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# Studying the Studies: An overview of recent research into taxation operating costs

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## **Abstract**

Studies into the operating costs of taxation – compliance costs for taxpayers and administrative costs for revenue authorities – have flourished in recent years. This paper provides an overview of these studies, and reveals both the breadth and the depth of the research in this area. The paper focuses upon studies that have taken place in the last 20 years or so, although the paper also briefly considers the broader historical context, including the reasons why research into tax operating costs has apparently flourished after some initial neglect.

A summary of most of the major (and some minor) administrative and compliance cost studies that have been published (and some that have not been published) since 1980 is contained in an appendix. This summary highlights the geographical spread of operating cost research, the variety of taxes and aspects of tax systems that have been studied, and the range of methodologies employed. The outcomes of the research are also summarised.

A key thesis of the paper is that tax law design should not take place without clear recognition of the impact of the proposed changes on the operating costs of the tax system. Sensible tax law design must be informed by an understanding of the impact that design will have on the burden that taxpayers will face and the administrative costs that the revenue authority will be required to carry.

## **I. INTRODUCTION**

Recognition of the existence and impact of tax operating costs<sup>1</sup> is not the recent phenomenon we sometimes assume it to be. As long ago as the eighteenth century, the latter three of Adam Smith's four well-known maxims of good tax practice (equity, certainty, convenience and economy) emphasised the impact of tax operating costs on the tax system (Smith, 1776, pp. 361-362). And literature contains many historical references to the burden imposed upon taxpayers as a result of their taxation obligations. For example, half a century after Smith's discourse, William Cobbett noted that farmers not only faced the cost of paying tax of "2d in the pound" for growing hops, but that "...in all such cases, there falls upon the consumer the expenses attending the paying of the tax...[such as] the trouble it gives him, and the rules he is compelled to obey in the drying and bagging, and which cause him great expense" (Cobbett, 1826, pp. 148-149).

But if recognition is not new, research into those operating costs is a more recent development. Administrative costs, as a part of the cost of the public sector, have naturally been subject to some degree of measurement by governments throughout, though the standard and comprehensiveness of that measurement has varied

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<sup>1</sup> These comprise *administrative* costs incurred by the public sector (usually, but not exclusively, revenue authorities) and *compliance* costs incurred by taxpayers. Note, however, that the terminology sometimes varies. Stiglitz, for example, uses the term *administrative costs* to embrace both compliance and administrative costs (1988, pp. 393-395).

considerably over time and between governments. But very little was done in the way of assessing and measuring compliance costs until well into the twentieth century.

Since then, however, this has been an area of taxation research that has flourished – arguably too much so in the view of some: see, for example, James (2003, pp. 69-70). There have been more than 100 published studies into either compliance costs or administrative costs (or sometimes both) since Haig’s tentative first modern study (1935) in the US; and more than 60 of those have occurred since 1980. Studies have now occurred in most developed and many transitional and developing countries, have utilised most of the research methodologies that are available and have encompassed the full range of taxes and tax issues.

The principal objective of this paper is to make available in a single source an overview of recent research into tax operating costs. In so doing it should help interested readers and prospective researchers to gain an initial feel for the breadth and depth of studies in this area. It also signifies an ambition, on the part of the author, to prepare a comprehensive register of operating cost studies as part of a longer-term project.

This paper focuses upon studies that have taken place in the last 20 years or so, although the next section briefly considers the broader historical context, including the reasons why research into tax operating costs has apparently flourished. The third section focuses upon the scope of the taxes and taxpayers that have been the subject of the research, while an analysis of the different methodologies employed in the studies is dealt with in Section 4. The major outcomes of the studies are summarised in Section 5, and the concluding section suggests future directions and patterns for research, including the need for that research to feed into the tax law design process.

A summary of most of the major (and some minor) administrative and compliance cost studies that have been published<sup>2</sup> since 1980 that I have been able to trace is contained in the appendix to this paper. I have attempted to make the list as comprehensive as possible, although it is inevitable that some studies will have been missed. The focus is upon empirical research into operating costs, so commentaries – for example the review of the VAT evidence undertaken by Cnossen (1994) and the more general review of the research into operating costs conducted by Evans (2001) – are not included.

In addition the summary confines itself to business taxpayers and to individual taxpayers who are not in business (for example, employees and those who are retired and/or receive investment income). The operating costs of the public sector, “not for profit”, “charity” or related sectors of the economy may be significant, but they are excluded from this paper and its appendix.

The choice of 1980 as a starting point for the summary of studies in the appendix is somewhat arbitrary but can be defended on two major grounds. In the first place it provides a comprehensive review of most studies (by reference to geographical scope, type of taxes and taxpayers, methodology employed, and major compliance and administrative cost outcomes) over a period of more than 20 years. This period is considered to be more than adequate as a representative sample. And secondly it

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<sup>2</sup> And some that have not yet been published.

picks up where other excellent summaries (for example, Sandford, Godwin and Hardwick, 1989, pp. 224-230; Allers, 1994, pp. 241-250) have left off, though ensuring there are no major omissions by duplicating some of the later studies summarised in their appendices. Thus a complete picture emerges from this summary in combination with those earlier summaries.

The appendix identifies over 60 studies in the period since 1980. Only one of these (General Accounting Office, 1993) was solely concerned with administrative costs. Roughly 25% of the studies considered both administrative and compliance costs, though more often than not the primary focus in these studies was upon compliance costs. The balance of the studies were only concerned with compliance costs and did not specifically address issues relating to administrative costs.

The appendix has been compiled on the basis of the geographical location of each of the studies, and these have been categorised by reference to four major regions – North America, Europe, Australasia/Southeast Asia and finally the rest of the world (including multi-country studies).

Tran-Nam and Evans (2002, p. 393) have noted that the early quantitative studies of tax compliance costs in the 1930s to 1960s took place in North America. Those early studies were undertaken by researchers from diverse academic backgrounds, including management science, business studies, accounting and economics. They used a range of methodologies, and identified many of the features that regularly crop up in more recent studies (for example, the regressive nature of compliance costs and the potential trade off between administrative and compliance costs) (Tran-Nam and Evans, 2002, p. 393). North American studies into operating costs have not been quite so prolific in the last 20 years compared to those earlier time periods, but there have still been a number of major studies in both the USA and Canada in recent years (for example, Vaillancourt, 1989; Blumenthal and Slemrod 1992), and evidence that interest is being re-ignited (for example, Slemrod and Venkatesh, 2002; Stavrianos and Greenland, 2002).

Some compliance costs studies took place in Europe at about the same time as the early North American wave, but they tended to be small scale and low key (for example, Hofstra, in the Netherlands in 1943-4). This has been a region, however, where a great deal of activity has taken place in the last 20 years (for example, Sandford, Godwin and Hardwick, 1989; Allers, 1994; Diaz and Delgado, 1995; Collard, Green, Godwin and Maskell, 1998; Hasseldine and Hansford, 2002). Interestingly, despite this widespread recent activity, only a small number of different countries (the UK, Ireland, Germany, the Netherlands, Sweden and Spain) feature in the section devoted to European studies.

Before 1990 there were no published operating cost studies in Australasia or Southeast Asia. Since then, the floodgates have opened, with published studies in Australia (Pope, Fayle and Duncanson, 1990; Pope, Fayle and Chen, 1991; Pope, 1992; Pope, Fayle and Chen 1993a, 1993b, 1994; Wallschutzky and Gibson, 1993; Evans, Ritchie, Tran-Nam and Walpole, 1996, 1997; Rametse and Pope, 2002; Tran-Nam and Glover, 2002), New Zealand (Sandford and Hasseldine, 1992; Prebble, 1995), Singapore (Ariff, Loh and Talib, 1995; Ariff, Ismail and Loh, 1997), Malaysia (Loh, Ismail, Shamsheer and Ali, 1997) and Hong Kong (Chan, Cheung, Ariff and Loh, 1999).

Finally, there is a small but growing list of studies from countries as diverse as Tanzania (Shekidele, 1999), Brazil (Bertolucci, 2002) and India (Chattopadhyay and Das-Gupta, 2002), as well as evidence of interest from supra-national bodies such as the OECD (Cordova-Novion and De Young, 2001) in the production of comparative compliance costs studies. These studies are listed in the fourth part of the appendix.

## II. HISTORICAL CONTEXT

Sandford, Godwin and Hardwick (1989, pp. 27-34) postulate three broad phases in attempts to identify and measure operating costs – a North American phase lasting from the 1930s to the 1960s; a European phase in the 1960s and 1970s; and a worldwide phase from the 1980s onwards.

Haig's 1935 study involved a postal survey of the taxation compliance costs encountered by over 1,500 large firms in the USA. This triggered a series of small-scale compliance cost studies, often lacking in rigour, in North America in the period through to the late 1960s. The methodology involved included case study approaches (for example, Edelman, 1949; Oster and Lynn, 1955; Yocum, 1961; Johnston, 1963) and postal surveys (for example, May and Thompson, 1950; Bryden, 1961; Wicks, 1965 and 1966).

During the same period there were relatively fewer academic studies of the administrative costs of taxation, although Reynolds (1937), Maloon and Oster (1957) and Wicks and Killworth (1967) studied these costs in a variety of States and local government authorities in the USA. Reynolds conducted his research through a review of the literature, and the latter two used surveys and questionnaires.

Since 1970, the volume, scope and geographical locations of operating costs studies have grown considerably, particularly in the UK following the early studies of Sandford and others (Sandford 1973, Sandford, Godwin, Hardwick and Butterworth, 1981). Allers (1994, pp. 243-247) identifies 41 separate compliance cost studies, ranging across nine separate countries<sup>3</sup>, in the period from 1970 to 1993. The studies employed a variety of methodologies, including surveys (telephone, postal and magazine), case studies, diary studies and interviews. Some merely involved "guesstimates". During the same period the number of administrative cost studies also grew considerably, with Allers able to identify seven such studies in the Netherlands, five in the UK, two in both the USA and Ireland, and one each in France, Canada and West Germany (1994, pp. 248-250).

Hence by the early 1990s literature on the operating costs of the tax system was burgeoning, and the period since then has been no less prolific. This growth in the literature relating to operating costs over the last 20 years or so has been matched by an increased awareness of the issue by governments around the world. Much of the earlier research preceded government interest, but, from the 1980s or so, research and government interest have often gone hand in hand, and many recent studies have been government financed (for example, Evans, Ritchie, Tran-Nam and Walpole, 1996, 1997 in Australia; Plamondon, 1997 in Canada; Collard, Green, Godwin and Maskell, 1998 in the UK; and Stavrianos and Greenland, 2002 in the USA).

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<sup>3</sup> The Netherlands, West Germany, USA, UK, Ireland, Switzerland, Canada, Australia, and New Zealand.

An important factor contributing to the growth of interest (but also reflecting that growth) by both researchers and governments has been a series of conferences and symposia held on the topic in the last two decades. The International Fiscal Association made the administrative and compliance costs of taxation a main subject for their 1989 conference, and the cahiers listed studies of varying size and rigour in nine countries (Argentina, Belgium, Canada, Germany, Netherlands, Sweden, Switzerland, UK and USA). In 1994 a major symposium was convened at St John's College, Oxford, attracting most of the world's major researchers in the area, and the ensuing publication (Sandford, 1995) showed that many of those countries had undertaken further studies. In addition, Australia, Spain and New Zealand were added to the list of countries which were undertaking major studies.

More recently (April 2000), a follow up symposium was convened in Sydney, Australia. The conference publication (Evans, Pope and Hasseldine, 2001) identified further large-scale studies in Canada (Plamondon, 1997), Australia (Evans, Ritchie, Tran-Nam and Walpole, 1996 and 1997), and the United Kingdom (Collard, Green, Godwin and Maskell, 1998), as well as smaller studies in Singapore and Malaysia (Ariff, 2001). Other studies extended the scope of tax compliance costs to particular features, such as appeals tribunals (Copp, 2001) and psychological costs (Woellner, Coleman, McKerchar, Walpole and Zetler, 2001). And many other research projects relating to the operating costs of the tax system were also noted as being under way.

This increased research and government interest and involvement in issues relating to taxation operating costs can be attributed to a number of factors. Sandford (1995, pp. 4-7) identifies six:

- the powerful influence of changes in technology (and especially computers), enabling researchers and governments to undertake larger and more credible studies into compliance costs in particular;
- the introduction of VAT/GST regimes in a number of countries (UK, Canada and New Zealand are cited by Sandford<sup>4</sup>). The high operating costs associated with such taxes have increased interest in identifying and quantifying the potential impact;
- the increased importance to modern economies of the small business sector – which research shows carries a disproportionate burden of taxation compliance costs. A whole series of deregulatory and “enterprise culture” oriented initiatives have been undertaken since the 1980s, and it is therefore not surprising that interest in operating costs would be a feature of this;
- the growing complexity of modern tax systems and the burdens they impose on taxpayers who have been exposed to a larger range of taxes;
- the increased emphasis by governments on voluntary compliance has made them more conscious of the burden they impose on taxpayers; and
- measures taken since the 1980s to reduce administrative costs (as part of policies to reduce public expenditure) may have increased the burden of compliance costs, and possibly even increased the overall resource costs to society. Glassberg and Smyth (1995, p. 17) cite the transfer of costs from the UK Government to financial institutions (primarily the building societies) with the introduction of

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<sup>4</sup> Since 1995, Australia has also introduced a GST.

Mortgage Interest Relief At Source (MIRAS) in the 1980s as an example of this. A more recent example may lie in the introduction of systems of self-assessment in Australia and the UK in the late 1980s and 1990s. Once again, increased burdens are likely to translate to increased awareness and research interest.

### **III. THE SCOPE OF THE STUDIES**

It is a difficult task to summarise on any systematic basis the taxes that were the subject of research in the studies listed in the appendix, as many of the studies were not focused upon one particular tax, but embraced a variety of taxes or tax related matters. For example, the study of employer related taxes in Australia by Pope, Fayle and Chen (1993a) covered specific taxes such as Fringe Benefits Tax (FBT) and payroll taxes, as well as tax collection or reporting mechanisms such as PAYE and the Prescribed Payment System (PPS). At least five other studies identified in the appendix are concerned with similar areas.

Roughly a dozen of the studies focused solely on Personal Income Taxes (PIT), and about the same number considered just Corporate Income Taxes (CIT). Eight other studies (for example, Arthur D Little Inc, 1988; Evans, Ritchie, Tran-Nam and Walpole, 1997) considered all federal taxes, whether business or personal. Indirect taxes are also well represented in the appendix, with seven Value Added Tax/Goods and Services Tax (VAT/GST) and four sales tax and excise duty studies identified.

The balance of the studies are spread across a range of tax and tax related areas, including tax expenditures (Gunz, Macnaughton and Wensley, 1995), Petroleum Revenue Tax (Sandford, Godwin and Hardwick, 1989) and road tolls (Friedman and Waldfogel, 1995).

Just as the types of taxes that have been the subject of study over the last 20 years is diffuse, so is the nature of the taxpayer. As in previous periods (see Tran-Nam and Evans, 2002, p. 393), there has inevitably been a greater emphasis on business taxes and taxpayers. But despite this emphasis, very few types of taxpayer have escaped scrutiny over this period. Taxpayers not in business (employees, the retired) have been included in many of the studies (Slemrod and Sorum, 1984; Allers, 1994; Evans, Ritchie, Tran-Nam and Walpole, 1997; Chattopadhyay and Das-Gupta, 2002), but usually only as part of a broader survey. They rarely feature as the central part of the study (though see Satvrianos and Greenland, 2002, which focused entirely on individuals with wage and investment income). In contrast, employers have been the sole or primary focus of the research in at least six studies (Leonard and O'Hagan, 1985; Sandford, Godwin and Hardwick, 1989; Vaillancourt, 1989; Pope, Fayle and Chen, 1993; Plamondon, 1997; Collard, Green, Godwin and Maskell, 1998).

Where the research has been into the operating costs of business taxpayers, studies are more or less equally split between those that have specifically targeted small businesses (Wallschutzky and Gibson, 1993; Plamondon, 1993, 1995; Yellow Pages 1996; Rametse and Pope, 2002; Tran-Nam and Glover, 2002; CPA Australia 2003) and those that have specifically targeted the large corporate sector (Pope, Fayle and Chen, 1991; Prebble, 1995; Ariff, Loh and Talib, 1995; KPMG, 1996; Slemrod and Blumenthal, 1996; Erard, 1997; Bertolucci, 2002, Slemrod and Venkatesh, 2002). Most studies into business operating costs are not specific to any one sector, however, but embrace all business segments, large and small.

The vast majority of the studies look at the costs incurred by taxpayers. In contrast, very few studies (for example, Green, 1994; Evans 2003) consider the perspective of the practitioner, even though practitioner costs have always been a very significant component of the compliance costs incurred by business and non-business taxpayers.

It is also slightly surprising how few truly international comparative studies have taken place over the last 20 years. Some of the national studies contain comparative sections where the outcomes for one country are compared with those in others (for example, Evans, Ritchie, Tran-Nam and Walpole, 1997, pp. 58-83). But the dangers of international comparisons are well known to most researchers. Sandford (1995, pp. 405-408) identifies a number of reasons why such comparisons are more likely to mislead than enlighten, and, in an earlier piece (1994) the same author offered the advice that “comparisons of ... operating costs should be used sparingly, with the greatest care and with a comprehensive statement of their limitations”.

One relatively early study and two more recent studies have countered the trend for studies to be national rather than international. Bannock and Albach (1989) compared VAT compliance costs in Germany and the UK. More recently, Cordova-Novion and De Young (2001) undertook a multi-country survey of business tax compliance costs in eleven different countries for the OECD, and Evans (2003) has completed a comparative study of the operating costs of taxing personal capital gains in Australia and the UK.

In summary, studies in the last 20 years have considered most of the different types of tax and most of the different types of taxpayer. The level of coverage has varied – some taxes and taxpayer types have received very comprehensive coverage while others have been relatively under-researched. The analysis now turns to the manner in which that research has been conducted.

#### **IV. RESEARCH METHODOLOGIES**

Research literature has typically categorised the study of human and social phenomena by reference to two broad camps – the quantitative (or traditional, positivist, empiricist) and the qualitative (also referred to as the constructivist, naturalistic, interpretive, post-positivist or post-modern). The quantitative paradigm is the more traditional approach to research and typically adopts a deductive approach. In contrast the qualitative approach relies upon an inductive logic. Theories develop through the study rather than being established at the outset, and the methodology is also likely to emerge as part of the process of research rather than being predetermined.

Studies into tax operating costs borrow from both traditions, though there is a far greater emphasis on quantitative techniques. The studies use a variety of specific research methodologies to research into aspects of compliance costs. These include surveys (invariably using questionnaires) conducted through commercial polling organisations (Allers, 1994), or by mail (Green, 1994), email (Bertolucci, 2002) and telephone (Yellow Pages, 1996, CPA Australia, 2003), other interview-based methodologies (Plamondon, 1993; 1995; 1997), diary and case study approaches (Wallschutzky and Gibson, 1993), and documentary analysis (Arthur Andersen & Co, 1985) and estimating/simulating techniques (Thompson, 1984). Often the studies employ a combination of these approaches (Collard, Green, Godwin and Maskell, 1998).



Postal surveys feature most prominently in the appendix, with nearly two thirds of the studies using this methodology wholly or in part. Roughly one quarter of the studies used interviewing techniques, usually on a face-to-face basis and with a structured survey instrument or script built into the process. The labour intensive diary and case study approaches tended to be the least used methodology.

The appendix shows that response rates for postal surveys into compliance costs have varied considerably. At the one end of the scale there are studies that failed to achieve a response rate of 10%. For example, Vaillancourt (1989, p 47) reported a response rate of only 9.2% based on a distribution of 4,196 questionnaires to Canadian employers, and Arthur Andersen & Co (1985, Chapter 3, pp. 4-5) achieved just 7% response rate in a survey of 600 small businesses. At the other end of the scale, Evans, Ritchie, Tran-Nam, and Walpole (1996, p. 35) achieved a response rate of 50% in an Australian postal survey of 1,867 personal taxpayers. This high response rate<sup>5</sup> reflected a number of factors. These included:

- the full support of the Australian Taxation Office (ATO), including a strong letter of endorsement from the Commissioner of Taxation. (It is possible that many of the personal taxpayers surveyed in 1996 incorrectly believed that they were required to complete the form as a result of this endorsement;)
- full funding from the ATO, permitting mail-out, initial postcard reminders and a second full mail-out, all with reply paid facilities and properly staffed help-desks;
- letters of endorsement from key professional associations; and
- the chance for respondents to win a computer. (This factor appeared to make a small but statistically significant difference, as the response rate in the one Australian state – South Australia – that would not permit this “gambling” incentive was lower than that in other states.)

The summary in the appendix confirms Sandford’s observation that the “norm” for response rates of such studies is probably around 30% (1995, p. 379).

Administrative costs have primarily tended to be identified through analysis of relevant documentary evidence. Surprisingly, there is very little evidence that researchers have considered other possible methodologies, such as structured or in depth interviews or case studies, in attempts to assess administrative costs.

## V. MAJOR OUTCOMES

The major outcomes summarised in the appendix suggest that compliance costs are highly significant for the main central government taxes such as PIT, CIT, VAT/GST. They are high however measured – whether in absolute money terms or relative to tax yield, GDP or administrative costs. For example, the studies suggest that compliance costs of such taxes are typically anywhere between 2% and 10% of the revenue yield from those taxes; up to 2.5% of GDP; and usually a multiple (of between two and six) of administrative costs.

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<sup>5</sup> But note that it is by no means the highest response rate for a postal survey. The appendix indicates that the Arthur D Little Inc study in the USA (1988) achieved a 62% response rate in its survey of 6,200 individuals, and Malmer (1995) achieved 67% in Sweden in a postal survey of 12,000 individuals.

The research also points strongly to the regressivity of compliance costs of such taxes, particularly where VAT type taxes are involved. The size of the business is a key factor in determining compliance costs, and most of the studies confirm that smaller businesses carry disproportionately higher compliance costs.

In contrast, compliance costs for property taxes are low in absolute and relative terms, as are compliance costs of some excise duties in developed countries (for example, tobacco and petrol) where the sales are high and the number of businesses involved are low. Compliance costs for excise duties in developing countries appear to be significantly higher than those in developed countries, though the evidence is somewhat thin at the moment (Shekidele, 1999).

The evidence from the studies also points to the fact that compliance costs are perceived to be a very significant issue for most business taxpayers and many non-business taxpayers, as well as for practitioners. They are an on-going cause for concern, and the problem is not perceived as improving over time (Blumenthal and Slemrod, 1992; Evans, 2003), despite attempts by governments (ostensibly) designed to reduce the burden faced by taxpayers. Complexity of legislative provisions together with the frequency of legislative change are identified as prime causes of high compliance costs (Green, 1994, Evans, 2003).

The studies in the appendix also suggests that administrative costs are absolutely and relatively less burdensome than compliance costs. Those studies that do address administrative costs suggest that they rarely exceed 1% of revenue yield, and more usually come in well below 1%.

## **VI. CONCLUSIONS**

In summary, therefore, the initial neglect of this area of research has now long passed. The last 20 years have seen issues relating to tax operating costs shift from the periphery to a more central position. As a result, there is now an extensive and varied literature available which can provide a useful reference point for studies relating to the regulatory burden.

Using a variety of methodologies researchers have identified and quantified both compliance and administrative costs, and are now exploring a number of related and more qualitative issues. As Evans, Pope and Hasseldine note in their concluding chapter (2001, pp. 409-417), future operating cost research is likely to both “drill down” (seeking depth by looking at “hot spots” and politically sensitive areas) and “reach out” (broadening the scope of the research to embrace new countries, more comparative work, other disciplines and fresh methodologies).

The operating costs literature will clearly continue to develop over the next 20 years, and it is to be hoped that the fruits of operating cost research will continue to be evident in the policy-making process. There is an obvious interconnection between tax law design and implementation. Tax law design should not take place without clear recognition of the impact of the proposed changes on the operating costs of the tax system. Sensible tax law design must be informed by an understanding of the impact that design will have on the burden that taxpayers will face and the administrative costs that the revenue authority will be required to carry. The greatest contribution that research into operating costs can make in the future is to ensure that those who formulate and implement legislative change are properly informed as to the operating cost implications of their actions. This will not always be (and indeed does

not need to be) the decisive factor; but it cannot be ignored in the way that it so often has in the past.

Pope identified a number of possible stages in the awareness of compliance costs (Pope, 1992, pp. 27). These ranged from initial neglect, through recognition by professionals (tax advisers etc), quantification (usually by academics), policy recognition, effective policy measures resulting in lower compliance costs, and finally to continual monitoring of compliance costs.

Many of the developed countries that have undertaken the studies summarised in the appendix have clearly passed through the first four of these stages, and in some of them there is even lip-service paid to the need to take operating costs into account when policy is formulated (see, for example, Evans and Walpole, 1999, pp. 38-77). But there is still a long way to go before any of the countries can truly claim that its tax laws are designed with a clear focus on the implications that design will have on the operating costs of the tax system.

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**APPENDIX SUMMARY OF MAJOR PUBLISHED STUDIES OF TAXATION OPERATING COSTS SINCE 1980 BY REFERENCE TO GEOGRAPHICAL LOCATION****North American Studies**

Year of publication (Year(s) under review)	Author(s)	Country (population studied)	Taxes studied	1. Methodology 2. Sample frame 3. Respondents 4. Response rate	Major outcomes	
					Compliance costs	Administrative costs
1984 (1982)	Slemrod & Sorum	USA (Minnesota residents)	Personal income taxes	1. Postal survey 2. 2,000 3. 653 4. 33%	Compliance costs were 5% to 7% of revenue yield; self employed incur relatively higher costs	Not addressed
1984 (1979)	Thompson	Canada (Ontario personal taxpayers)	Personal income taxes	1. Estimate, based on assumptions applied to provincial tax statistics 2. Not relevant 3. Not relevant 4. Not relevant	Compliance costs that would be associated with the introduction of a personal income tax system in Ontario would be roughly C\$150m or C\$42 per taxpayer	Not addressed
1985 (1984)	Arthur Andersen & Co for the Department of Finance	Canada (Canadian businesses)	Federal sales and excise taxes	1. Documentary analysis for administrative costs; for compliance costs (a) face to face interviews (using survey instrument) with large firms (b) postal survey for other firms 2. (a) 76 (b) 1,600 3. (a) 36 (b) 171 4. (a) 47% (b) 11%	Compliance costs were C\$731.4m or 7.56% of revenue yield; significant variation depending on size of firm, with compliance costs being higher for smaller firms	Administrative costs were C\$76.4m or 0.8% of revenue yield
1985 (1984)	Arthur Andersen & Co for the Department of Finance	Canada (Ontario businesses)	Ontario retail sales tax	1. Documentary analysis for administrative costs; postal survey for compliance costs 2. 600 3. 43 4. 7%	Compliance costs were 5.85% of revenue yield; significant variation depending on size of firm, with compliance costs being higher for smaller firms	Administrative costs were C\$39.9m or 0.6% of revenue yield

Year of publication (Year(s) under review)	Author(s)	Country (population studied)	Taxes studied	1. Methodology 2. Sample frame 3. Respondents 4. Response rate	Major outcomes	
					Compliance costs	Administrative costs
1988 (1983-1985)	Arthur D Little Inc	USA (USA individuals and businesses)	Federal taxes	1. (a) diary study of 750 individuals (b) postal survey of 6,200 individuals (c) postal survey of 4,000 businesses 2. (a) 750 (b) 6,200 (c) 4,000 3. (a) 750 (b) 3,831 (c) 1,474 4. (a) 100% (b) 62% (c) 37%	Total estimated taxpayer paperwork burden increased from 4,342m hours in 1983 to 5,427m hours in 1985; record keeping accounted for 50% of this time and form preparation 29%; high degree of correlation between the total time spent on record keeping, learning, preparation and sending time associated with filing individual tax returns and the number of line items present on the tax return	Not addressed
1989 (1986 & 1987)	Vaillancourt	Canada (Canadian individual taxpayers and employers)	Personal income taxes & payroll taxes	1. (a) Interviews (face to face) with questionnaire for individuals (b) postal survey for employers 2. (a) 2,040 (b) 4,196 3. (a) 2,040 (b) 385 4. (a) 100% (b) 9%	Individuals' compliance costs were C\$1.95b, or 2.5% of revenue yield, with the tax complexity of the taxpayer situation being the main determinant; employers' compliance costs were C\$2.75b, or 3.5% of revenue yield, with a decreasing cost-size relationship	Administrative costs were C\$0.77b, or 1% of revenue yield
1992 (1989)	Blumenthal & Slemrod	USA (Minnesota residents)	Personal income taxes	1. Postal survey 2. 2,000 3. 826 4. 40%	Upward drift in compliance costs 1989 compared to 1982 survey by Slemrod & Sorum; Tax Reform Act 1986 did not stem this growth	Not addressed
1992 (1991)	Erard & Vaillancourt	Canada (Ontario personal taxpayers)	Personal income taxes	1. Simulation: estimate based on line count of items on individual returns 2. Not relevant 3. Not relevant 4. Not relevant	Introducing a personal income tax system to Ontario would increase net steady state compliance costs for taxpayers, employers and financial institutions by between C\$244.5m and C\$372.5m (between 2% and 3.1% of provincial revenue yield), depending on the model adopted	Not addressed
1993 (1993)	Plamondon	Canada (Canadian small businesses)	Goods and services tax	1. Interviews (face to face) conducted by accountants with questionnaire 2. 200 3. 200 4. 100%	Compliance costs were not as high as previous studies had shown, but were regressive; businesses using computers for accounting routines had compliance costs 20% to 40% lower than those operating manually	Not addressed

Year of publication (Year(s) under review)	Author(s)	Country (population studied)	Taxes studied	1. Methodology 2. Sample frame 3. Respondents 4. Response rate	Major outcomes	
					Compliance costs	Administrative costs
1993 (1995)	General Accounting Office (US)	USA (Federal administration)	Value added tax	1. Estimate of administrative costs of a value added tax 2. Not relevant 3. Not relevant 4. Not relevant	Not addressed	Recurrent administrative costs of a value added tax would be between US\$1.22b and US\$1.83b, with 70% of those costs related to audit work; transitional costs of introducing a value added tax would be US\$800m; costs would vary with key design features of the tax, and a simple single rate, broad-based VAT would minimise administrative costs
1995 (1994)	Friedman & Waldfogel	USA (Massachusetts & New Jersey toll road users)	Road tolls	1. Case study 2. Not relevant 3. Not relevant 4. Not relevant	Operating costs of tolls in the US are between 15% and 42% of revenue yield during rush hour, and between 11% and 19% of revenue yield over an entire weekday.	
1995 (1994)	Gunz, Macnaughton & Wensley	Canada (Ontario corporations)	Tax expenditures (scientific research and experimental development (SRED) initiatives)	1. Face to face or telephone interviews with survey instrument 2. 111 3. 51 4. 46%	Compliance costs of SRED initiatives were quite low in aggregate, representing less than 1% of the credits claimed; compliance costs not regressive based on firm size, but were highly regressive based on the size of the claim	Not addressed
1995 (1995)	Plamondon	Canada (Canadian small businesses)	Goods and services tax (Quick method of accounting for GST)	1. Interviews (face to face) conducted by accountants with questionnaire 2. 200 3. 200 4. 100%	Small businesses were not using the Quick method of accounting for GST due to a lack of awareness; those who knew of it but did not use it were not overly concerned about compliance costs; savings in tax were more important than savings in compliance costs	Not addressed
1996 (1992)	Slemrod & Blumenthal	USA (largest US corporations)	Federal and sub-federal corporate income taxes	1. Postal survey 2. 1,329 3. 365 4. 27%	Compliance costs of 1,329 largest US corporations US\$2.1b, or 3.2% of revenue yield; the state ratio (5.6%) is higher than the federal (2.6%), reflecting non-uniformity of state tax systems; Tax reform Act 1986 increased compliance costs	Not addressed
1997 (1995)	Erard	Canada (large Canadian corporations)	Federal and provincial corporate income and capital taxes	1. Postal survey 2. 250 3. 59 4. 24%	Compliance costs of top 500 corporations were C\$250m, or between 4.6% and 4.9% of revenue yield; the compliance burden increases with firm size, but less than proportionately; foreign operations and involvement in the mining, oil and gas industries likely to lead to relatively higher compliance costs	Not addressed

Year of publication (Year(s) under review)	Author(s)	Country (population studied)	Taxes studied	1. Methodology 2. Sample frame 3. Respondents 4. Response rate	Major outcomes	
					Compliance costs	Administrative costs
1997 (1996)	Plamondon	Canada (Ontario employers)	Federal and provincial payroll taxes	1. Interviews (face to face) conducted by accountants with questionnaire 2. 40 3. 40 4. 100%	Compliance costs were “relatively low” (2.76% of revenue yield for 30 small and medium sized businesses interviewed); Ontario workers’ compensation system causing confusion and uncertainty; support from employers for harmonization of payroll taxes	Not addressed
1998 (1996)	Plamondon & Zussman	Canada (Canadian business taxpayers)	Canadian federal & provincial business taxes	1. Estimation of compliance costs followed by panel discussion and poll 2. Not relevant 3. Not relevant 4. Not relevant	Compliance costs for Canadian business estimated at C\$3.4b, or 0.4% of GDP, 1.5% of revenue yield; a single tax administration would reduce annual compliance costs by between C\$171m and C\$285m	Administrative costs of Federal & Provincial business tax system estimated to be C\$2.2b; a single tax administration would reduce annual administrative costs by between C\$97m and C\$162m
2002 (1998 and 1999)	Stavrianos & Greenland (PwC Consulting)	USA (individuals with wage and investment income)	Personal income taxes	1. Postal surveys or telephone interviews 2. 11,086 3. 6,366 (2,551 by post and 3,815 by telephone) 4. 57%	The objective is to develop an improved methodology for measuring and modelling the compliance burden. The initial report does not provide any estimates; only details of the microsimulation model used	Not addressed
2002 (2001)	Slemrod & Venkatesh	USA (large and mid-size businesses)	Business taxes	1. Postal surveys of (a) corporations and (b) tax advisers 2. (a) 2,499 (b) 1,824 3. (a) 225 (b) 218 4. (a) 9% (b) 12%	Compliance costs are regressive; compliance costs of corporations required to file as “non-US corporations” were, on average, higher than for other similar sized corporations; compliance costs of firms in the media, communications and technology industry had the highest average total compliance costs and those in the retail, food and healthcare group had the lowest average amount	Not addressed

## European Studies

Year of publication (Year(s) under review)	Author(s)	Country (population studied)	Taxes studied	1. Methodology 2. Sample frame 3. Respondents 4. Response rate	Major outcomes	
					Compliance costs	Administrative costs
1981 (1978-1980)	Sandford, Godwin, Hardwick & Butterworth	UK (UK VAT registered traders and their advisers)	Value added tax	1. Documentary analysis for administrative costs; for compliance costs (a) postal survey, followed by (b) telephone and personal interviews and (c) interviews with advisers (sample and responses not published for this element) 2. (a) 9,094 (b) 445 3. (a) 2,799 (b) 263 4. (a) 31% (b) 59%	Gross compliance costs for VAT estimated as £392m in 1977-78, and administrative costs £85m. Total operating costs of c. £480m represented 11% of VAT revenue; VAT compliance costs “exceptionally regressive in their incidence” (and administrative costs also likely to be regressive); cash flow benefits (£73m) and managerial benefits (difficult to quantify) exacerbate the regressiveness; net compliance costs affected by size of firm, sector (relatively lower compliance costs in primary production and higher in financial and services sector), payment or repayment situation	
1985 (1983)	Leonard & O’Hagan	Ireland (employers)	Pay as you earn and Pay related social insurance (PRSI)	1. Postal survey 2. 300 3. 119 4. 40%	Total operating costs of PAYE/PRSI were IR£108m, or 4.6% of revenue yield; compliance costs exceeded the administrative costs by a factor of three; compliance costs were regressive – gross cost per employee decreased as firm size increased; firms employing more than 100 staff enjoyed a net compliance benefit as a result of cash flow benefits from operating PAYE	
1989 (1981-82)	Sandford, Godwin & Hardwick	UK (UK employers)	Pay as you earn and national insurance contributions	1. Postal survey with some (17) interviews 2. 3,039 3. 783 4. 29%	Aggregate compliance costs in 1981-82 were £449m, or just over 1% of combined revenue yield from PAYE and NIC; the impact of compliance costs was regressive; substantial cash flow benefit of £878m, which probably wiped out compliance costs for the larger firms	Administrative costs were just under 1% of the revenue yield
1989 (1983-84)	Sandford, Godwin & Hardwick	UK (UK personal taxpayers)	Personal income taxes	1. Postal survey followed by anonymised matching data from Inland Revenue 2. 4,241 3. 1,776 4. 43%	Compliance costs in 1983-84 were £1.15b, or 3.6% of revenue yield; impact was regressive for the self employed, though they enjoyed cash flow benefits; the most important factors determining the level of compliance costs were size of income and category of employment; CGT was an important source of high compliance costs but affected relatively few taxpayers	Not addressed

Year of publication (Year(s) under review)	Author(s)	Country (population studied)	Taxes studied	1. Methodology 2. Sample frame 3. Respondents 4. Response rate	Major outcomes	
					Compliance costs	Administrative costs
1989 (1983 & 1988)	Sandford, Godwin & Hardwick	UK (UK alcohol, tobacco and oil companies)	Excise duties	1. Postal survey of alcohol industry (a), and interviews with tobacco (7) & oil (3) companies and others 2. (a) 369 3. (a) 99 4. (a) 30%	“Administrative and compliance costs of the main excises are outstandingly low in absolute and proportional terms” (but estimates somewhat speculative); for 1986-87 administrative costs were £41.9m and compliance costs were £33.3m; total operating costs of £75.2m were 0.45% of revenue yield; some regressiveness, but not as pronounced as with VAT studies	
1989 (1986-87)	Sandford, Godwin & Hardwick	UK (UK oil companies)	Petroleum revenue tax	1. Postal survey 2. 14 3. 9 4. 64%	Compliance costs in 1986-87 were £5.25m, or 0.44% of revenue yield; low revenue yield in 1986-87 makes this ratio particularly unreliable; but compliance costs are relatively low (compared to other central government taxes)	Administrative costs 1986-87 were £1.4m, or 0.12% of revenue yield
1989 (1986-87)	Sandford, Godwin & Hardwick	UK (UK VAT registered traders)	Corporation tax (part of value added tax survey below)	1. Postal survey 2. 3,000 3. 680 4. 24%	In 1986-87 compliance costs were £300m (2.22% of revenue yield) and administrative costs were £70.3m (0.52% of revenue yield); total operating costs were 2.74% of revenue yield; roughly 50% of compliance costs were external fees to advisers; compliance costs were regressive; cash flow benefits exceeded compliance costs	
1989 (1986-87)	Sandford, Godwin & Hardwick	UK (UK VAT registered traders)	Value added tax	1. Postal survey 2. 3,000 3. 680 4. 24%	Aggregate compliance costs were £791m (3.69% of revenue yield) and cash flow benefits (disproportionately enjoyed by larger firms) were £580m; net compliance costs were 1% of revenue yield; compliance costs very regressive; compliance costs fallen since 1977-78	Administrative costs of £220m in 1986-87 were 1.03% of revenue yield
1989 (1987)	Bannock & Albach	UK & Germany (UK and German businesses)	Value added tax	1. Postal survey (a) UK and (b) Germany, with very limited telephone follow up (15 calls in each country) 2. (a) 600 (b) 800 3. (a) 262 (b) 197 4. (a) 44% (b) 25%	Dissatisfaction with VAT system was much greater among smaller firms in the UK than in Germany, and compliance costs for smaller traders were significantly higher in the UK than in Germany	Not addressed

Year of publication (Year(s) under review)	Author(s)	Country (population studied)	Taxes studied	1. Methodology 2. Sample frame 3. Respondents 4. Response rate	Major outcomes	
					Compliance costs	Administrative costs
1994 (1990)	Allers	The Netherlands (Dutch individuals)	Total Dutch tax - benefit system	1.(a) postal survey for business compliance costs; (b) commercial postal polling for non-business costs; (administrative costs determined by way of documentary analysis) 2. (a) 5,252 (b) Not known 3. (a) 1,116 (b) 10,992 4. (a) 21% (b) 44%	Total operating costs of the Dutch tax-benefit system amounted to 15.3b Guilders, or 3% of GDP. The operating costs of the tax system alone were in the region of 11b Guilders, or 2.1% of GDP. Most (60%) operating costs were incurred by the private sector (compliance costs), with businesses accounting for about 80% of those costs. Regressivity of compliance costs confirmed, and self employed also typically incurred high compliance costs.	
1994 (1992-93)	National Audit Office	UK (UK VAT traders)	Value added tax	1.Update of earlier VAT surveys conducted by Sandford et al (1981 & 1989) 2. Not relevant 3. Not relevant 4. Not relevant	Compliance costs of VAT were £1.6b off set by compliance benefits (cash & management) of £750m; compliance cost s regressive	Administrative costs were £399m
1994 (1992)	Green	UK (UK tax practitioners)	Income tax (including national insurance), corporation Tax and capital taxes	1. Postal survey 2. c. 6,000 3. c. 1,500 4. c. 25%	Practitioners perceived that there were increasing compliance costs associated with the UK direct tax system; the causes of this trend were the complexity of the tax system and deficiencies in the legislative process	Not addressed
1995 (1983-1993)	Malmer	Sweden (Swedish individuals and businesses)	Personal income taxes and business taxes	1.(a) Postal survey of individuals 1986, 1989 & 1992 (b) personal interviews of individuals 1983, 1985, 1986, 1987, 1988, 1989, 1992 & 1993 (c)postal survey of individuals and companies 1993 2. (a) 12,000 (b)1,000 (c) 1,000 3. (a) 8,040 (b) 1,000 (c) 599 4. (a) 67% (b) 100% (c) 60%	Swedish tax reform in 1990 and 1991 resulted in lower operating costs; compliance costs for individuals were reduced, but employers faced higher compliance costs; compliance costs were twice as high as administrative costs; total operating costs of the Swedish tax system estimated at SEK14b, or 1% of GDP and 2% of revenue yield; income tax accounts for 62% of this amount and VAT for 29%; VAT is the most expensive of the major taxes by reference to revenue yield	



Year of publication (Year(s) under review)	Author(s)	Country (population studied)	Taxes studied	1. Methodology 2. Sample frame 3. Respondents 4. Response rate	Major outcomes	
					Compliance costs	Administrative costs
1995 (1991)	Diaz & Delgado	Spain (Spanish taxpayers)	Personal income taxes	1. Interviews (face to face) with questionnaire 2. 2,500 3. 2,355 4. 94%	Compliance costs were 3.3% of revenue yield, with time costs comprising 73% and monetary costs 27%	Not addressed
1996 (1991-96)	KPMG	UK (UK listed companies)	Corporate taxes	1. Postal survey 2. 1,200 3. 266 4. 22%	Total compliance costs for UK listed companies estimated to be £265m; tax compliance costs have increased by 33.6% in the period 1991-96; major causes were complex, uncertain and badly drafted legislation	Not addressed
1998 (1995-96)	Collard, Green, Godwin & Maskell	UK (UK employers)	Pay as you earn and national insurance contributions	1 (a) Postal survey followed by (b) in-depth face to face interviews 2. (a) 4,168 (b) 310 3. (a) 1,338 (b) 310 4. (a) 32% (b) Not relevant	Compliance costs were £1.32b, or 1.3% of revenue yield; compliance costs highly regressive (bottom 30% pay 75% of compliance costs); labour costs account for approximately half of compliance costs	Not addressed
2001 (1998 & 1999)	Delgado Lobo, Salinas-Jiminez & Sanz Sanz	Spain (Spanish individuals)	Personal income taxes	1. Interviews (face to face) with questionnaire 2. 2,500 3. 2,388 (1998); 2,449 (1999) 4. 96% (1998); 98% (1999)	Compliance costs were 1.8% of revenue yield in 1998 and 1.3% in 1999. Reduction due to PIT reform operative from 1 Jan 1999; psychological costs also fell	Not addressed
2002 (2000)	Hasseldine & Hansford	UK (business taxpayers)	Value added tax	1. Postal survey 2. 6,232 3. 1,449 4. 23%	Increased compliance costs are associated with increased turnover, newly registered businesses, increased complexity and perceived psychological costs; no significant differences in patterns of core compliance costs and planning costs; businesses with computerised systems faced relatively higher compliance costs than businesses with manual procedures	Not addressed

## Australasian and South East Asian Studies

Year of publication (Year(s) under review)	Author(s)	Country (population studied)	Taxes studied	1. Methodology 2. Sample frame 3. Respondents 4. Response rate	Major outcomes	
					Compliance costs	Administrative costs
1990 (1986-87)	Pope, Fayle & Duncanson	Australia (Australian registered voters)	Personal income taxes	1. Postal survey 2. 6,737 3. 1,098 4. 16%	Compliance costs of PIT were between \$2.8b and \$3.8b, or between 7.9% and 10.8% of revenue yield; they were relatively higher than countries with comparable PIT systems; they were regressive; main determinants were level of income and type of return submitted	Not addressed
1991 (1986-87)	Pope, Fayle & Chen	Australia (Australian public companies)	Companies income tax	1. Postal survey 2. 1,837 3. 298 4. 16%	Gross compliance costs of public companies were between \$0.65b and \$1.3b, or between 11.4% and 23.7% of revenue yield; cash flow benefits were \$0.95b, or 16.9% of revenue yield; compliance costs were regressive and higher than other comparable countries	Not addressed
1992 (1989-90 & 1990-91)	Sandford & Hasseldine	New Zealand (New Zealand businesses)	Business taxes (employers and business income tax and GST)	1. Postal surveys of (a) employers and (b) businesses 2. (a) 4,743 (b) 9,541 3. (a) 1,887 (b) 2,954 4. (a) 40% (b) 31%	Compliance costs of business taxes were large and cumulative in impact (2.5% of GDP); and they were regressive, falling with disproportionate severity on smaller businesses	Not addressed
1993 (Nov. 1991-Nov 1992)	Wallschutzky & Gibson	Australia (Australian small businesses)	Business taxes	1. Case study (using diaries and face to face interviews) 2. 12 3. 12 4. Not relevant	With the exception of Wholesale Sales Tax, participants found taxes neither difficult to deal with nor time-consuming. Outcomes caused researchers to question their initial assumption that compliance costs were significant	Not addressed
1993 (1989-90)	Pope, Fayle & Chen	Australia (Australian businesses)	Employer related taxes (pay as you earn, fringe benefits tax, prescribed payment system, payroll tax)	1. Postal survey 2. 2,739 3. 745 4. 27%	The compliance costs of employers' PAYE and payroll tax were reasonable by international standards (1.7% of revenue yield compared to Canada's 3.5%); FBT compliance costs were relatively high (10.9% of revenue yield); high burden of employment related taxes on small businesses noted	Not addressed
1993 (1990-91)	Pope, Fayle & Chen	Australia (Australian businesses)	Wholesale sales tax	1. Postal survey 2. 2,467 3. 593 4. 24%	Net compliance costs of WST were \$201m, or 2.1% of revenue yield; compliance costs were highly regressive; WST generated a cash flow cost overall rather than a benefit	Not addressed

Year of publication (Year(s) under review)	Author(s)	Country (population studied)	Taxes studied	1. Methodology 2. Sample frame 3. Respondents 4. Response rate	Major outcomes	
					Compliance costs	Administrative costs
1994 (1990-91)	Pope, Fayle & Chen	Australia (Australian companies)	Companies income tax	1. Postal survey 2. 2,531 3. 571 4. 23%	Net compliance costs of companies were \$2.05b, or 14.5% of revenue yield; compliance costs were regressive	Not addressed
1995 (1991 & 1992)	Prebble	New Zealand (New Zealand companies)	Companies subject to controlled foreign company regime	1. Two personal interviews 2. 200 3. 14 4. Not relevant	Compliance costs for controlled foreign companies are relatively lower than compliance costs for domestic companies of a comparable size	Not addressed
1995 (1994)	Ariff, Loh & Talib	Singapore (Singapore Stock Exchange listed corporate taxpayers)	Corporate income taxes	1. Postal survey 2. 200 3. 65 4. 33%	Compliance costs were "reasonable" compared to other countries, but the large element of fixed costs caused them to be particularly regressive	Not addressed
1996 & 1997 (1994-95)	Evans, Ritchie, Tran-Nam & Walpole	Australia (Australian business and personal taxpayers)	All federal taxes	1. Postal survey of (a) business taxpayers and (b) personal taxpayers 2. (a) 7,496 (b) 1,867 3. (a) 2,464 (b) 936 4. (a) 33% (b) 50%	Federal taxpayer compliance costs (after taking into account the value of tax deductibility of certain costs and the value of cash flow benefits) were \$6.2b (1.4% of GDP or 7% of revenue yield); compliance costs were regressive, and larger businesses actually enjoyed net compliance benefits rather than costs	Not addressed
1996 (1996)	Yellow Pages Small Business Index	Australia (small businesses)	All taxes	1. Telephone interviews (commercial opinion poll) 2. 1,200 3. 1,200 4. 100%	Small businesses spend 832 hours pa (16 hours per week) on financial accounts, invoices, tax and other compliance matters; tax element is less than 25% (3 hours per week); the hours a firm spent on tax matters increased directly with the size of the firm, the number of taxes involved and the sector of activity; one third of all small businesses considered the time spent on tax compliance to be excessive	Not addressed
1997 (1995)	Ariff, Ismail & Loh	Singapore (Singapore Stock Exchange listed corporate taxpayers)	Corporate income taxes	1. Postal survey 2. 234 3. 62 4. 26%	Limited reduction in compliance costs of larger firms as a result of simplification, compared to 1994 study; most of the reduction was due to lower computational (as opposed to planning) costs	Not addressed

Year of publication (Year(s) under review)	Author(s)	Country (population studied)	Taxes studied	1. Methodology 2. Sample frame 3. Respondents 4. Response rate	Major outcomes	
					Compliance costs	Administrative costs
1997 (1995)	Loh, Ariff, Ismail, Shamsher & Ali	Malaysia (Malaysian Stock Exchange listed corporate taxpayers)	Corporate income taxes	1. Postal survey 2. 300 3. 80 4. 27%	Compliance costs were regressive, and primarily comprised computational costs (59%) as opposed to planning costs (41%)	Not addressed
1999 (1995-96)	Chan, Cheung, Ariff & Loh	Hong Kong (Hong Kong Stock Exchange listed corporate taxpayers)	Corporate income taxes	1. Postal survey 2. 496 3. 75 4. 15%	Established a positive relationship between company size and compliance costs; compliance costs were regressive; average compliance costs were relatively high compared to Singapore and Australia (as a result of low administrative costs, difficulties with territorial source basis and higher level of external costs); no major industry variations in patterns of compliance costs	Not addressed
2002 (1998-2000)	Rametse & Pope	Australia (Western Australian business taxpayers)	Start-up costs of the Goods and Services Tax (GST)	1. Postal survey 2. 3,199 3. 868 4. 27%	Estimated GST start-up compliance costs for small businesses were AUD\$7,600; this included owner/manager time of 131 hours; start-up costs were considerably higher than official government estimates	Not addressed
2002 (Jun 1999- Jun 2001)	Tran-Nam & Glover	Australia (small business taxpayers)	Transitional costs of the Goods and Services Tax (GST), Australian Business Number (ABN), Pay As You Go (PAYG) and Business Activity Statement (BAS)	1. Case study 2. 31 3. 31 4. Not relevant	Small businesses incurred net transitional compliance costs of AUD\$4,853 (mean) or AUD\$2,393 (median); (median was preferred); in addition to monetary costs, small business taxpayers appeared to suffer substantial psychological costs during the transitional period	Not addressed
2002 (2002)	Evans, Tran-Nam & Jordan	Australia (business taxpayers)	Tax Value Method (TVM)	1. Case study 2. 40 3. 40 4. Not relevant	There would be significant transitional compliance costs for businesses of all sizes and in all sectors if the Tax Value Method of identifying and calculating assessable income were to be introduced. Practitioners and businesses were unable to identify any recurrent compliance benefits that would offset these transitional costs over the longer term after the introduction of the Tax Value Method	Not addressed

Year of publication (Year(s) under review)	Author(s)	Country (population studied)	Taxes studied	1. Methodology 2. Sample frame 3. Respondents 4. Response rate	Major outcomes	
					Compliance costs	Administrative costs
2003 (2003)	CPA Australia	Australia (small business taxpayers)	Business taxes	1. Telephone interviews of (a) small businesses and (b) tax practitioners conducted by market research firm 2. (a) 701 (b) 105 3. (a) 701 (b) 105 4. (a) 100% (b) 100%	Many businesses, particularly non-employers, have experienced little change in compliance obligations over the past two years, however where change has occurred it is more likely to be an increase than a decrease; 30% have seen an increase in time for completion of annual return.	Not addressed
2003 (2002)	Evans	Australia and the UK (tax practitioners)	Personal capital gains tax	1. Postal survey of (a) Australian and (b) UK tax practitioners for compliance costs and documentary analysis for administrative costs 2. (a) 321 (b) 320 3. (a) 94 (b) 89 4. (a) 29% (b) 28%	Operating costs in both countries are high (by reference to the amount of tax payable on capital gains, revenue yield, GDP and relative to other types of tax), have not reduced over time and are both horizontally and vertically inequitable; the primary factors causing the high operating costs are legislative complexity and frequency of legislative change, together with record keeping and valuation requirements; that there was relatively greater concern among UK practitioners about CGT compliance costs issues compared to their Australian counterparts.	

### International Studies and Studies from the Rest of the World

Year of publication (Year(s) under review)	Author(s)	Country (population studied)	Taxes studied	1. Methodology 2. Sample frame 3. Respondents 4. Response rate	Major outcomes	
					Compliance costs	Administrative costs
1999 1995-96	Shekidele	Tanzania (Tanzanian large businesses)	Excise duties	1. Hand-delivered survey (supplemented with semi structured interviews with firms and tax officials) 2. 14 3. 9 4. 64%	Compliance costs of excise duties were relatively high (15.57% of revenue yield) compared to developed countries; some evidence of regressive nature of compliance costs	Not addressed
2001 (1998-99)	Cordova-Novion & De Young	Multi-country (Australia, Austria, Belgium, Finland, Iceland, Mexico, New Zealand, Norway, Portugal, Spain and Sweden) (businesses)	Business taxes	1. Postal survey 2. 22,544 3. 7,859 4. 35%	Tax regulations impose high compliance costs on businesses; regressive nature of compliance costs confirmed; compliance costs appear to be increasing over time	Not addressed
2002 (1999)	Bertolucci	Brazil (Brazilian public companies)	Corporate and business taxes	1. Email & postal survey 2. 211 3. 25 4. 12%	Compliance costs were R\$7.2b, or 0.75% of GDP; highly regressive; internal compliance costs approximately 80% of all costs	Administrative costs estimated as 0.2% of GDP (but only on very unscientific basis of being 25% of compliance costs)
2002 (2001)	Chattopadhyay & Das-Gupta	India (Indian personal taxpayers)	Personal income taxes	1. Postal survey 2. 5,435 3. 128 4. 2%	Compliance costs for individuals were "extraordinarily high" (between 49% and 56% of revenue yield); high for salary earners and "excessive" (7-10 times higher) for non-salaried taxpayers; regressive	Administrative costs estimated as 2.49% of individual income tax collected
2002 (2000-2001)	Chattopadhyay & Das-Gupta	India (Indian corporate taxpayers)	Income taxes of companies	1. Postal survey 2. 3,913 3. 45 4. 1%	Gross compliance costs for companies were between 5.6% and 14.5% of revenue yield (but negative when cash flow benefits and tax deductibility of certain costs are taken into account; regressive	Not addressed