteria for evaluating a PIT, with general agreement that equity ranks as the single most important criterion;

- there is no general agreement, however, about the appropriate role of the PIT in the overall tax mix;

- there is general agreement that the Australian PIT should be characterized, so far as possible, by as broad a base as possible combined with rates that are as low as can be sustained;

- the experts consider, on the whole, that the individual is a more appropriate tax unit than the family;

- there is a strong view expressed by the experts that the superannuation concessions and the 50% CGT discount are the tax expenditures that cause the greatest level of distortion within the Australian PIT. Moreover, the experts generally agree that the CGT discount would be the first choice of tax expenditure that could be removed to broaden the tax base, that "ideally" capital gains should be taxed on the same basis as other forms of income, and that there are strong grounds for introducing a de minimus annual exemption to remove relatively insignificant capital gains from the tax base;

- there is strong endorsement for the view that all income tax brackets or thresholds should be indexed annually for inflation, though less agreement on precisely how this elimination of bracket creep should be implemented;

- the experts generally agree that alignment of the corporate rate and top personal rate (or at least a reduction in the gap) is desirable, but there is no general agreement on the optimal number of tax rates or scales that should be contained in a PIT;

- the experts can identify significant advantages that are likely to ensue with less comprehensive annual filing (primarily relating to simplicity and compliance costs) but also identify some disadvantages (primarily related to the capacity for non-compliance that less filing might permit); and

- there is little agreement – even after experts were given the opportunity to re-consider their positions in the light of the views of their peers – on key design issues such as the

REFERENCES

Adler, M. and Ziglio, E. (1996), Gazing into the Oracle: The Delphi Method and its Application to Social Policy and Public Health, Taylor and Francis, Philadelphia.

Andrew, B. (2005), "Reform of the Australian Personal Tax System", *Asia-Pacific Journal of Taxation*, Vol 9(3), pp 46-55.

Australian Bureau of Statistics (2004), *Year Book Australia 2004,* Table 27.16, Canberra.

Australian Taxation Office (2005), *Taxation Statistics 2002-03,* Table 2.1, Canberra.

Birkett, W. (1989), *The Demand For, and Supply of, Taxation Education: A Delphi Study*

APPENDIX ONE: ROUND ONE INSTRUMENT

Delphi: Round One (March 2006)

Dear Colleague

Many thanks for agreeing to participate in this Delphi methodology involving a panel of 12-15 international academic experts in the field of taxation. This is the first round of the Delphi and we provide some background and context about the project and the Delphi immediately below and in the appendix. We expect to conduct the second and third rounds (where you will anonymously comment on the views of the other panel members with a view to seeking a consensus) in April to June 2006.

Background and context to the research project
We are currently involved in an Australian Research Council (ARC) funded research project entitled "*Towards systemic reform of the Australian personal income tax: Developing a sustainable model for the future*".

The aim of this project is to develop a model of the Australian personal income tax system that is capable of commanding widespread expert and community support

constitutes a sufficient number of experts to ensure reliable outcomes.) Up to three rounds of questioning (over a four month period) about the perceived advantages and weaknesses of the models developed in the first modelling phase is being conducted in an attempt to seek expert coalescence about the characteristics of a model that can best provide the policy objectives required of the PIT. The Delphi panel comprises PIT experts from Australia and from comparable tax jurisdictions (New Zealand, the UK, Canada and the USA). We are hoping that many of these international experts will later be able to participate in a PIT Symposium scheduled for March/April 2007.

DELPHI ROUND ONE

This first round of the Delphi contains four sections. Section A seeks your views on some broad tax principles and the tax mix, while Sections B-D seek your input on more specific issues relating to (respectively) the personal tax base, personal tax rates, and personal tax administration issues.

Feel free to write, in open-ended sections, as much or as little as you please (do not feel constrained by the space available). As you will appreciate, there are no right or wrong answers – we are merely seeking your opinions with a view to identifying what level of consensus (if any) may initially exist within the panel. Future rounds (we anticipate that there will be two further rounds) will (anonymously) seek feedback on the views of members of the panel and further seek to develop a consensus (which may prove impossible!).

We have estimated that you should not need more than about 30 minutes to respond to these questions. We would really appreciate it if you could complete the Round One Survey below and return the document to Chris Evans (email cc.evans@unsw.edu.au or fax +612 9385 9383) by 31 March 2006.

Please move to the next page to commence the Delphi.

Chris Evans   Atax, UNSW
Binh Tran-Nam   Atax, UNSW
Brian Andrew   Charles Darwin University
Paul Drum   Senior Tax Counsel, CPA Australia

March 2006

Section B   The Personal Tax Base and Tax Unit

B1   It is often suggested that the PIT should be characterised by as broad a base as possible combined with rates that are as low as can be sustained bearing in mind the needs of generating "sufficient" tax revenue. Do you generally support this view? If not, how would you describe the approach that you think is appropriate in the design

B5   Australia (unlike many other comparable regimes) currently permits individuals who incur losses on revenue account as a result of holding passive investments (equities, property etc) to set those losses off against any other income including income from salary and wages (so-called "negative gearing").

Is this treatment justified? If not, what treatment might be more appropriate?

B6   If you were seeking to broaden the tax base in Australia, what priority order would you apply in removing each of the following concessions (where a ranking of 1 would suggest that this would be your highest priority for removal, 2 would be the second highest etc):

Concession	Ranking
The 50% discount for capital gains	_____
Work related deductions	_____
Superannuation concessions	_____
Negative gearing concessions	_____
Other (please specify) _____	_____

B7   Australia (in common with many other comparable PIT regimes) bases its PIT on the individual (although its social security system is often predicated upon the household or family unit). In your estimation, what is the ideal tax unit for the PIT: the individual, the family, hybrids of this or other? Why?

Section C   Tax Rates and Thresholds

The 2006-07 Australian PIT rate structure for residents involves a five rate structure with marginal tax rates (MTRs) as follows:

Taxable Income (AUD$)*	MTR (%)
0 – 6,000	Nil
6,001 – 21,600	15
21,601 – 70,000	30
70,001 – 125,000	42
> 125,000	47
* AUD$1 = approx US$0.73 or 0.42 or CAN$0.85 or NZ$1.15 as at 13 Mar 06	

In addition a Medicare levy of 1.5% is charged on income greater than AUD$17,191, and there are various rebates and offsets including a low income rebate.

C1   In your estimation, should all tax brackets/thresholds be automatically indexed on an annual basis in line with inflation? (Yes/No/Don't know is fine, but any elaboration is welcome.)

C2   Currently around 40% of taxpayers in Australia pay no net tax because of a range of rebates and concessions, and the two lowest income deciles have almost zero taxable income and do not benefit from the tax free threshold.

If reform of the Australian PIT were undertaken, which of the following options would you prefer to see implemented with respect to the initial tax free threshold (currently AUD$6,000):

- Option A: Increase it to the individual poverty line (currently approx AUD$13,500).
- Option B: Increase it above AUD$13,500.
- Option C: Leave it unchanged.
- Option D: reduce it to zero.
- Option E: Other (please specify)_____

Preferred Option (specify A, B, C, D or E):   ____

(Feel free to elaborate on your preferred option.)

eJournal of Tax Research

Unravelling the Mysteries of the Oracle: Using the Delphi Methodology
to Inform the Personal Tax Reform Debate in Australia

C3 Assuming the revenue impact can be neutralised (ie that the same tax revenue can be generated) and that there are no adverse distributional outcomes, what advantages or positive benefits could you envisage if Australia were to implement a two or three rate PIT rate structure (rather than the current five rate structure)? What disadvantages or negative implications might arise?

Advantages/positive implications:

Disadvantages/negative implications:

C4 Is there an optimal number of rates and thresholds for an equitable, efficient and simple PIT system? If yes, indicate that optimal position and say why. If no, indicate why not?

C5 The current top marginal PIT rate is 47%. The corporate rate is 30%. Ideally, should the rates be aligned? (Yes/No/Don't know is fine, but any elaboration is welcome. If you do not consider full alignment is possible, are there grounds for seeking, at least, to reduce the gap?)

C6 Should a flat tax (ie one single PIT rate) be considered as an option in a developed economy such as Australia? (Yes/No/Don't know is fine, but any elaboration is welcome.)

C7 Should a hybrid flat tax (i.e. a tax free threshold plus a flat rate) be considered as an option in a developed economy such as Australia? (Yes/No/Don't know is fine, but any elaboration is welcome.)

C8 Australia has a particular problem with high effective marginal tax rates (EMTRs) as a result of the poor meshing of its tax and transfer systems. For example, middle and lower income recipients can face EMTRs in excess of 60% (and sometimes over 100%). Can a properly implemented negative income tax provide a viable solution to the problem of high EMTRs? (Yes/No/Don't know is fine, but any elaboration is welcome.)

Section D   **Tax Administration**
D1

All of the methodologies involved in the project are mainstream research tools, and have been used in many other research projects. Indeed, the proposed researchers have successfully utilised each of these methodologies in their own recent work. Professor Andrew has extensively applied the micro-simulation technique in his study of the Australian tax system (Andrew 1996; CPA, 1998) and A/Prof Tran-Nam has had considerable experience in dealing with unit record data (eg, Tran-Nam and Whiteford 1990; Tran-Nam and Podder 2003). Prof Evans has successfully utilised the Delphi methodology in research into the use of Tax Impact Statements in the OECD (Evans and Walpole, 1999) and all three CIs have extensively used survey techniques of various types (eg, Gul; Teoh and Andrew, 1989; Evans et al, 1997; Tran-Nam and Glover 2002).

What is innovative and unique about the research design of this project is that the CIs

It is within this conceptual framework that the design of the current project has taken place.   The three major methodologies involved – micro-simulation, Delphi methodology and survey – feed off each other and into each other as an iterative loop.

APPENDIX TWO: ROUND TWO INSTRUMENT (INSTRUCTIONS ONLY

The Marginal Cost of Public Funds for Excise Taxes in Thailand[†]

Worawan Chandoevwit[*] and Bev Dahlby[**]

Abstract

We extend the Ahmad and Stern (1984) framework for calculating the marginal cost of public funds (MCF) for excise taxes in Thailand by incorporating non-tax distortions caused by (a) environmental externalities, (b) public expenditure externalities, (c) market power in setting prices, (d) addiction, and (e) smuggling or tax evasion. Our calculations, based on our benchmark parameter values, indicates that the MCFs are 0.532 for fuel excise taxes, 2.187 for tobacco excise taxes, 2.132 for alcohol excise taxes and 1.080 for the VAT. Using pro-poor distributional weights does not change the relative

NTR2.5(vOl)105(DUCTI)1.1(vOl)105(N.698 00 0 10.3303 92.7 5461D6)44TJ8019 TTj/TT4 1 Tf11.2898- 1 M85 TD59(a)-9 Tc0.0953 Tw108aExtataxo

the MCFs the non-tax distortions created by (a) environmental externalities, (b) public expenditure externalities, (c) addiction, (d) market power, and (e) smuggling. Our analysis, based on our benchmark parameter values, indicates that the MCFs are 0.532 for fuel excise taxes, 2.187 for tobacco excise taxes, 2.312 for alcohol excise taxes, and 1.080 for a VAT increase. We also use pro-poor distributional weights and data on the spending patterns of 90 household groups in Thailand to calculate distributionally-weighted MCFs, but this procedure does not change the ranking of the social marginal cost of the excise taxes. Finally, we show that a revenue-neutral marginal tax reform—reducing the excise tax rates on alcohol and tobacco by one percentage point and increasing the fuel excise tax—would result in a net efficiency gain equal to 1.72 Baht for every additional Baht of fuel tax revenue.

vector of consumer prices and I is lump-sum income. Later we show how to incorporate distributional concerns in the measurement of the social marginal cost of public funds (SMCF).

Total tax revenues $R = \sum_{i=1}^{n} t_i x_i$ depend on the tax rates, t_i, imposed on the n commodities, denoted by the x_is, that are consumed by the individual. A money measure of the harm imposed on the individual in raising an extra dollar of tax revenue by increasing tax rate t_i is defined by the expression:

$$MCF_{t_i} = \frac{-\dfrac{1}{\lambda(q,I)}\dfrac{dV}{dt_i}}{\dfrac{dR}{dt_t}} \tag{1}$$

where $\lambda(q,I)$ is the individual's marginal utility of income. In defining the MCF_{t_i}, it is assumed that dR/dt_i is positive, i.e. that the government is operating on the upward-sloping section of its Laffer curve with respect to t_i.

Rule for optimal commodity taxation states

problem. The individual make consumption decisions according to the following utility function:
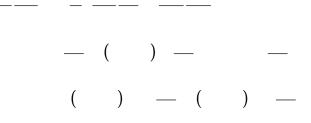
$$U^* = V(x_1) - \Phi C(x_1) + x_2 \tag{5}$$

where   is a positive parameter. If   < 1, the individual is said to have a self-control problem because he does not take into account the full personal cost consuming x_1. The individual's budget constraint is q_1

$$MCF_{t_1} = \frac{1 - \delta_{A_1} \varepsilon_{11}}{1 + \tau_1 \varepsilon_{11}}$$

(10)

assuming that there are no other distortions in the economy. If the government could raise revenue by imposing a lump-sum tax, such that its MCF was 1.00, then the optimal tax rate on the commodity would be $\tau_i = -\delta_{A_i} = (1 - \Phi)(C_{x_i}/q_i)$. The optimal sin tax rate would reflect the *neglected* proportion of the additional cost incurred in spending an additional dollar on x_1. See O'Donoghue, T. and M. Rabin (2006) for further discussion of optimal sin taxes.

Obviously, incorporating these self-control distortions into the calculation of the MCF is controversial, but we think that lack of self-control problems, especially with regard to tobacco products, reflects public opinion and policy-makers' views concerning the use of excise taxes. For this reason, we think that it is important to incorporate defective decision-making explicitly in the model so that it can be compared with the other distortions that affect the MCF. In this way, a better judgment can be made concerning the relative importance of self-control problems in the overall assessment of the appropriate level of excise taxation.

monopoly on the sale and distribution of domestically produced cigarettes in Thailand. In this situation, the MCF is equal to:

$$\text{MCF}_t(\tau_\pi = 1) = \frac{1}{1 + (\tau + \delta_M)\varepsilon} \tag{16}$$

which is independent of the degree of tax shifting. In this case, the total tax rate on the product is effectively $\tau + \delta_M$.

Smuggling

Norton (1988) has developed an economic model of smuggling and Usher (1986) and Ray (1997, 380-384) have incorporated tax evasion into the calculation of the MCF. Below, we outline a simple model that incorporates smuggling into the MCF for an excise tax. Suppose the elasticity of the supply of the smuggled commodity is $\eta^s > 0$. The price of the smuggled commodity will reflect its production cost plus the smuggling costs that are incurred by the smugglers, $q^s = p + c^s$. It will be assumed that these smuggling costs are less than the per unit excise tax imposed on the legitimate goods. Consumers are willing to buy smuggled goods as long as the price of a smuggled good plus the search costs, f, are less than the price of a legitimate good cigarette, $q^s = q - f$. Assuming the excise tax increases are fully reflected in the price of the legitimate good, this implies that $dq/dt = dq^s/dt = 1$ if search costs are relatively constant. The demand for the legitimate goods that are fully taxed is the difference between the total demand and the demand for smuggled goods or x^l

where $s_i^h = x_i^h / x_i$ is household h's share of the total consumption of commodity i. The ω_i parameter is known as the distributional characteristic commodity i, and it measures the social harm caused by increasing total household expenditure on x_i by a dollar. Note that ω_i will tend to be larger when β^h and s_i^h are positively correlated. This means that ω_i will be high for commodities that are consumed mainly by the poor.

The social marginal cost of public funds from taxing commodity i can be defined as:

$$SMCF_{t_i} = \frac{-\dfrac{dS}{dt_i}}{\dfrac{dR}{dt_i}} = \omega_i \cdot MCF_{t_i} \qquad (20)$$

To compute the $_i$s, we need the β^hs which reflect a society's, or perhaps more accurately its policy-makers', willingness to trade-off gains and losses sustained by different segments of society. The distributional weights are based on value judgments, and economists have no spec

Note that the components of the MCF that reflect the distortions are multiplied by the T_{ji}

Demand elasticities

The estimated demand elasticities are shown in the matrix below. (The own-price elasticities are along the diagonal.)

-0.1033	-0.0959	0.0818	0.1940	-0.0262	-0.0730	0.0545	-0.6860	-0.0486	0.0649
0.7103	-0.8429	-0.0125	-0.2744	0.4372	0.5244	-0.9369	0.1127	0.8354	-0.8950
-0.0348	-0.5159	-0.7992	-0.0835	0.1114	-0.0185	-0.1424	0.2369	0.1969	-0.3799
-0.5169	-0.3983	0.0281	-0.8380	0.1388	-1.1741	0.5797	0.2243	-0.6041	0.4520
0.0206	1.0223	-0.6111	1.8406	-1.5239	1.2575	-1.1766	1.8135	1.4716	-1.6749
-0.2923	-0.3043	0.2181	0.6647	-0.0927	-0.1833	0.2832	-0.5222	-0.1347	-0.0513
-0.2673	0.2926	0.1845	-1.4932	0.9452	1.2515	-0.2462	-0.2629	0.6606	-2.5485
0.1650	0.1295	-0.0802	0.7296	-0.5065	-0.0600	-0.2327	-0.0228	0.3480	-0.3652
0.0851	-0.1283	0.1458	0.0926	-0.4631	-0.3089	0.1216	-0.1335	-0.5734	0.1231
-0.9002	0.0565	0.0221	-1.1178	0.3235	0.2813	0.1250	-0.2827	-0.3962	-0.4540

The price elasticities of demand for the ten commodities were estimated, using the Almost Ideal Demand System (AIDS) developed by Deaton and Muellbauer (1980), based on data on consumption expenditures from 1983 to 2002 in the Thailand National Income Account. The observations for 1998-99 were omitted because of the non-normal consumption shares in that year due to the economic crisis that began in the fall of 1997. (An appendix describing the demand estimation is available from the authors upon request.)

Our estimated own-price elasticity for alcoholic beverages is quite high, - 0.8429, compared to the -0.54 estimate obtained by Sarntisart (2003). However, it is less elastic than the values in the TDRI (2005) study where the price elasticities for color

tax rate increase will be offset by declines in tobacco and fuel excise tax revenues. (The net effect on other commodity tax revenues is indeterminate, but likely to be relatively small.) This negative effect on tobacco and fuel excise tax revenues will tend to raise the MCF for alcohol excise taxes. However, the reductions in the consumption of tobacco and fuel would also reduce the MCF for alcohol excise taxes if the net distortion for these commodities, captured by the $\delta_{E_j} + \delta_{A_j} + \left(1 - \tau_{\pi_j}\right)\delta_{M_j}$ terms in the MCF formula, are negative i.e. marginal social cost exceeds marginal social benefit.

The price elasticity for tobacco products is -0.7992, which is close to the -0.83 value obtained in a study by Pattamasiriwat (1989), but substantially higher than the -0.39 price elasticity found by Sarntisart (2003) based on household tobacco consumption data.[8] The differences may be due to smuggled or non-taxed cigarettes which the study by Sarntisart indicated are fairly prevalent in Thailand. (He found that about 46 percent of imported cigarette package littering in five provinces across Thailand were untaxed cigarette.) In other words, the price elasticity using data from the National Income Account is higher than for total household cigarette consumption, where taxed and untaxed cigarettes are included. Galbraith and Kaiserman (1997) found the same relationship in Canada where the price elasticity for taxed cigarettes was higher (-1.01) than that for total (taxed and untaxed) cigarette consumption (-0.4). Another study from Canada by Gruber, Sen and Stabile (2002) also found that the demand for taxed cigarettes was higher than the total demand (-0.70 versus -0.45). Our cross-price elasticities of demand imply that an increase in tobacco taxes will increase

9

tax rate is a uniform tax rate because all good are equally "substitutable" with leisure, the non-taxed good.

Given the importance that the theoretical literature on optimal taxation has attached to the cross-price elasticities between leisure and commodities, it is important to briefly review the few papers have examined the empirical significance of the separability assumption for computing MCFs for commodity taxes. Madden (1995, p. 497), noting that several econometric studies of consumer demands and labour supplies reject the separability assumption, estimated models with and without the separability assumption, based on data for Ireland 1958-1988, and concluded that the MCF "rankings do not appear to be very sensitive to assumptions regarding separability between goods and leisure". In particular, he found that the MCFs for alcohol, tobacco, and fuels were 1.664, 1.397, and 1.193, respectively, without imposing separability and 2.304, 1.504, and 1.418 when separability was imposed.[10] Although Madden's estimates of the MCFs were higher when separability between leisure and commodities was imposed in estimating the demand elasticities, the rankings of the MCFs for the three commodities subject to high levels of excise taxation did not change. In his computations of the efficiency effects of excise taxes in the U.K., Parry (2003) assumed that petrol and alcoholic beverages were substitutes for leisure and that cigarettes were a complement. However, the implied cross-price elasticities between leisure and the price of these commodities were very low and did not have a material effect on Parry's measures of the marginal excess burdens imposed by the excise taxes.[11]

In marked contrast with the above studies, West and Williams (2006) found that including the cross-price effect between labour supply and the price of gasoline had a significant effect on the magnitude of the MCF for the excise tax on gasoline in the United States. They estimated a model based on individual household's expenditures gasoline and all other goods and their labour income, and found that higher gasoline prices increased labour income (reduced the demand for leisure). This reduced the MCF from taxing gasoline and increased the optimal gasoline tax rate. However, only one of the three cross-price elasticity between labour income and the price of gasoline that they estimated was significantly different from zero (males in households with two adults) and that point elasticity was very low 0.013.

The West and Williams results are somewhat surprising, and the importance of the cross-price effects between excise taxes and labour supplies need to be investigated more completely. Given our current and very limited knowledge about the importance of these effects, we have proceeded by adopting the conventional assumption that these effects do not have a material effect on the rankings of the MCFs for excise taxes.

Environmental externalities

In spite of a significant body of research, there is a great deal of uncertainty regarding the appropriate values to use for the δ_E parameters for developed countries, such as the United States or the United Kingdom. There is even greater uncertainty for a developing country, such as Thailand, where much less empirical research has been

---

[10] Madden calculated the marginal revenue cost of increasing welfare, which is the inverse of the MCF.

[11] See Dahlby (forthcoming, Chapter 3).

TABLE 2: PARAMETER VALUES FOR NON-TAX DISTORTIONS

	Low Case	Benchmark Case	High Case

Our estimates for the "environmental" externalities from alcohol are based on Smith (2005)'s recent survey of alcohol excise taxes because he decomposed these externalities in a way that is consistent with our framework.[13] Smith estimated that the total externality cost of alcohol in the U.K. is 17 percent of the pre-tax price. Based on his breakdown of the social costs of alcohol, we have decomposed his total externality into an 8.2 percent private sector "environmental" externality (losses sustained by employers etc.), a 1.31 percent public expenditure externality (health

---

[13] For further discussion of the externalities caused by alcohol consumption and tax policies to deal with these issues, see Pogue and Sgontz (1989), Grossman et al. (1993), Irvine and Sims (1993), Kenkel (1996), Cook and Moore (2002), and Chaloupka, Grossman, and Saffer (2002) and Grossman (2004).

costs, crime, and social responses) and 7.3 percent "internality" from unemployment and pre-mature death. (The latter is included in the δ_A parameter for alcohol to be discussed in Section 3.6.) The $_E$ parameter for the benchmark case was calculated as -0.082*(1–0.393)*0.27 =   -0.014. The 0.393 is the tax rate on alcohol in Thailand. We multiply by (1 – 0.393) to express the externality as a percentage of the tax inclusive price. We then multiply by the 0.27 which is the ratio of the purchasing power parity Thai GDP per capita to the U.K GDP per capita.[14] The High Case is the benchmark case without the adjustment for the relative GDPs in Thailand and the U.K. The Low Case is 50 percent of the benchmark case.

The environmental externality from tobacco is mainly second-hand smoke, and we do not know of any estimates for this type of externality. As noted in the literature, much of the second-hand smoke problem occurs within the family, and therefore it is debatable whether this is an "externality". The incidence of second-hand smoke in Thailand has also been reduced with non-smoking in public transit, schools and public offices, but smoking is still permitted in bars and non air-conditioned restaurants in Thailand. Overall, we think that the second-hand smoke externality is likely to be small (not many people offer to pay smokers to butt out their cigarettes), but obviously this is controversial and based on a value judgment that we admit is difficult to defend.

Newbery's (2005) estimate of the environmental cost is 14 pence per litre for gasoline in UK, excluding road costs which we treat as a public expenditure externality, and including 3.2 pence per litre for accidents. Our benchmark value for fuel environmental externality is -(0.14£/litre)(67.8B/£)(0.27)(25B/litre) = -0.10 using the relative Thai to UK GDP per capita to is 27 percent of the U.K GDP per capita. For the High Case, we do not adjust for differences in Thai to UK real GDP per capita -(0.14£/litre)(67.8B/a(per litrubti)(ali)-0.8(cper lit5.7(ddti)(ait)-0.8(ureᵀ9(--5.2lity i)5.7()6)11.9 f-17-5.2al)

The benchmark value for the impact of smoking on health care costs uses the estimates from Manning et al. (1989) of $US 0.25 per package (figures updated to 2003) See Cnossen (2005, p.37). This value was multiplied by 0.20 to reflect the relative GDP in Thailand and divided by 1.08, the price of a package of cigarettes in Thailand. The resulting estimate of the δ_G parameter is (0.25)(0.20)/(1.08)= 0.046, rounded to 0.05. The High Case was obtained using the position expressed by the Director-General for WHO, Dr. Lee Jong-wook, that 15 percent of all health care costs in high income countries are due to smoking. Public health care costs are two-thirds of total health care costs in Thailand. Total health care costs in 2002 were 333,798 million Baht and total value of cigarette consumption was 55,832 million Baht. Therefore the High Case parameter value was calculated as (0.32)(0.15)(333,3798)/(45,219) = 0.29, rounded to 0.30. The Low Case parameter value was based on the Sarntisart (2003, p. 43) estimate that the direct health care costs of tobacco were 249 million Baht in 2003. This would imply that the δ_G parameter would be (249)/(55,832)= 0.004.

Newbery's (2005) estimate of road costs are 25.2 pence/litre in the U.K. The benchmark value for fuel public expenditure externality is (0.252£/litre)(67.8Baht/£) (0.27)(25Baht/litre) = 0.18. The High Case is 50 percent higher and the Low Case is 50 percent lower that the Benchmark Case.

Addiction
As noted in the introduction, excise taxes are often viewed as "sin taxes", levied in order to discourage the consumption of products that are "bad for people". In Section 2.3, we used the O'Donoghue and Rabin (2006) model to formalize the view that some individuals engage in excessive consumptiopO'D(so)nssoas "side0 T5(o-mak7.3489 0 TDg1(ex..4(o)l

population who reportedly drink every day plus 50 percent of the 3.79 percent who drink 3 to 4 times per week.[15] Thus the Benchmark figure for   is 3.34+(0.5)3.79 = 5.2 percent. The High Case figure is 3.34 + 3.79 = 7.1 percent. The Low Case figure is half the percentage that drinks every day.

The Benchmark value for the addiction distortion for cigarettes was obtained using Gruber and K szegi's (2004, p.1979) estimate that the cost in terms of life years lost per pack of cigarettes in the United States is $35.64. The purchasing power equivalent

assumed that marginal changes in pure profits are taxed at the statutory Thai corporate income tax rate of 30 percent. Our analysis is based on the assumption that excise taxes are fully shifted to consumers. However, a study by Young and Bieli ska-Kwapisz (2002) indicates that taxes on beer and spirits are over-shifted in the United States. In their study, taxes on beer and spirits increased consumer prices by approximately 1.7 times the tax rate. We also briefly consider the impact of the over-shifting of alcohol excise taxes on the MCF for alcohol.

The Thai Tobacco Monopoly (TTM) has a monopoly in production of domestic brands. The market power distortion in the Benchmark Case, $\delta_M = 0.20$, is based on an estimate of the market power of European tobacco companies from a study by Delipalla and O'Donnell (2001).[20] We have assumed that all of the profits of the TTM go to the Thai government, or $\tau_\pi = 1$. Therefore, the total effective tax rate on cigarettes in the benchmark case is $0.587 + 0.20 = 0.79$, which is very close to the effective tax rate that Sarntisart (2003, p.43) used in his study of tobacco control in Thailand. The High Case is twice the benchmark case and the Low Case is half the benchmark case.

The mobile phone market in Th5 TDf10D1r17.02T

Smuggling

To capture the effect of alcohol smuggling, we use a total demand elasticity of $\varepsilon_{22}^T = -0.54$ based on the estimate of the demand for alcohol in Sarntisart (2003). A study of alcohol smuggling in Thailand by TDRI (2006) indicates that illegally produced and smuggled alcohol is about 16 percent of alcohol consumption. [22] For the Low Case, we use 8 percent and for the High Case we use 24 percent.

To capture the effect of tobacco smuggling, we use a total demand elasticity of $\varepsilon_{33}^T = -0.40$ based on this widely used value of the elasticity of demand for cigarettes. The Benchmark value for the proportion of smuggled cigarettes is from a survey by Sarntisart (2003. p.26) who found that "15.5% of their cigarettes packages had warning labels in English or other non-Thai languages or no warning labels, and were probably illegally imported". The Low Case estimate was based on the results of a different survey, also described in Sarntisart (2003), where it was found that 46 percent of discarded imported cigarette packages had warning label in wrong language or no warning labels. Given that imports represent 4.89 percent of total consumption of cigarettes, the proportion of smuggled cigarettes in the Low Case was calculated as 0.46(4.89) = 2.22 percent. (The share of imported cigarettes was based on figures in Sarntisart (2003 Table 3.4 p. 9).) The High Case figure is twice the Benchmark figure.

CALCULATIONS OF THE MCFS

The calculations of the MCFs for the Benchmark parameter values are shown in Table 3. Alcohol taxes have the highest MCF at 2.312, followed by tobacco at 2.187, and fuels at 0.532. The large gaps between the MCFs for alcohol and tobacco and the MCF for fuels indicates that there would be a substantial welfare gain from a revenue neutral tax reform which reduced tax rates on alcohol and tobacco and increased the tax rate on fuel. However, this conclusion has to be tempered by the fact that the low

TABLE 3: MCFs FOR EXCISE TAXES AND THE VAT: BENCHMARK

To summarize, our analysis indicates that smuggling, market power, and addiction have potentially large impacts on the MCFs, especially for tobacco taxes, and that interactions with other tax bases is especially important for calculating the MCFs for excise taxes.

These conclusions are based on a particular set of parameter values. To determine the sensitivity of our results to the choice of the parameter values, we recalculated the MCFs using the High Case and Low Case values for the parameters. Table 4 indicates that the MCFs are lower in the High Case. This means that the higher parameter values for the environmental and public expenditure externalities and addiction more than offset the use of the higher parameter values for market power and smuggling. The contributions of the various distortions to the MCFs are also generally larger (in absolute value) than in the Benchmark case. The only major anomaly is that the public expenditure externality now reduces the MCF for tobacco.

TABLE 4: MCFs FOR EXCISE TAXES AND THE VAT: HIGH DISTORTION CASE

	Excise Tax on Alcohol	*Excise Tax on Cigarettes*	*Excise Tax on Fuel*	*VAT*
MCFs	1.95	2.10	0.32	1.05
Contributions of Non-Tax Distortions to the MCFs:[a]				
Environmental Externalities, δ_E	-0.243	0.257	-0.016	-0.012
Public Expenditure Externalities, δ_G	-0.725	-0.220	-0.010	-0.021
Market Power, δ_M	0.388	0.442	-0.424	-0.004
Addiction, δ_A	-0.304	-0.6290.3x/TT4	1 E-0.009	0.168

TABLE 5: MCFS FOR EXCISE TAXES AND THE VAT: LOW DISTORTION CASE

	Excise Tax on Alcohol	*Excise Tax on Cigarettes*	*Excise Tax on Fuel*	*VAT*
MCFs	2.220	1.794	0.645	1.083

Contributions of Distortions to MCF:[a]
Environmental Externalities, $_E$

regions in each decile) from the Socio-Economic Survey (SES) 2002. Table 6 shows the computed distributional characteristics for all of the commodities for values of between 0.25 and 1.00, normalized so that the distributional characteristic for food is equal to one. Note that when = 0.25, alcohol, tobacco and fuel have almost identical distributional characteristic values, around 0.88. Therefore, with a moderate set of distributional weights, the real

TABLE 6: DISTRIBUTIONAL CHARACTERISTICS FOR THE MAJOR EXPENDITURE CATEGORIES IN THAILAND

	$= 0.00$	$= 0.25$	$= 0.50$	$= 1.00$
	Normalized Distributional Characteristics			
Food	1.000	1.00	1.000	1.000
Alcohol	1.000	0.882	0.835	0.762
Tobacco	1.000	0.885	0.821	0.707
Clothing	1.000	0.942	0.893	0.828
Health	1.000	0.940	0.849	0.721
Electricity and Fuels	1.000	0.957	0.874	0.754
Telecommunications	1.000	0.888	0.799	0.660
Housing and Water	1.000	0.987	0.922	0.824
Entertainment	1.000	0.904	0.801	0.659
Other	1.000	0.910	0.827	0.700
	SMCFs[a]			
Alcohol Excise	2.311	2.038	1.930	1.761
Tobacco Excise	2.183	1.932	1.792	1.543
Fuel Excise	0.533	0.510	0.465	0.402

[a]

R

Feldstein, M. (1972), "Distributional Equity and the Optimal Structure of Public Prices", *American Economics Review*, 62(1): 32-36.

Galbraith, J.W. and M. Kaiserman (1997), "Taxation, Smuggling and Demand for Cigarettes in Canada: Evidence for Time-Series Data", *Journal of Health Economics*, 16(3): 287-301.

Goel, R. and M. Morey (1995), "The Interdependence of Cigarette and Liquor Demand", *Southern Economic Journal*, 62(2): 451-459.

Grossman, M. (2004), "Individual Behaviors and Substance Use: The Role of Price", NBER working paper 10948, December.

Grossman, M., J. Sindelar, J. Mullahy, and R. Anderson (1993), "Policy Watch: Alcohol and Cigarette Taxes", *Journal of Economic Perspectives*, 7(4): 211-222.

Gruber, J and B. K szegi (2004), "Tax Incidence When Individuals Are Time-Inconsistent: The Case of Cigarette Excise Taxes", *Journal of Public Economics*, 88(9-10): 1959-1987.

Gruber, J, A. Sen, and M. Stabile (2002), "Estimating Price Elasticities when there is Smuggling: The Sensitivity of Smoking to Price in Canada", NBER working paper 8962.

Gruber, J. and S. Mullainathan (2005), "Do Cigarette Taxes Make Smokers Happier", *Advances in Economic Analysis and Policy*, 5(1): Article 4.

Guindon, G., S. Tobin, and D. Yach (2002), "Trends and Affordability of Cigarette Prices: Ample Room for Tax Increases and Related Health Gains", *Tobacco Control*, 11: 35-43.

International Telecommunication Union (2002) "Bits and Bahts: Thailand Internet Case Study," Geneva, Switzerland, March. available at www.itu.int/asean2001/reports/material/THA%20CS.pdf

Irvine, I. and W. Sims (1993), "The Welfare Effects of Alcohol Taxation" *Journal of Public Economics*, 52(1): 83-100.

Jones, A. (1989), "A Systems Approach to the Demand for Alcohol and Tobacco",

Liberati, P. (2001), "The Distributional Effects of Indirect Tax Changes in Italy", *International Tax and Public Finance*, 8(1): 27-51.

Madden, D. (1995), "Labour Supply, Commodity Demand and Marginal Tax Reform", *Economic Journal*, 105(429): 485-497.

Manning, W., E. Keeler, J. Newhouse, E. Sloss, and J. Wasserman (1989), "The Taxes of Sin: Do Smokers and Drinkers Pay Their Way?", *Journal of American Medical Association*, 261: 1604-1609.

Merriman, D., A. Yurekli, and F. Chaloupka (2000), "How Big is the Worldwide Cigarette Smuggling Problem?", in P. Jha and F. Chaloupka (eds.), *Tobacco Control in Developing Countries*, Oxford University Press, Oxford, Chapter 15: 365-392.

Ministry of Public Health, (2004), *Public Health in Thailand 1999-2004.* Ministry of Public Health, Bangkok.

National Statistical Office, (2002), *Socio-Economic Survey Data Tape 2002*, Bangkok.

National Statistical Office, (2003), Health and Welfare Survey Data Tape 2003, Bangkok.

Newbery, M. (2005), "Road User and Congestion Charges" in S. Cnossen (ed.) Theory and Practice of Excise Taxation - Smoking, Drinking, Gambling, Polluting, and Driving, Oxford University Press, Oxford, Chapter 7: 193-229.

Norton, D. (1988), "On the Economic Theory of Smuggling", *Economica* 55(217): 107-118.

O'Donoghue, T. and M. Rabin, (2006), "Optimal Sin Taxes", *Journal of Public Economics*, 90(10-11):1825-1849.

Parry, I. (2003), "On the Costs of Excise Taxes and Income Taxes in the UK", *International Tax and Public Finance*, 10(3): 281-304.

Parry, I. and K. Small (2005), "Does Britain or the United States Have the Right Gasoline Tax?", *American Economic Review*, 95(4): 1276-1289.

Pattamasiriwat, D. (1989), "A Study of h88(thslnw**(** at21(e)1.68-0.0044 2c0.005nsum).5(yp Tw**(**1y)-15.5(P)

Santoro, A. (no date), "Marginal Commodity Tax Reforms: A Survey" working paper, University of Milan-Bicocca.

Sarntisart, I. (2003), *Economic Analysis for Tobacco Control in Thailand*. A Report for Discussion "Health, Nutrition and Population, Tobacco Free Initiative," World Health Organization. (in Thai)

Smith, S. (2005), "Economic Issues in Alcohol Taxation" in S. Cnossen (ed.), *Theory and Practice of Excise Taxation - Smoking, Drinking, Gambling, Polluting, and Driving*, Oxford University Press, Oxford, Chapter 3, 56-83.

Sriyookrat, P. (2001), *A Study of Market Structure and Factor Affecting Demand for Alcoholic Beverages in Thailand*. A Thesis for Master of Science (Agricultural Economics), Department of Agricultural and Resource Economics, Kasetsart University.

Sunley, E., A. Yurekli, and F. Chaloupka (2000), "The Design, Administration, and Potential of Tobacco Excises" in P. Jha and F. Chaloupka (eds.), *Tobacco Control in Developing Countries*, Oxford University Press, Oxford, Chapter 17, 409-426.

Tanzi, V., and H. Zee (2000), "Tax Policy for Emerging Markets: Developing Countries", *National Tax Journal*, 53(2): 299-322.

TDRI (2005), *Alcoholic Beverage Consumption in Thailand*. Thailand Development Research Institute, Bangkok (in Thai).

TDRI (2006), "An Impact Assessment of Alcoholic Beverage Tax on Its Price and Consumption", Thailand Development Research Institute, Bangkok, (in Thai).

Thai Beverage PCL. (2005), *Prospectus: ThaiBev PCL*. available at www.bangkokbiznew.com/2005/ special/beerchang/ downloaded on Feb. 21, 2006 (in Thai).

Usher, D. (1986), "Tax Evasion and the Marginal Cost of Public Funds", *Economic Inquiry*, 24(4): 563-586.

Wade, S. (2003), "Price Responsiveness in the AEO2003 NEMS Residential and Commercial Buildings Sector Models", Energy Information Administration Publication. (www.eia.doe.gov/oiaf/analysispaper/elasticity/pdf/buildings.pdf downloaded on Aug. 30, 2006).

West, S. and R. Williams III (2007), "Optimal Taxation and Cross-Price Effects on Labor Supply: Estimates of the Optimal Gas Tax", *Journal of Public Economics*, 91(3-4): 593-617.

Young, D. and A. Bieli ska–Kwapisz (2002), "Alcohol and Beverage Prices" *National Tax Journal,* 55(1): 57-73.