January 1998

Recognising the Pitfalls in Tax Compliance Costs Research

John L. Turner

Malcolm Smith

Bruce Gurd
University of South Australia

Follow this and additional works at: http://epublications.bond.edu.au/rlj

Recognising the Pitfalls in Tax Compliance Costs Research

Abstract

Since the first study of tax compliance costs in 1973 there have been numerous studies of different taxes in many different countries. Unfortunately, most of these studies have adopted the same approach as the seminal study, even though the complexity of the issues involved rarely make this appropriate.

The wide variations in the outcomes of these studies suggest that the accuracy and reliability of the results are closely related to the method of research employed. This paper examines the best and worst of current practice, identifies common deficiencies and makes recommendations for improvements in the manner in which tax compliance research in conducted.

RECOGNISING THE PITFALLS
IN TAX COMPLIANCE COSTS RESEARCH

John L Turner

Malcolm Smith

Bruce Gurd

School of Accounting
University of South Australia

Since the first study of tax compliance costs in 1973 there have been numerous studies of different taxes in many different countries. Unfortunately, most of these studies have adopted the same approach as the seminal study, even though the complexity of the issues involved rarely makes this appropriate.

The wide variations in the outcomes of these studies suggest that the accuracy and reliability of the results are closely related to the method of research employed. This paper examines the best and worst of current practice, identifies common deficiencies and makes recommendations for improvements in the manner in which tax compliance research is conducted.

1   INTRODUCTION

The imposition of any tax results in three types of cost in addition to the "cost" to taxpayers of the tax itself. To the extent that a tax is really a shifting of spending power from one part of the community to another end, if the tax were perfectly efficient, it would not result in any reduction in the overall resources available to the community as a whole. However, no tax is perfectly efficient and, consequently, three cost by-products result:

62

J Turner, M Smith and B Gurd   Pitfalls in Tax Compliance Costs Research

- *administration costs:*   these are the costs to the government of collecting the tax. They include staff salaries and labour on-costs at all levels in the relevant tax collection agency; accommodation costs; information technology costs, travel, and sundry administration;

- *compliance costs:* the costs to taxpayers and others of paying taxes, over and above the tax itself (ie, the cost of learning about the tax, keeping records, preparing tax returns, dealing with tax auditors, resolving misunderstandings with the tax authorities, etc.); and

- *economic efficiency costs:* these result, as a tax imposed on any base will raise the relative cost of that base in such a way as to distort producer and consumer choices, with a consequent loss of efficiency relative to the perfectly free and unfettered market, which economic theory perceives as the ideal. This category of cost is often referred to as the "excess burden" of a tax.

This paper focuses on the second of these categories.

Twenty-five years ago the term "taxation compliance costs", in its presently accepted meaning, was virtually unknown. Since then there has been at least one major research study on this subject in each of the countries: Australia, Canada, Germany, the Netherlands, New Zealand, Spain, Sweden, the United Kingdom, and the United States. In most cases there have been two or more. In very recent years, compliance cost studies have also been contemplated or are underway in Japan, Singapore, Tunisia, and India. Allers[1] (1994) listed over sixty original research projects that had been undertaken into this topic, the overwhelming majority in the previous twenty years.

However, we argue that much of the recent research in this area has been poorly conducted and produced flawed outcomes. A combination of poor timing, inadequate sampling frames, poor response rates, researcher bias and an absence of cross validation in a number of studies has generated huge variability of measurement. This paper examines the major issues, identifies the flaws apparent in current research, and makes suggestions for future improvements in research in the tax compliance area.

---

[1]   Allers MA, *Administrative and Compliance Costs of Taxation and Public Transfers in the Netherlands* (1994 Wolters-Noordhoff).

63

(1998) 8 Revenue LJ

2   ISSUES

2-1   Definitions of tax compliance costs

Taxation compliance costs can be defined as "the costs incurred by taxpayers and third parties in meeting the requirements laid upon them in complying with a given structure and level of tax".[2] They include the costs incurred by individuals of acquiring sufficient knowledge to meet their legal obligations, the costs of compiling the necessary receipts and other records, and of completing tax returns; payments to professionals taxation advisers and return preparers; and incidental costs for postage, telephone, and travel in order to communicate with advisers or the tax authorities. For businesses, compliance costs include the cost of collecting, paying, and accounting for tax on products or profits of the enterprise, and on the wages and salaries of employees, together with the costs of acquiring the knowledge to enable this work to be done. In attempting to measure these we are concerned with opportunity costs - the value of the next best use to which the resources consumed might be put if the tax did not exist.

Four categories of compliance cost can be specified: taxpayer's time; unpaid helper's time; tax agent fees; and, incidental expenses. The most recent research by Evans, Ritchie, Tran-Nam & Walpole (1997b)[3] estimates compliance costs for the major Australian federal taxes during 1994-95 at $10.417 billion.

For the amount of time that personal taxpayers spent each year on complying with their income tax obligations, Evans et al, in an earlier study (1997a),[4] arrived at the following figures:

---

[2]   Sandford CT, Godwin M & Hardwick P, *Administrative and Compliance Costs of Taxation* (1989 Fiscal Publications) at 10.

[3]   Evans C, Ritchie K, Tran-Nam B & Walpole M, *A Report into Taxpayer Costs of Compliance* (November 1997 Australian Taxation Office ("ATO"))(1997b).

[4]   Evans C, Ritchie K, Tran-Nam B & Walpole M, *A Report into the Incremental Costs of Taxpayer Compliance* (January 1997 ATO)(1997a).

64

J Turner, M Smith and B Gurd   Pitfalls in Tax Compliance Costs Research

Figure 1: Average Number of Hours Per Annum Spent on Compliance

	Non-agent	Agent Client	Total
Learning about tax laws	1.8	1.7	1.7
Keeping records	3.8	11.2	8.4
Preparing tax return	2.2	1.8	1.9
Discussions with advisers	0.3	1.9	1.4
Answering Tax Authority queries etc	0.1	0.1	0.1
Paying taxes	0.3	0.5	0.4
Other	0.1	0.4	0.3
Total	**8.5**	**17.6**	**14.2**

The burden of record keeping, therefore, presents the major cost source for individuals complying with their personal income tax obligations. For small businesses, Allers (1994)[5] in a study of aggregate compliance costs for the Dutch business sector, finds that the most important components of business compliance costs are the value of time spent by owners/managers, the value of time spent by staff, and fees paid to outside advisers such as accountants. Each of these categories amounted to approximately 30% of the total compliance costs, with the share of cost components varying considerably between taxes. For the smallest category of business in his study, value added tax ("VAT") generated the highest compliance costs and accounted for 38% of the total, with over 60% of total compliance costs being borne by firms with less than five employees, these being the vast majority of firms in the Netherlands.

On a number of occasions in the past researchers have been content to let research subjects decide for themselves what are and are not compliance costs[6] and how costs should be apportioned between tax and non-tax applications. These issues are complex, even for experts, so that it appears unreasonable to leave such matters to untrained subjects who have no special interest in the subject area. Researchers need to specify in advance what it is they are trying to measure and how it is to be quantified.

Small businesses may believe that the only reason that they do any accounting is to meet the requirements of the Australian Tax Office ("ATO"); and if it was left up to them, they would do none of this irksome paperwork. However, there are numerous legal, governmental and managerial reasons why businesses should maintain some basic accounting records. For example,

---

[5]   Allers, above n 1.

[6]   For example, Gibson B & Wallschutzky IG "A Case Study Exploration of Taxation Compliance Issues in Small Business" paper presented at the ATO Conference on Taxpayer Compliance Research, 2-3 December 1993, Canberra.

65

payroll records are not only maintained to support the PAYE system, they are also required by industrial relations legislation, for product costing purposes, to support the preparation of general purpose financial statements, and to enable inquiries from employees to be answered and disputes to be avoided. Payroll records would have to be maintained by almost all businesses even if the PAYE system did not exist. Yet when asked about the costs of complying with the requirements of the PAYE tax collection system, many small business proprietors will simply allocate the whole of the time spent on maintaining payroll records to this category.

Likewise, even though their accountant may prepare general purpose financial statements, applications for bank loans, applications for licences and registrations, Corporate Affairs Commission annual returns, and various other non-taxation accounting reports, most small businesses will view the whole of their accountants' annual bills as relating to tax compliance. This is because, from their perspective, they only visit an accountant because the tax laws force them to do so! It seems very likely that a significant proportion of the $1,312 million income received by the accounting services industry for "general business and personal accounting" during 1995-96 (1997b)[7] would have been regarded by the payers as part of their taxation compliance costs.

The definition and recognition by taxpayers of what is a compliance cost is complex in itself and may not have been thoroughly addressed in some of the previous research.

2-2   Targeting research

Some of the research undertaken to date, especially in Australia, has failed to add to the body of knowledge on taxation compliance costs because it has been targeted inadequately. The population subject to such costs is large and diverse; it is essential that research carefully specifies the sub-population it proposes to study. The segmentation detailed in Figure 2 would provide a suitable sampling frame for targeted research:

---

[7]   Australian Bureau of Statistics ("ABS") *Legal and Accounting Services: Australia – 1995-96* (10 November 1997 ABS)(1997b) at 25.

66

J Turner, M Smith and B Gurd   Pitfalls in Tax Compliance Costs Research

Figure 2: Entities subject to Tax Compliance Costs (1996)

Individuals	*Approx Number 1995-96*
Individual not liable to income tax	8,400,000
Non-business individual taxpayers	
• pensioners	450,000
• salary & wage earners	5,500,000
• investors & landlords	1,150,000
• self-employed individuals	800,000
Business people	1,500,000
Total	*17,800,000*
Organisations	
a) Profit oriented Businesses	
Micro-enterprises: (<5 persons employed)	500,000
Small business employers: (5-19 persons employed)	380,000
Medium-sized Businesses: (20-99 persons employed)	26,000
Large Corporate Groups: (100+ persons employed)	5,000
b) Non-profit oriented Organisations	
Small clubs & associations: (no employees)	200,000
Small non-business employers: (1-99 employees)	85,000
Large government & non-profit entities: (100 employees)	4,000
Total:	*1,200,000*

It is also necessary to segment the population to a low enough level to make results meaningful.   More valid results will come from studying the compliance costs of one particular segment of the community rather than the compliance costs of a particular tax across the entire population; different tax types are too interrelated to be isolated successfully in this manner.

2-3   Measurement: the value of time

The valuation of time spent on tax compliance activities by business tends not to be particularly contentious; the time is costed in accordance with the relevant wage rate for that type of labour. However, in the case of the time of non-business taxpayers, unpaid helpers, self-employed workers and small business proprietors, where hourly wage rates are inapplicable, the problems become more difficult.

The cost estimates in Pope, Fayle and Duncanson (1990)[8] are based on individuals' own valuation of their time as reported in survey questionnaires.

---

[8]   Pope J, Fayle R & Duncanson M, *The Compliance Costs of Personal Income Tax in Australia* (1990 Australian Tax Research Foundation).

67

Three other compliance cost estimates, using the average hourly earnings for adults, the median value of time, and individual's own time valuation subject to a "realistic" maximum value (set by the researchers at $100 per hour) are also cited, less prominently. Subsequent studies by the same researchers adopt the same basic approach, but with even less consideration of alternative valuation methods.

Pope, Fayle and Chen (1991)[9] required business respondents to estimate the cost of staff time devoted to computational compliance functions, and also the number of hours used on this work. Using these figures the researchers derived the value of time that companies assigned to categories of their staff. The overall average figure for management and professional staff of $60 per hour represented annual salary and on-costs of around $125,000 per annum. For secretarial/bookkeeping and administrative staff, the figure of $25.40 per hour represented annual salary and on-costs of around $53,000 per annum. Pope et al (1991)[10] concluded from this that:

> Having regard to the specialist nature of the relevant tasks, the value of time figures tend to support the reasonableness of the respondents' estimates of both total costs and staff times costs, for the income tax computational compliance function.

The valuation of time includes on-costs. However, even allowing for on-costs, $125,000 per annum *average* salary expense for managerial/professional personnel, and $53,000 per annum for secretarial/administrative staff are high by today's standards. When equated to wage rates prevailing ten years ago, at the time of the survey, they are extremely high.

More significantly, these figures are only the overall averages for the entire sample. When various sub-populations are examined the responses are even more unbelievable. For company groups with turnover between $50 million and $100 million per annum, the average salary expense for managerial/professional personnel equates to around $240,000 per annum, while for companies with annual turnover in the range $20-50 million, the cost of a secretary or bookkeeper was apparently around $85,000 per annum.[11] Rather than confirming the validity of the responses, these calculations tend to suggest that at least some respondents seriously overstated their costs or understated the numbers of hours of work involved.

In trying to quantify compliance costs the determination of time devoted to

---

[9] Pope J, Fayle R & Chen D-L, *The Compliance Costs of Public Companies' Income Taxation in Australia, 1986/87* (1991 Australian Tax Research Foundation).
[10] Ibid at 55.
[11] Ibid, see table 4.13.

68

J Turner, M Smith and B Gurd   Pitfalls in Tax Compliance Costs Research

compliance activities is very much influenced by factors affecting a specific firm at any give time. It is evident that quite different results as to the value of time spent could have been obtained depending on when estimates were requested.

For micro-enterprises (sole traders and partnerships with no employees or sub-contractors subject to tax deduction at source), Pope et al suggest that annual compliance costs can be expected to average around $1,500 and are probably in the range $1,200 to $2,000. All of this category of taxpayer are expected to employ accountants, except those with accounting qualifications of their own.

For very small employers, with between one and four employees or sub-contractors, annual taxation compliance costs for income tax purposes will be much the same as those for micro-enterprises. However their compliance costs will be supplemented by the costs of administering the PAYE system. It is expected that these firms would have compliance costs each year which range between $1,600 and $2,800.

The accounting complexities of having to calculate one's income from running a business or being self-employed are such that it is very unlikely that it will be cost-effective for such taxpayers to look after all their own tax affairs. These taxpayers tend to work long hours and, unless they already have qualifications or experience in accounting or taxation, they are unlikely to have the incremental time that they would require to understand the field and undertake the additional bookkeeping and calculations. Consequently, necessity forces the self-employed tradesman, farmer, shopkeeper, or consultant to engage an accountant, even though the cost of employing such professionals is often regarded as outrageous.

Gibson and Wallschutzky (1993)[12] perceive that prior research recommends opportunity cost rather than incremental cost as the most appropriate measure. However, they suggest that neither of these notions has been fully understood by participants. Accordingly, they use a surrogate measure based on an expected hourly reward for time, though it is left to participants to determine how much time is associated with activities they deem to constitute tax compliance.

In the Plamondon study in Canada, (1995)[13] labour inputs for their Goods & Services Tax (GST) compliance cost calculation are costed at the wage rates provided in the interviews by the participants. In most cases the owners are not paid a wage or salary that reflects a comparable market rate for their

---

[12]   See above n 6 at 6.
[13]   Wurts B, "Report on the Plamondon compliance Cost Study for the Canadian Goods and Services Tax" (1995) in Sandford, see below n 16 at 308.

efforts. Usually the owners are compensated by the residual earnings of the business, which when divided by the hours worked, produces a figure that is significantly higher or lower than a realistic market rate for the type of bookkeeping work performed on compliance activities. In subsequent discussions with the interviewers used during the survey, the researchers concluded that the wage amounts supplied by respondents represented a realistic national average for the bookkeepers and owners in the study.

In the area of valuing people's time for unpaid work Evans et al (1997a)[14] adopt the following approaches:

- for unpaid helpers in small businesses, they use the clerk's wage rate as established by other survey responses;
- for the tax compliance activities of sole traders they use the rate established by responses against the category for "partners/trustees/directors"; and
- for non-business taxpayers they use three different methods (after-tax "reservation" wage rates; taxpayers' subjective opinions of the value of time spent; taxpayers' opinions of the appropriate fair monetary compensation) and then use the highest and lowest estimates as limits of a range of forecasts.

They rule out the use of average wage rates or average earnings expressed in hourly terms, despite their simplicity, because such an approach was not viewed as "conceptually sound, ... because it ignored all relevant demographic and economic characteristics in valuing personal time".

There is much to be said in favour of a simple and pragmatic approach to this issue. Irrespective of the research methodology adopted, the best that can be expected is a fairly imprecise estimate of the monetary value of compliance costs. Given that reasonably accurate estimates of average earnings for particular occupational groups and the workforce as a whole are already available, it is debatable whether researchers should devote substantial efforts to trying to determine what relatively small samples of the population *perceive* their time is worth. Evans et al (1997a)[15] and Sandford (1995)[16] both suggest that most participants appear to base their estimates for the value of time spent on this type or work on the earnings rates they have for paid employment.

The Australian Bureau of Statistics (ABS) produces regular statistics on average weekly earnings and the wage and salary rates applying in various

---

[14]   See above n 4.
[15]   Ibid.
[16]   Sandford C, *Tax Compliance Costs: Measurement and Policy* (1995 Fiscal Publications).

70

occupations. Researchers who fail to utilise these are working inefficiently. The major question to be addressed is whether it is most appropriate to use averages for the entire workforce, or averages for the particular occupational group that would normally undertake this type of work on a paid basis. In practice there is little difference between the two outcomes, and consequently, it may be preferable to use the more general value because of its universal recognition and for ease of comparison against the results of other studies.

This approach appears superior to using survey participants' own estimates for the value of their time, or using data on survey participants' actual earnings.

Evans et al (1997b)[17] used multiple different bases to calculate the value of unpaid time of various types: personal taxpayers' own time; unpaid helpers of personal taxpayers' time; sole traders' time; partners' time; trustees' time; unpaid helpers of business taxpayers' time; and company directors' time (even though paid directors fees, these have nothing to do with the time that these people devote to taxation matters - and would presumably be the same, even if they devoted no time to taxation compliance matters). The values placed on unpaid time by Evans et al (1997b)[18] varied from $11 per hour to $46 per hour. Given that there is no demonstrably right value that should be placed on unpaid time of any type, researchers should opt for the simplest, stable and transparent solution. This should improve the comparison with other research either in other countries or at other points in time.

Average weekly earnings after tax is one stable, transparent measure that could be used. ABS figures for May 1996 indicate that average hourly earnings vary significantly from one occupational group to another. Permanent male professional employees averaged $24.00 per hour while permanent female clerical and service workers averaged $11.70 per hour.[19] The average hourly earnings for all occupations and all categories of employee (permanent, temporary and casual) was $16.30. After income tax this figure would equate to approximately $12.50 per hour (23.3% average taxation - including Medicare levy - as applicable to a taxable income of $32,700 per annum). This would seem to be a reasonable figure to use to value all unpaid time spent by people on taxation compliance activities. At the time of the Evans et al research this figure would have been close to $12.00 per hour (during the 12 months to May 1996 there was a 4.1% increase in average weekly earnings while average hours worked stayed fairly constant). If this figure had been used uniformly by these researchers, the overall cost of compliance calculated would have dropped by $2 billion!

---

[17]   See above n 3.
[18]   Ibid.
[19]   ABS, *Employee Earnings and Hours: Australia - May 1996* (3 April 1997 ABS)(1997a) at 32.

71

2-4   Double counting

Researchers have a tendency to multiply the average cost reported by their respondents by the numbers of taxpayers in the relevant sub-population as reported in ATO statistics. While this seems sensible and logical at first glance, the results seem to demonstrate that the procedure is gravely flawed. For example, Evans et al (1997b)[20] reported that the expenditure by personal taxpayers on paid tax advice during 1994-95 was $453 million and the expenditure by business taxpayers was $2,842 million giving a total of $3.3 billion. However, the ABS industry statistics for the following year show that the entire Australian accounting services industry had an annual turnover of only $4.4 billion and only 32% of this was generated from the provision of taxation services. The balance came from general business & personal accounting (27%), auditing (18%), insolvency/reconstruction (5%), investment financial planning advice (3%) and miscellaneous other accounting services (5%).[21]

The main problem seems to be that the ATO statistics report the number of tax returns lodged by various types of entities, and many businesses operate under the umbrella of a number of entities, ie, one business lodges several tax returns. For example a medium sized family owned business may well have one or more registered companies, one or two family trusts, a superannuation fund and perhaps even partnerships. When a compliance cost questionnaire is addressed to any one of these, the recipient small business proprietor is probably not in a position to distinguish the costs associated with any one entity from the costs of the whole structure - only one bill is received from the accountant, and this is not itemised in such a way as to enable this information to be gleaned. In fact, the recipient probably does not even recognise that the researchers are only asking about the costs of one entity, and instead assumes that the researcher is interested in the whole of the business' compliance costs. While Evans et al "grossed up" their figures for 2,450,000 business taxpayers, ABS figures indicate that there are only around one million separate businesses in Australia.

Secondly, small business proprietors generally have their tax agents prepare their personal tax returns at the same time as those of the owning entities. Once again it is normal practice for the accountants to provide only one all-encompassing bill for these services. Consequently, it is not unreasonable to expect that some taxpayers who receive compliance cost questionnaires asking about the cost of preparing their personal tax returns will be unable to distinguish these costs from their business' tax compliance costs and will quote the total figure. Indeed, the proprietors may not even recognise such a

---

20   See above n 3.
21   ABS, see above n 19 at 25.

72

J Turner, M Smith and B Gurd   Pitfalls in Tax Compliance Costs Research

distinction. The result is likely to be the inclusion of substantial amounts of "business taxation compliance costs" in the figures for personal taxation.

While Evans et al (1997b)[22] suggested a total amount paid for taxation advice in 1994-95 of $3,296 million and the ABS reported a total income from taxation work for the accounting services industry of just $1,575 million in the following year, the discrepancy between the two findings may not be as great as it appears on first glance. The Evans et al (1997b)[23] figure was compiled from the following components:

Figure 4: Amounts Paid for Taxation Advice   1994-95

		Average Cost ($)	Total Cost ($ m)
Personal Taxpayers:	Low Income	77	138
	Medium Income	102	249
	High Income	175	66
Business Taxpayers:	Small Businesses	509	870
	Medium Businesses	2,808	1,560
	Large Businesses	34,716	413
Total:			**3,296**

It is reasonable to expect that the major component of tax adviser fees paid by large businesses and a component of the amounts paid by medium-sized businesses would have been paid to the legal profession, not to accountants. The ABS survey of the legal services industry also undertaken for 1995-96 did not provide a separate category for taxation work in its split of income from different sources. Any taxation work undertaken by the legal profession would have fallen under the headings "Commercial, finance & business" and/or "Other fields" which totalled $2,374 million. Therefore, it would appear unlikely that taxation advice costs could have exceeded $1,000 million. If this figure is added to the value of taxation work undertaken by the accounting services industry, the combined total of $2.6 billion is still substantially less than the $3.3 billion suggested by Evans et al.

2-5   Measurement: valuation of corresponding benefits

Pope, Fayle & Chen (1993b)[24] assess the value of cash flow benefits for businesses arising out of the sales tax system. While the estimated cash flow costs and benefits are taken into account in calculating the "net compliance

---

[22]   See above n 3.

[23]   Ibid.

[24]   Pope J, Fayle R & Chen D-L, *The Compliance Costs of Wholesale Sales Tax in Australia* (1993 Australian Tax Research Foundation)(1993b).

73

costs" of the system, the impact of tax deductibility is not. Because expenditure incurred in complying with the tax laws is allowable as a deduction for income tax purposes, an off-setting benefit for business taxpayers may be the reduction in income tax that generally follows. For companies this would have served to reduce the cash impact of costs by 39% and for individuals it could have been as much as 47%. It might be argued that the effect of the tax deductibility of compliance costs is similar in concept to that of cash flow benefits. Gross compliance costs could therefore be discounted by the value of the benefits of tax deductibility (a maximum of 39% in the year under consideration).

A major feature of the recently released Evans et al study (1997b)[25] is the separate calculation and reporting of compliance costs from two separate perspectives:

- "social compliance costs" - the costs to the economy that arise as a result of taxpayers complying with taxation, as measured before any off-setting benefits are taken into account.
- "taxpayer compliance costs" - taxpayers are able to obtain a tax deduction for many of their compliance costs, and also derive certain cash flow benefits. When these are netted off against the social compliance costs, the result is a measure of the aggregate compliance costs faced by taxpayers.

These researchers make the point that both tax deductibility and cash flow benefits represent transfers of value within the economy which do not reduce the compliance costs to the economy, only to individuals or businesses.[26] They recognise that this is a break with the approaches adopted by most researchers in the past:[27]

> The ATAX research departs significantly from the previous studies in taking into account the tax deductibility of certain of the compliance cost components. Apart from a study in the Netherlands by Allers, no previous research has done this...

The latest Evans et al study is also unique in calculating cash flow benefits enjoyed (and cash flow costs incurred) by individual taxpayers. However they did this using the assumption that, on average, income tax refunds are made three months after the end of the tax year.[28] With the widespread use of the Electronic Lodgment Service in Australia for 1994-95 personal income tax returns, and the ability of that system to generate tax refunds within two weeks of lodgment of the relevant return, this assumption seems out of place.

---

[25] See above n 3.
[26] Ibid at 4.
[27] Ibid at 64.
[28] Ibid at 25.

74

J Turner, M Smith and B Gurd   Pitfalls in Tax Compliance Costs Research

If the assumption had been that, on average, tax refunds are made two months after the end of the financial year, this would have changed the resulting benefit calculation by around $36 million.

2-6   Misleading reporting

For the most part, survey results are reported as simple arithmetic means with few, if any details of the amount of dispersion of responses around the average. When there are indications of the level of differentiation between values, they usually suggest massive differences from company to company. For example, Pope et al (1991) report that when they asked about the cost of specific additional information compiled for company income tax returns:[29] "The marginal costs of maintaining these specific records were on average $39,596 per company, ranging from a low of $100 to a high of $1 million for the tax year 1986/87". When responses cover such a broad range, averages become largely meaningless.

The Pope, Fayle & Chen (1994)[30] survey relates to company income tax. It assumes that companies listed in the Telecom Yellow Pages telephone directory are representative of the taxpaying population of companies as a whole. It also assumes that respondents were in "knowledgeable and responsible" positions within their companies and answered questions "sincerely and as accurately as possible".[31] A pilot survey was undertaken in July 1992 and the main postal questionnaire survey of 3,000 companies was undertaken in October/November 1992. 3,000 survey instruments were issued but only 431 responses were useable for the key question on internal compliance costs.[32] The researchers compare the characteristics of all the responses against the general population, but then discard all responses from groups of companies from their subsequent analysis, with the result that one third of all responses do not appear in the analysis. While the percentage of responses from upper tax remittance ranges are between five and nine times those appropriate to the population at large, the response rate from the remittance range $1 to $1,999 was less than one-fifth of what it should have been.[33]

Pope et al (1994)[34] acknowledge the absence of correlation between compliance costs and tax remittance levels:

---

[29]   Pope, Fayle & Chen, see above n 9 at 49.
[30]   Pope J, Fayle R & Chen D-L, *The Compliance Costs of Companies' Income Taxation in Australia* (1994 Australian Tax Research Foundation) at 33.
[31]   Ibid.
[32]   Ibid at 59.
[33]   Ibid at 49.
[34]   Ibid at 66.

75

> Expressing total compliance costs as a percentage of tax paid may be less appropriate for company income tax than for other Commonwealth taxes. This is because [of] the fixed cost element of compliance costs for company income tax ...

However, this does not prevent them deriving estimated total compliance costs by multiplying the mean compliance cost figure by the number of taxpayers for each category of annual tax remitted. Even if the survey results accurately reflect the costs of the participant companies, the extrapolation to the entire population is only justified if the respondents are typical of the taxpayer population at large. The exclusion of groups of companies ensured that this was not in fact the case.

3   PROBLEMS WITH QUESTIONNAIRE BASED STUDIES

If research is to produce quality results it is not only essential that the necessary theoretical foundations be laid but that adequate preparation is carried out. Researchers need to have a thorough understanding of the tax system and they need to know their target population. The researchers must resist the temptation to leap into field-work until such time as they have armed themselves with the appropriate background information provided by the taxation compliance cost literature and the statistical information available in Australia from ATO and ABS sources.

There are two main types of data collection technique that can be used in cost of compliance research: direct observation and surveys. Direct observation is very costly since it requires that an observer trained in time and motion study record each and every tax compliance activity. Consequently, survey techniques have been used more generally. Surveys can be classified into three categories: face-to-face; telephone; and mail surveys. The latter have the advantage of having the lowest unit cost but they suffer the following drawbacks:

- response rates are lower than with other types of survey;
- the feasible questionnaire length is shorter;
- the quality of the data collected tends to be poor; and
- there is often a biased respondent distribution.

In view of these shortcomings it is imperative that researchers contemplating using mail surveys appreciate the need to:

- focus their research on a manageable subject area;
- make their survey instrument as brief as possible;
- validate their findings with data from other sources; and
- take all possible steps to ensure that response rates are relatively high.

76

J Turner, M Smith and B Gurd   Pitfalls in Tax Compliance Costs Research

While most overseas researchers have followed Sandford (1973)[35] in using postal questionnaires to gather data on taxation compliance costs, their implementation has highlighted the extremes of research practice. Best practice is illustrated by the team of UK researchers operating out of Bath University who have undertaken a total of eight surveys using postal questionnaires (Godwin, 1995).[36] Four of these have involved large scale sampling of mass taxpayer populations while the other four entailed mailing survey instruments to all or high proportions of taxpayers subject to specialty taxes (eg, tobacco excise and petroleum revenue tax). The sample sizes for the large surveys ranged from 3,000 to 9,000 with response rates varying between 24% and 43%. With the surveys of specialist taxpayer populations, mail-outs ranged from 7 to 369 and response rates varied between 30% and 100%.

A feature of the work of this team was a heavy reliance on supplementary interviews, either face-to-face or telephone, and comprehensive preliminary research and data analysis to verify the validity of the main surveys. All questionnaires were pre-piloted and augmented by interviews with respondents, professional advisers and tax officials. However, this care made the research somewhat costly with a grant of the equivalent of more than US$200,000 needed to pay for the largest of the projects.

Another feature of the UK approach is the high level of co-operation between the researchers and the revenue authorities. Samples were drawn from the official registers of taxpayers. However, taxpayer confidentiality was safeguarded by procedures which had the researchers supply unaddressed mailings to the tax collection authorities, who addressed and posted the questionnaires and reminders. Completed questionnaires were returned direct to the researchers. The reminder system necessitated the use of a code number on each questionnaire to ensure that respondents were not bothered with further mailings.

Care was taken with the appearance and presentation of all questionnaires and supporting literature. Two reminders were sent, the second enclosing a further copy of the questionnaire. Trade associations were asked to endorse the project and favourable news media coverage was organised. A reverse-charge telephone "hot-line" was activated during survey periods so that prospective respondents could obtain help and encouragement in completing the questionnaires. Although this service was not greatly used, it was felt that its very existence added to the impression of professionalism with which the survey was carried out and thus, indirectly, encouraged other respondents to reply.

---

[35]   Sandford CT, *Hidden Costs of Taxation* (1973 Institute of Fiscal Studies).
[36]   Godwin M, "The compliance Costs of the United Kingdom Tax System" (1995) in Sandford, see above n 16.

77

Godwin states that it would have been highly desirable to incorporate some system to enable follow-up of non-respondents, preferably by telephone. A brief telephone survey of around 10% of non-respondents was expected to have supplied a more substantial indication of whether response was biased in any systematic way. At least one telephone reminder was expected to elicit some key information even from sample members who were unwilling to complete the whole questionnaire.

The Bath researchers encountered small percentages of respondents who reported costs which were surprisingly high for the category of taxpayer to which they belonged. Where possible these atypical responses were followed up and queried in detail. In some cases they proved to be exaggerated, or estimated on a poor basis, but in other cases such follow-ups revealed particular problems which affected a small percentage of taxpayers and pointed to a need for reform to the taxation system.

In hindsight, Godwin reported he would have put more emphasis on a survey of accountants. Subsequent experience has revealed that interviews with small firms advisers "on the ground" are especially informative and useful. Likewise, bearing in mind the extensive resource requirements needed for data preparation, he recommends that future researchers economise on sample size.

When Sandford (1973)[37] initiated the modern study of taxation compliance cost by undertaking a mail survey of personal income taxpayers in the UK he considered a range of options for data gathering before deciding to conduct a postal questionnaire. Since then subsequent researchers have tended to choose the methodology first and then to formulate the research questions, identify the survey population, and decide on the timing. The choice of methodology prior to undertaking the appropriate background research is almost always a mistake. Recent research (eg, Vaillancourt and Blais, 1995;[38] Godwin, 1995;[39] and Wurts, 1995[40]) has demonstrated what can be achieved relatively cheaply using alternative methodologies.

Postal questionnaires have their role to play, but many questions involving business taxation compliance costs are far too complex to be condensed into a questionnaire short enough and simple enough to gain an acceptable response rate.

Alternative methodologies, including interview methods and log-book studies may be preferable. Secondary statistical analysis may also offer substantial

---

[37] See above n 35.

[38] Vaillancourt V & Blais E, "The Evolution of Compliance Time of Personal Income Tax-filers in Canada 1971-1993" (1995) in Sandford, see above n 16.

[39] See above n 36.

[40] See above n 13.

J Turner, M Smith and B Gurd   Pitfalls in Tax Compliance Costs Research

scope, especially if linked to the data bases of the tax authorities and supplemented by additional field work on the precise factors that contribute to the compliance costs of particular categories of taxpayer. The second Evans et al study (1997b)[41] begins to show the way in this area. Their secondary analysis of compliance costs is based primarily upon the data obtained from a survey of just over 10,000 personal and business taxpayers in September - November 1995 and outlined in their first report (1997a).[42] However, the team report that:[43]

> Gaps in the data set have been made good by means, including supplementary information from the ATO, data on wage rates from the private sector and limited access to some of the original survey participants who expressed a willingness to be contacted if additional information was required.

A number of common areas of concern are apparent in recent tax compliance mail surveys:

3-1   **Timing**

Timing is important with taxation compliance costs research. Many activities in taxation compliance only occur once a year; many of the players have seasonal peaks of workload that need to be taken into account. Researchers need to plan their research well in advance and ensure that it is carried out at the right time of the year. A few weeks either way may be critical to the eventual results.

The questionnaires for the Pope et al study (1990)[44] were mailed out to subjects in April/May yet most Australian individual taxpayers complete their annual income tax returns in July and August of each year. By April or May many taxpayers will have hazy memories of the hour or two spent completing a tax return nine months before.

Pope et al (1993a)[45] conducted a survey of compliance costs for four specific types of tax in April/June 1991. However, the major work associated with the PAYE system occurs around the end of the financial year when group certificates have to be prepared and issued and a reconciliation statement must be completed and lodged with the ATO. This work occurs in the last week of June and throughout July. Consequently the survey was undertaken

---

[41]   See above n 3.
[42]   See above n 4.
[43]   See above n 3 at 2.
[44]   See above n 8.
[45]   Pope J, Fayle R & Chen D-L, *The Compliance Costs of Employment-Related Taxes in Australia* (1993 Australian Tax Research Foundation)(1993a).

79

(1998) 8 Revenue LJ

nine months too late for the 1989/90 year or three months too early for the 1990/91 year.

The Pope et al (1993b)[46] survey of the compliance costs associated with wholesale sales taxes was undertaken in November/December 1991. Although the sales tax collection cycle is a monthly one, unlike most of the taxes for which Australian compliance cost studies have been carried out, the business cycle needs to be taken into account. Sales Tax is collected by wholesalers, retailers, importers and manufacturers. November and December are likely to be particularly busy months for these groups because Christmas is the time of the year with highest retail sales levels. It is to be expected that November would be the busiest month of the year for wholesalers, importers and manufacturers and December that for retailers. Undertaking the survey in these months may have had an impact on the response rate. This particular survey was undertaken at a time when there was considerable debate on the subject of introducing a goods and services tax along the lines of the value added taxes operating in most European countries. This might have coloured the perceptions of survey respondents.

3-2   Response bias

The most successful research efforts appear to have had the active co-operation of the relevant tax authorities. If the tax authorities had the necessary expertise in social science research methodologies it is conceivable that they could carry out cost of compliance research without the assistance of outside academics. However, the reverse does not appear to be true. The tax authorities have access to information, expertise, practical experience, resources and contacts which are essential if taxation compliance cost studies are to be successful.

The response rate reported by Pope et al (1990)[47] was a mere 16.3%: well below that which most social scientists would consider acceptable. No reminders were sent to those who failed to respond, and the survey methodology adopted was such that there was no means of identifying who had replied. A follow-up would have entailed sending a reminder to all 7,000 persons in the survey. Neuman (1994)[48] suggests that any response rate below 50% should be treated with caution. UK surveys of personal taxation compliance costs have achieved response rates of 30-45% and these researchers[49] were still concerned that the respondents may not have been typical.

---

[46]   See above n 24.
[47]   See above n 8.
[48]   Neuman WL, *Social Research Methods: Qualitative and Quantitative Approaches* (1994 Allyn & Bacon 2nd edn).
[49]   See Sandford, above n 16 at 379.

80

J Turner, M Smith and B Gurd   Pitfalls in Tax Compliance Costs Research

Pope et al (1991)[50] reveal similar flaws in their approach: The response rate from listed companies is only 16%, but no follow-up procedure is used. Over two-thirds of the responses were in respect of groups of wholly-owned companies. This should have been an important factor for the researchers to have taken into account in their analysis of the results, but appears to have been overlooked.

The survey responses in Pope et al (1990)[51] showed a strong bias towards taxpayers earning above-average incomes. While only 1.7% of the population had annual incomes over $50,000, 10.3% of the respondents fell into this category. There was also a poor response from taxpayers in the 16-24 age group, with the response rate only one-fifth of what should have been expected. The responses also showed a significant bias to male taxpayers.

A substantial pilot study undertaken by Evans et al (1997a)[52] demonstrated conclusively that a better response was achieved for business taxpayers if the questionnaire was accompanied by a covering letter from the Commissioner of Taxation rather than a similarly worded letter from a Professor of Law at the University of New South Wales, with response rates of 20% and 16%, respectively for individual taxpayers, and 28% and 18%, respectively, for business taxpayers.

Pope et al (1991)[53] acknowledged that there had been two recently published studies into the compliance costs associated with corporate taxation, one in the UK and one in the USA, however, they ignored the latter. The authors' comparison with Sandford's UK study was flawed because the latter considers all companies, large and small, whereas the Australian study was to be confined to public companies (which tend to be substantially larger than private companies) and, in practice, grossly over-represented the largest of public companies because of sampling and response bias. The end result is that the overall Australian mean compliance cost estimate "is around 43 times higher than that of the UK".[54]

3-3   Sampling bias

The Pope et al (1993b)[55] investigation of wholesale sales tax (WST) used a sample of businesses selected from the Yellow Pages telephone directory using "industries/sectors which were potentially liable for WST",[56] even though the best source of a sampling frame would have been the ATO itself.

50	See above n 9.
51	See above n 8.
52	See above n 4.
53	See above n 9.
54	Ibid at 100.
55	See above n 24.
56	Ibid at p. 21.

81

The researchers stated that it was not considered possible to obtain a suitable sample from the ATO because that office "had declined similar requests for three earlier studies".[57] However, a request for a sample of sales tax payers may have been more successful because the details available within the ATO would have been more current.

With income tax, the ATO usually only deals with a taxpayer on an annual basis and with business clients this tends to be via tax agents. Consequently, while the business or residential address of a taxpayer is supplied on the tax return, this may well be out of date, or it may not have been put into the ATO's computer system, not being necessary for operational purposes. However, with sales tax, the ATO tends to deal with the taxpayer directly at their place of business and the opportunity exists for the addresses to be updated on a monthly basis. Although the ATO is naturally concerned about privacy issues, and is constrained by the secrecy provisions of the tax laws, examples from overseas[58] demonstrate what can be done if suitable "blind" sampling methodologies are used.

4   ALTERNATIVE APPROACHES

4-1   Log book studies

While log books have been used elsewhere, the only tax compliance research project to place prime emphasis on this methodology was reported by the Australian Bureau of Statistics (1993).[59] The Federal government initiated the development of a program for the reduction of paperwork and regulatory reporting, and in early 1991 the Department of Industry, Technology and Regional Development (DITARD) commissioned the ABS to design and conduct a study to obtain information to enable identification of "problem" areas for which DITARD could propose solutions in an effort to reduce the workload placed by government on small businesses.

Businesses included in the study were selected from the ABS Business Register. Each of the selected businesses was sent a letter inviting them to participate in the study for a period of three months. Almost 3,000 businesses were approached to achieve the required number of participants within each industry and state. Although the researchers perceived there to be no particular bias introduced by this selection method the danger of introducing self-selection sampling bias is real and might have suggested the use of some form of cross-validation.

---

[57]   Ibid.

[58]   In particular, Sandford et al, see above n 2.

[59]   ABS, *Study of the Workload Placed on Small Business by Government Paperwork 1992: Final Report* (June 1993 ABS).

82

J Turner, M Smith and B Gurd   Pitfalls in Tax Compliance Costs Research

A 20-40 minute structured interview was conducted with each participant. The purpose of the study was explained in detail and each was provided with a log book for recording all government paperwork completed during the following three months. Of the 219 businesses who participated in the initial interviews, 208 returned completed log books.

Small business personnel participating in the study had differing perceptions as to what constituted time spent on government paperwork. Some felt that all of the time taken to prepare data prior to completing the forms (such as keeping accounts) should be included, while others included little or no preparation time. The self-reported estimates of time taken provided by the participants were accepted by the ABS at face value. A number of businesses felt that wages books were kept exclusively to assist them in the completion of government forms such as those required for group tax, and that all time spent "doing the books" should be included in the estimates for these forms.

Estimates of the cost per hour submitted by businesses for completing paperwork varied between $8 and $120, demonstrating again the difficulties associated with relying on respondents' valuations for unpaid time. However, in spite of this deficiency, the study does provide some information which assists in understanding the subject of taxation compliance costs. For example, the median time spent on government paperwork per quarter was 4.5 hours with 74% of businesses spending 10 hours or less on this activity. 93% of participants either employed an accountant or were accountants themselves, and the median cost of external accounting services was $1,250 per annum.

4-2   Case studies

A number of studies have claimed to have utilised the case study methodology to gather information on tax compliance costs, but only that reported in Gibson and Wallschutzky (1993)[60] can claim the degree of depth normally associated with this approach to research. The research was jointly funded by the ATO and the then Department of Industry, Technology and Commerce.

Gibson and Wallschutzky consider the case study technique to be the appropriate research methodology when the focus is on contemporary events; there is little control possible over behavioural events; and the research questions are concerned with how, why or what, as opposed to who, where and how many. The methodology was chosen because it best suited the purposes of the investigation. Perhaps the most compelling reason for adopting this approach was a recognition that small business operations are

---

[60]   See above n 6.

83

widely acknowledged to be heavily influenced by behavioural factors - especially those pertaining to the individuals who own and manage firms. Because small firms were recognised as being a non-homogenous group, the researchers expected to find diversity rather than conformity, and consequently the multiple case study approach seemed appropriate.

Twelve participants were involved in a series of semi-structured interviews between November 1991 and November 1992. An initial interview and four subsequent quarterly interviews were undertaken with each selected small business. The participating firms were also asked to maintain weekly dairies in which they recorded the time spent on compliance tasks and any problems they encountered with taxation issues. Diary entries were discussed during the quarterly interviews.

Participants were selected from a pool of volunteers, with supplementary data gathered from separate group discussions with ATO staff, public accountants, and business proprietors from interstate and country areas. It is possible that the participant selection process may have been biased in favour of atypical small businesses. Most small businesses do not volunteer to participate in academic research initiatives. This, and the small sample of only twelve firms makes it unwise to generalise the findings to all small businesses. The data provided by diary entries was considered particularly suspect by the researchers.

This research offers the following warnings for subsequent studies:

- it was evident that participants' perceptions about taxes change from time to time and differ according to recent experience;
- compliance "problem areas" appeared to be associated with poor record keeping practices on the part of the businesses concerned;
- patterns of compliance work were found to be highly irregular throughout the year;
- there is a need for a concise definition of a compliance activity if it is to be the critical variable in any research project;
- there are potential problems in identifying the right person to respond to questionnaires and in generalising results based on that type of data;
- the timing of "one-shot" research is likely to have a material effect on the reported outcomes;
- participants' estimates of the opportunity cost of their labour was not consistent over time, and researchers seem unlikely to achieve consistency on this question;
- it would appear to be particularly dangerous to attempt to determine a single measure of compliance costs to be used across all small businesses.

Before too much further research is carried out on compliance costs, the researchers recommend that consideration should be given to two issues:

- a more precise understanding of what constitutes "compliance costs"; and
- how best to obtain reliable estimates of time spent on compliance activities that are not dependent upon the research instrument used, the timing or the morale of the respondents.

4-3   Personal interviews

Wurts (1995)[61] reports on a Canadian study which considered that personal interviews were the most effective method for gathering detailed information about goods and services tax (GST) compliance costs. However, he also considered that on a per-respondent basis, it was the most costly method. Consequently, the designated sample size for this study was much smaller than in earlier studies that utilised mail-back questionnaires. Despite this, the level of detail achieved strengthened confidence in the conclusions of the study.

The major advantage of the methodology was perceived to be the increased level of accuracy and reliability consequent upon the trust established between the interviewer and participant. Whereas previous research only obtained response rates of 25-30%, the use of accounting firms to do the interviewing resulted in an almost 100% response rate (only one business refused to participate), virtually eliminating problems of non-response bias.

The principal disadvantage of the methodology chosen was that the selected sample may not have been representative of the entire population being studied. However, each accounting firm used had between 500 and 1,000 clients and was carefully selected to participate because it was expected that their client lists were generally representative of the population as a whole. At the conclusion of the project, the interviewers considered that the compliance costs for the 200 participants were indicative of what they would expect to find had all 10,000 of their clients been included in the survey.

The target population for the study paper was established as small, profit-oriented businesses with sales turnovers below C$5 million. However, the sample did not adequately represent businesses at the lowest end of the population; those with revenues below C$50,000 were highly under-represented because they were less likely to use the services of an accounting firm. There were virtually no participants with turnovers under C$50,000 or over C$5 million.

---

[61]   See above n 13.

Many participants were angry about the GST, but this was perceived not to affect the validity of their responses during the interviews. The interviewers noted that clients rarely sought advice on GST issues, restricting their involvement to year-end work in the preparation of financial statements and income tax returns. In this regard, survey participants did not enjoy any particular advantage with respect to GST compliance over other businesses that do not use independent accountants. Based on the de-briefing of interviewers the researchers concluded:

- participants were pleased to participate in the study;
- around 90% were interested in receiving a copy of the summary report and a similar number expressed their willingness to participate in follow-up studies;
- the interview was essential in explaining the technical subject matter and to probe for details;
- the trust between the interviewer and participant (accountant and client) was critical to obtaining accurate and complete responses;
- the degree of honesty and co-operation among the participants exceeded interviewer expectations; and
- the use of personal interviews added greatly to the precision of the compliance estimates provided for each small business.

5   DISCUSSION AND FUTURE RESEARCH

Although many past research efforts have failed because they have attempted to cover too large a field, it is impossible to avoid adopting a wide view of a particular taxpayer's compliance costs. In spite of its history, the study of taxation compliance costs should not be viewed as a branch of economics. It is just as properly viewed as a field of sociology, psychology, accountancy, or public policy research. A multi-disciplinary approach would appear to offer the greatest potential for real insights.

It is not possible to study taxation compliance costs successfully in isolation from other aspects of the taxation system nor in isolation from other aspects of the subjects dealings with the government. For example, attempts to study the compliance costs of FBT without consideration of the wider objectives of the tax would lead to a totally worthless report.

Too much of the research work in tax compliance has been atheoretical. Researchers need to discard exploratory research and take the time to formulate some specific theoretical models of the factors that actually cause compliance costs, in order to use field research to test the accuracy of these models. In the past the field research has been undertaken first and then an attempt made to find statistical correlations between the various items of data gathered. This has confused correlation and causation.

86

J Turner, M Smith and B Gurd   Pitfalls in Tax Compliance Costs Research

Most past research has attempted to measure tax compliance costs as if they were a static, non-varying characteristic of the economy. The most interesting feature of compliance costs from a public policy perspective is the fact that they are not constant and do vary over time. Models of compliance cost behaviour should not be confined to those factors that dictate the level of costs at a particular point in time, they should take the next step and attempt to explain why compliance costs change over time.

The evidence from overseas suggests that changes in the tax structure are an important component, but also point to the operation of a learning curve effect which tends to drive these costs down in the long run. Sandford (1995)[62] maintains that stability in taxation minimises temporary costs, both learning and start-up costs, for administrators and taxpayers.

Timing changes that accord as closely as possible with the convenience of taxpayers will also minimise costs. Whenever feasible, tax collectors should use common bases, common definitions, and common procedures for different taxes, since harmonisation of processes can also reduce costs. Sandford (1995)[63] maintains that borderlines within a tax create compliance costs, as do borderlines between taxes, because they offer an incentive for taxpayers to transfer between them. Such cross-over opportunities may add to compliance and administrative costs as well as causing economic distortions. All these factors need to be considered in formulating theoretical models to guide future empirical research.

---

[62]   See above n 16.

[63]   Ibid.

87