
THE IMPLEMENTATION COSTS OF THE GST IN AUSTRALIA: CONCEPTS, PRELIMINARY ESTIMATES AND IMPLICATIONS

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The introduction of a GST in Australia which commenced on 1 July 2000 heightened public interest in and concern for the simplification of tax reform. In recent months, the media increasingly focused on the implementation costs of the GST. Some estimates of the start-up compliance costs of the Australian GST have been reported, many of which were either baseless or difficult to justify. This paper considers a number of conceptual and measurement issues associated with the implementation costs of a new tax. It reviews Canadian and Australian estimates, and suggests that the implementation costs of the GST in Australia would range from \$4-5 billion dollars. The implications for tax revenue, the price level and efficiency gains of the GST start-up operating costs are also discussed

1. INTRODUCTION

Despite ruling out a Goods and Services Tax ("GST") during his first term of office, Prime Minister John Howard has always considered a GST fundamental in his long-term taxation policy. As early as 1984, he wrote:

I have long believed that the single most important reform which is needed to the Australian tax system is the broadening of the taxation base towards a greater reliance on general consumption taxes with a corresponding reduction in our current over-reliance on personal taxation as a source of revenue¹.

The re-election of his Coalition Government in the 1998 Australian federal election meant that the public resistance to a GST was finally overcome after three previously unsuccessful attempts². The original 10% GST with very few exemption and zero rating categories proposed by the Government was subsequently modified in a deal with the Australian Democrats in the Senate and then enacted by the Australian Federal Parliament to commence on 1 July 2000.

It is important to recognise from the outset that the introduction of the GST represents only a part of the Government's tax reform strategy. There are many other measures including the Australian Business Number ("ABN"), Pay As You Go ("PAYG"), Business Activity Statement ("BAS") and the Review of Business Taxation. The latter recommended the abolition of accelerated depreciation and the reduction of the company tax rate, capital gains initiatives as well as significant changes in business accounting systems. Nevertheless, the GST remains the central component of tax reform and has attracted considerable scrutiny. In particular, there has been immense interest in the implication of the GST for the operating costs of the Australian tax system.

Conceptually, a distinction can be made between the social and taxpayer compliance costs of the GST. The social compliance costs of the GST refer to the costs incurred by the entire economy in complying with the GST legislation. Taxpayer compliance costs refer to the costs incurred by business in complying with the GST after taking into account offsetting benefits to

*. This paper is supported by a small ARC grant from the Faculty of Law at the University of New South Wales. The author is indebted to Associate Professor Chris Evans and Colin Fong for their valuable input. Critical comments from an anonymous referee are also gratefully acknowledged. The author alone is responsible for any remaining errors.

¹ JW Howard, "Taxation Reform" (1984) 1 *Australian Tax Forum* 8, 12.

² The first unsuccessful call for a broad-based consumption tax was made in the Asprey Report (Commonwealth Taxation Review Committee, *Full Report* (1975)). A broad-based retail sales tax was then proposed as Option C by the then Treasurer P Keating (*Reform of the Australian Tax System Draft White Paper* (1985)) but this was rejected at the National Taxation Summit (*Record of Proceedings* (1985)). The GST then resurfaced as the central element of Dr J Hewson's *Fightback!* package, which cost the Liberal Party the 1993 federal election.

business such as direct subsidies and tax deductibility, cash flow and managerial benefits. The distinction between social and taxpayer compliance costs has generated debate regarding the use of compliance costs in evaluating the simplification impact of tax reform.³

In its original *Regulation Impact Statement* ("RIS"), the Government estimated the recurrent social compliance costs of the GST in 2001/02 at \$1.91 billion.⁴ Another study estimated that the introduction of the GST would impose recurrent social tax compliance costs in the order of \$2.2 billion annually. This implies an annual increase of over \$1 billion in recurrent social compliance costs of taxation.⁵ Subsequent to the publication of the above study, the Government appears to have revised its own estimate and arrived at the same estimate of \$2.2 billion for a full-year recurrent social compliance costs.⁶

The Government's original estimation indicated that the GST would raise taxpayer compliance costs by only \$210 million in 2001/02.⁷ Subsequently, this figure has been revised upward by the government to \$385 million.⁸ Neither of these estimates seems to be well based. A more careful examination of past studies produces an estimated increase in recurrent taxpayer compliance costs of about \$657 million in 2001/02.⁹

Whether viewed from a social or business perspective, the compliance costs impact of the GST is substantial. An ATAX study estimated the

social and taxpayer compliance costs incurred by Australian business taxpayers in dealing with federal taxes and tax collection mechanisms in 1994/95 at \$8.9 billion and \$4.6 billion, respectively.¹⁰ Assuming that these estimates have not changed too much in the last five years, the GST-induced increases in the recurrent social and taxpayer compliance costs are significant relative to the respective total compliance costs.

As the commencement date of the GST approached, the Australian public's attention was increasingly focused on the implementation costs of the GST. Various estimates were reported in the media, many of which were either baseless or difficult to justify. This paper focuses on the implementation costs of the GST and has a two-fold purpose. First, it seeks to examine various conceptual and measurement issues associated with the implementation costs of a new tax. This is carried out in parts 2 and 3 respectively. It is shown that the concept of implementation costs of a new tax is not only more comprehensive and complex than generally reported, but also intrinsically difficult to quantify. Secondly, the paper attempts to estimate the implementation costs of the Australian GST and analyse the implications for the economy. Part 4 critically reviews the available evidence and suggests that the implementation costs of the Australian GST would be about \$4.5 billion. Some implications of these costs for the economy and future tax compliance costs studies are then drawn out in part 5.

³ B Tran-Nam, "Assessing the Revenue and Simplification Impacts of the Government's Tax Reform" (1999) 2 *Journal of Australian Taxation* 329, 337.

⁴ Treasury, "Regulation Impact Statement for the Introduction of a Goods and Services Tax" in *A New Tax System Bills 1998*, 8.

⁵ A figure of \$1,035 million increase was derived by subtracting the combined annual recurrent social compliance costs estimates of the wholesale sales tax and state taxes to be abolished (\$1,160 million) from the annual recurrent compliance costs estimate of the GST (\$2,195 million). See Tran-Nam, above n 3, 340.

⁶ Joint Government's Advocate, "GST Implementation and Compliance Costs", Attachment ID in *Letter to the President of the Australian Industrial Relations Commission Bench* (31 March 2000), 9.

⁷ See Treasury, above n 4, 8.

⁸ See Joint Government's Advocate, above n 6.

⁹ B Tran-Nam, "Use and Abuse of Tax Compliance Costs in Evaluating Tax Reform", Working Paper, 12th Australasian Tax Teachers Conference, Monash University (5 February 2000) 16.

¹⁰ C Evans, K Ritchie, B Tran-Nam and M Walpole, *A Report into Taxpayer Costs of Compliance* (1997) 51.

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2. THE IMPLEMENTATION COSTS OF THE GST - CONCEPTUAL ISSUES

The implementation costs, alternatively referred to as commencement or start-up costs, arise with the introduction of a new tax. In principle, there are three areas of implementation costs of a new tax:

- design, drafting and enactment;
- administration; and
- compliance.

Implementation costs for the design, drafting and enactment of a new tax refer to resources expended by the society in the events leading to the enactment of the tax legislation. In the case of a substantial tax such as the GST, these costs are immense as government departments, political parties, business and welfare organisations, labour unions, religious institutions, the media, etc have all been involved in discussing, debating, promoting and opposing the tax. However, these costs are extremely difficult to quantify with any degree of accuracy and have traditionally been ignored in the literature.

This paper focuses on the administrative and compliance costs of the implementation of the GST. The sum of these costs, taken together, can be termed the implementation operating costs of the GST, or simply, the implementation costs of the GST. Because the implementation costs of GST compliance are far greater than those of GST administration, it is not surprising that most studies have focused on the former. However, there is a clear transferability of these two costs so that it is necessary to consider them together.

The administrative costs of implementing the GST refer to the start-up costs incurred by the Australian Taxation Office ("ATO") and other regulatory bodies. For example, the costs incurred by the Australian Competition and Consumer Council ("ACCC") in regulating prices during the introduction of the GST could

also be counted as start-up administrative costs. The costs incurred by the Federal Treasury in assisting business in its preparation for the GST will be, for convenience, treated as implementation compliance costs.

The compliance costs of implementing the GST refer to the resources expended by the economy in its preparation to comply with the GST. A broad-based tax such as the GST affects all sectors of the economy including households, firms, the budget sector (government departments, universities, etc) and the Federal Treasury. Households (or individuals) in their capacity as consumers need to learn about GST but this is mainly for consumer expenditure planning, not for tax compliance. Thus, the individual costs of learning about the GST are excluded from the implementation compliance costs. The business sector includes non-profit organisations and firms that are not required to register for the GST. They may nevertheless incur start-up costs due to the need to learn about the GST legislation. Note also that business will not only be able to claim tax deductions on its implementation costs but will also receive some direct subsidies from the Government. The implementation costs incurred by the Federal Treasury cover both its subsidies to the business sector and a one-off loss in tax revenue (arising from tax deductibility benefits to business taxpayers).

In view of the above discussion, one may write:

$$(1) \text{ Implementation Operating Costs of the GST} = \text{Implementation Administrative Costs of the GST} + \text{Implementation Compliance Costs of the GST}$$

where

$$(2) \text{ GST Implementation Administrative Costs of the GST} = \text{Implementation Costs by the ATO} + \text{Implementation Costs by other Regulatory Bodies}$$

$$(3) \text{ Implementation Compliance Costs of the GST} = \text{Implementation Compliance}$$

Costs of the Business Sector + Implementation Compliance Costs of the Budget Sector + Implementation Costs to the Federal Treasury

(4) Implementation Business Compliance Costs = Explicit and Implicit Costs of Resources Expended by Business Tax-payers - Cash Subsidies - Tax Deductibility Benefits

(5) Implementation Costs to the Federal Treasury = Tax Revenue Losses + Government's Subsidies

Several points deserve further mention. First, the cash flow and managerial benefits of the GST are offsetting benefits of recurrent compliance costs and do not feature in the calculation of implementation compliance costs. Secondly, the tax deductibility benefits to business and tax revenue losses to the Treasury cancel out assuming that business and government can lend and borrow at the same interest rate. Thirdly, the Government's subsidies in the right hand side of equation 5 and the cash subsidies in the right hand side of equation 4 do not cancel out. This is because the Government's subsidies include both cash transfers and indirect subsidies in the form of free advice to business taxpayers. The Australian Government has promised to make a once-off compensation grant of up to \$500 million to defray the implementation costs incurred by small and medium businesses, but only some of this will be available as cash subsidies to registered firms.

Fourthly, and more importantly, there are some complications in measuring tax deductibility benefits to business taxpayers. These complications arise because some of the business implementation costs (for example, labour and small capital expenses) can be deducted from business revenue in a single claim, while other costs (large capital expenses) can only be depreciated over a number of periods. For estimation purposes, it will be assumed that all

implementation costs incurred by business are tax deductible in one year. This is not a severe assumption in view of the low inflationary economic environment in Australia and the Government's prospective legislation to extend the class of GST-related expenditures immediately deductible for businesses with annual turnover not exceeding \$10 million.¹¹ The magnitude of the aggregate tax deductibility benefits depend on the taxability of the business and the overall business marginal tax rate. Both of these will be considered in part 4.

It should be clear by now that the business implementation compliance costs (equation 4) are relevant to business' perspective while the implementation operating costs (equation 1) are appropriate for policy evaluation. Since the magnitude of the Government's indirect subsidies are relatively small, social costs are approximately equal to the opportunity costs of resources expended by business and the budget sector in implementing the GST. For ease of terminology, the term "GST registered firm" will, from now on, cover a business as well as a government department.

3. IMPLEMENTATION COSTS OF THE GST - MEASUREMENT PROBLEMS

The start-up compliance costs of the GST include:

- registering the business for GST;
- learning about GST and new procedures;
- getting advice about GST from professional tax advisers;
- discarding of out-of-date stationery or receipts;
- purchasing new equipment (for example, new cash registers or computers) or updated equipment (for example, more powerful

¹¹ Treasurer, Press Release No 51 - Assistance to Small and Medium Sized Businesses: Immediate Tax Deductibility for GST Related Expenditures (19 August 1999).

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computers);

- acquisition of new or updated tax software;
- modification of accounting and business systems; and
- changing prices of goods and services for sale.

Many of these costs spread over a long time period, before and after the commencement of the GST. On the collection side, the start-up administrative costs of the GST include:

- educating/communicating with business taxpayers;
- recruitment/training of new staff;
- consultants/contractors; and
- infrastructure (for example, laptops, mobile phones, publications, etc).

The implementation compliance costs vary widely by firm size, structure and industrial sectors. For any given wage rates and equipment costs, the implementation compliance costs, at the aggregate level, depend on:

- the number of registered firms (which in turn depends on the GST thresholds for any given distribution of firms by turnover);
- the complexity of the GST legislation (for example, the exclusion of most categories of food from the GST base increases complexity and thus implementation costs);
- the associated measures by the Government (for example, using the ACCC instead of the demand-supply mechanism to regulate post-GST prices will most likely raise implementation costs);
- the efficiency of educational campaigns conducted by the ATO and

industrial/professional organisations;

- the tax culture (ie the extent to which businesses try to minimise their tax burdens through tax planning, tax avoidance and tax evasion); and
- the pre-GST level of computer usage for tax purposes (the higher the level of computer usage, the lower the implementation costs). A high level of computer usage reduces the need for acquiring or upgrading computer hardware for GST purposes.

In a recent article on GST, Professor Sandford stressed the need of a comprehensive education and training program getting things right the first time in minimising the compliance costs of a GST¹².

The aggregate magnitude of the implementation compliance costs is typically derived from combining information on the cross distribution of registered firms by various relevant characteristics (which is in principle available from the ATO) and average implementation compliance costs of different categories of firms (which can be obtained from a random sample of registered businesses). The sample data is usually derived from large-scale mail questionnaire surveys, supplemented by follow-up telephone interviews. The sample should be random and stratified by some relevant business characteristics such as turnover and main business activity, and this typically requires the assistance of the ATO. Ideally, there should have been two surveys, six months before and six months after the introduction of the GST, to capture as much start-up costs as possible.

The introduction of the GST in Australia gives tax compliance researchers an excellent opportunity to study its implementation compliance costs. This is particularly useful in view of the lack of international evidence in this area (to be further discussed at part 4). Some

¹² C Sandford, "Minimising the Compliance Costs of a GST" in C Evans and A Greenbaum (eds), *Tax Administration - Facing the Challenges of the Future* (1998) 130.

preliminary work has started. Clearly, support is needed to fund further studies which will identify not only the magnitude of compliance costs, but also factors that may help reduce recurrent compliance costs.

Before proceeding further, it is worth discussing the difficulties in measuring implementation compliance costs. Such costs are inherently difficult to quantify for a number of reasons:

- The boundary between start-up and recurrent compliance costs is not always clear and it is thus difficult to allocate costs into the correct category.
- Economic factors of production are not perfectly divisible and inputs may be hired or purchased to perform several different tasks. For example, a firm purchases a new computer system not only to satisfy its GST requirements but also for normal upgrading purposes. How much of the total costs should be allocated to GST start-up compliance costs? The difficult task of cost allocation here is conceptually analogous to the perennial accounting-taxation overlap debate in the tax compliance cost literature.
- The implementation period including the build-up period may be a very long one and the timing of the surveys may be such that not all implementation compliance costs are captured.
- As profit maximisers, registered firms may have the incentive to systematically overstate their implementation costs in order to justify price rises or to seek subsidies or immediate depreciation from the Government.
- In the case of Australia, there are a number of changes being implemented over a relatively short time period. This makes it difficult for business taxpayers to allocate start-up costs to

the correct type of tax reform.

- There is a distinction between a business entity and business taxpayer. This is because many businesses for reasons such as limitation of legal liability, security, financial planning and tax planning choose to use several business vehicles in a single business entity. In 1996-97, there were just over 1 million separate businesses giving rise to about 2.4 million business taxpayers in Australia.¹³ Since there may be some cost savings within a business group (for example, a computer can be shared by several business taxpayers within a business group), there is a danger of overestimation by careless extrapolation using the number of registered business taxpayers.

Note that most of the above arguments also apply to problems in measuring implementation administrative costs.

The simultaneous presence of implementation and recurrent compliance costs in the early years following the introduction of a new tax complicates the analysis of tax compliance costs. Estimates of the GST compliance costs in the first one or two years of its introduction cannot validly be used to indicate the level of compliance costs that will prevail in the future as the early compliance costs are likely to include start-up costs, which will soon disappear. Economic theory and accounting practice suggest that some start-up costs, particularly the costs of durable assets, should be spread over a number of periods, rather than be treated as a cost solely at the time incurred. The most rigorous approach is to make use of the present value concept in cost-benefit analysis to define the aggregate social compliance costs ("ASCC") over the lifetime of the tax as:

$$(6) \text{ ASCC} = \sum_{t=0}^n r^t \text{ SCC}$$

¹³ The ABS in *2000 Year Book of Australia* stated that there were about 1,046,900 separate businesses for 1996-97 while the ATO's 1996-97 *Tax Return Database* contains about 2.4 million business taxpayers (including sole traders).

Where π (< 1) is the subjective social discounting factor, SCC is the social compliance costs of the GST in year t and n is the number of years during which the new tax operates. In principle, all the commencement costs can be captured by the first few terms of the right hand side of equation 6.

In reality, empirical studies typically focus on a single year so that the above approach is not practicable. In this case, an alternative approach is to use the present-value arithmetic to convert implementation costs into an indefinite stream of equivalent annual costs. This involves treating start-up costs as a perpetual stream of annual costs, which is equivalent to assuming that the new tax is indefinitely (or sufficiently) long-lived. For example, one may write:

$$\begin{aligned} \text{(7) Implementation Annual Equivalent} \\ \text{Compliance Costs} &= \text{Implementation} \\ \text{Compliance Costs} &\div \text{Annual Interest} \\ &\text{Rate} \end{aligned}$$

The implementation annual equivalent compliance costs can then be added to the recurrent compliance costs for evaluating the simplification impact of tax policy. A numerical illustration of this method will be given in part 4.

4. ESTIMATES OF THE IMPLEMENTATION COSTS OF THE AUSTRALIAN GST

Before presenting Australian estimates of the GST implementation compliance costs, it may be worthwhile to examine some overseas evidence. The GST has been introduced in many countries and there have been accordingly several studies of GST/VAT compliance costs¹⁴. However, all of these studies are concerned with recurrent

compliance costs as they were conducted many years after the introduction of the GST/VAT in the relevant countries. In fact, the only known international study to date of the implementation compliance costs of the GST is by the Canadian Federation of Independent Business ("CFIB")¹⁵.

The GST commenced in Canada on 1 January 1991. In June 1991, the CFIB conducted a GST Follow-up Survey and received 25,362 responses. Based on the results of the survey, it was found that the costs to firms of implementing the GST emerge in different ways and vary depending on each firm's characteristics. For small firms (employing less than 20 persons), the GST implementation costs increased business costs in the following order of magnitude: owners' time, professional services, equipment/hardware, training personnel and software. For larger firms, the order was slightly different: owner/managers' time, professional services, training personnel, software and hardware/equipment. The implementation costs of the GST in Canada were estimated at \$CAN2,539 per firm¹⁶ or \$CAN3 billion in the aggregate.

The main strength of the CFIB survey lies in its exceptionally large sample size. However, since the survey was not an academic exercise, no information about the representativeness of its sample was given. Furthermore, surveys of this type are potentially subject to self-selection bias. There is a possibility that those who chose to respond distort the survey outcomes because they have a particular perception of compliance costs compared to those who do not respond. Nevertheless, the fact that almost 17% of respondents in the survey reacted positively and a further 31% were neutral to the GST¹⁷ suggests that the self-selection bias, if it occurred, might not be too serious.

¹⁴ CT Sandford, MR Godwin, P Hardwick and I Butterworth, *Costs and Benefits of VAT* (1981); CT Sandford and J Hasseldine, *The Compliance Costs of Business Taxes in New Zealand* (1992); Plamondon and Associates Inc, *GST Compliance Costs for Small Business in Canada* (1993); M Allers, *Administrative and Compliance Costs of Taxation and Public Transfers in the Netherlands* (1994).

¹⁵ CFIB, *The GST: A National Tax Tragedy* (1991).

¹⁶ The unweighted sample average start-up costs per firm were given as \$CAN3,964. See CFIB, *ibid*, 9. However, adjusting for the population distribution of firms by size (in terms of number of employees), a weighted average start-up costs of \$CAN2,539 per firm were derived.

¹⁷ See CFIB, *ibid* n 15, 2.

Turning to Australia, wide-ranging estimates have been made and reported. The Federal Government has not made any explicit forecast, but it stated in its original RIS that "start-up costs are likely to be one-off expenses and to be lower than the full year compliance costs of the GST".¹⁸ In the revised RIS the Government is more explicit in stating that it expects that the estimated implementation compliance costs would not exceed \$2.2 billion.¹⁹ Clearly, the ATO has its own estimate, but this is not available for public scrutiny.

Professional organisations and firms have come up with much higher estimates than the Government. The National Tax and Accountants' Association ("NTAA") proposed an estimate of at least \$15 billion in early 1999.²⁰ This was derived by multiplying 1.5 million (the expected number of registered firms) by an estimated start-up cost of more than \$10,000 per firm. Later, Arthur Andersen ("AA") suggested a much higher figure of about \$24 billion, with \$12 billion for external tax and systems advice and \$12 billion on internal project management, education and pricing issues.²¹ These various estimates are apparently based on business' total expenditure on the Y2K problem, estimated at \$12 billion nationwide. Neither of the NTAA or AA estimates are based on careful studies. Both appear to be overestimation as a result of (i) extrapolation which is biased toward larger businesses, and (ii) lumping the GST-related and normal upgrading computer and system costs together.

Based on a survey of over 320 Australia's largest corporations, Ernst and Young estimated implementation compliance costs at between

0.75% and 1% of business' annual revenue²². A later Ernst and Young Report, commissioned by the NSW State Government and based on four cases studies of small business, suggested estimates ranging from \$9,750 to \$19,930 start-up costs per small firm²³. Using a figure of \$10,000 (average between \$9,750 and \$19,930), this implies total start-up costs of at least \$10 billion for the small business sector alone. However, as the Federal Government argued later, these estimated costs include new capital equipment not directly related to the GST. This illustrates the measurement problems discussed in part 3.

A much smaller estimate was given by the GartnerGroup.²⁴ Immediately after the GST legislation was passed, the GartnerGroup surveyed 18 medium and large enterprises from different industrial sectors on cost estimates for GST compliance in the first year. The highest estimate was \$30 million, the lowest \$50,000 with an average estimated compliance costs in the first year of \$8.72 million. By extrapolating from this data, the GartnerGroup has concluded that the implementation cost of compliance for business and government will exceed \$2.6 billion²⁵. It is not clear how the extrapolation was done (since the GartnerGroup's survey did not contain any small businesses) and the aggregate estimate appears to be small in view of the sample results.

In its 1999 September quarter survey of business trends and prospects, the Victorian Employers' Chamber of Commerce and Industry ("VECCI") included some special questions on the GST compliance burden.²⁶ These costs include registration for an ABN, upgrading

¹⁸ See Treasury, above n 4, 5.

¹⁹ See Joint Government's Advocate, above n 6, 9.

²⁰ P Rees, "GST's Big Cost" *Sunday Telegraph* (14 February 1999) 31.

²¹ F Buffini, "Readiness for GST Tipped to Cost \$24b" *Australian Financial Review* (6 January 2000) 6.

²² Ernst and Young, *Preparing for the GST: An Australian Survey* (1999) 6.

²³ F Buffini, "\$10bn Bill for Compliance" *Australian Financial Review* (21 January 2000) 59.

²⁴ B McCabe and E Purchase, "Surviving Australia's Goods and Services Tax" *Strategic Analysis Report* (14 January 2000).

²⁵ *Ibid*, 9.

²⁶ VECCI, *Survey of Business Trends and Prospects No 20* (1999).

computing and record-keeping procedures, personnel training, all up to the commencement of the GST on 1 July, 2000. This is in some sense the Australian counterpart of the CFIB study, except that many expenses are anticipated rather than actual. On the basis of a sample of 326 firms, the VECCI produced an aggregate estimate of \$3.514 billion cash plus 75.6 million hours of staff time.²⁷ Using an average pre-tax wage rate of \$20 an hour²⁸, the additional labour time represents a further \$1.512 billion, implying an aggregate estimate just over \$5 billion.

The VECCI's aggregate estimates are extrapolated from an average direct cost of \$3,800 per firm and 929,500 businesses around Australia. Note that the term business in the VECCI research refers to business group rather than business taxpayers. Thus, the number of businesses used in the VECCI's estimation is far less than the expected 1.6 million GST registered taxpayers (the average estimated number of registered firms over the two years 2000/01 and 2001/02), as discussed in part 3.

Like the CFIB study, the VECCI survey is only a business survey. Although the average GST start-up compliance costs are presented in terms of business size (number of employees) and industry, the cross distribution of the observed sample by business size and industry is not given. There is also no analysis of non-response bias in the survey. Nevertheless the VECCI survey provides the largest and most comprehensive data set (both quantitative and qualitative) to date.

As a check, one may try to extrapolate from the CFIB Survey, making use of its estimated average cost per business taxpayer. To adapt the Canadian results for the Australian context, we begin by assuming that the structure of Australian businesses is broadly similar to those in Canada. There are forces that would affect average start up compliance costs between the two countries in opposite directions:

- Over the period of nine and a half years from 1 January 1991 to 1 July 2000, there has been some price inflation which would raise the implementation costs. Using international comparable CPI, the cumulative change in the CPI of Canada over the period 1990/91 to 1998/99 is about 16% while the corresponding figure for Australia is 20%.²⁹
- The Australian GST appears to be better designed and less hastily imposed than the Canadian GST. The Australian Government has had available at its disposal a number of GST models including that adopted in New Zealand and proposed in the *Fightback!* package. In Australia, there will a time lapse of about a year between the passing of the legislation and the commencement of the GST. In the case of Canada, the GST legislation was passed and commenced effectively on the same date, 1 January 1991.
- The current level of computer usage among businesses in Australia is likely to be higher than in Canada a decade ago. It was argued in part 3 that a more widespread usage of computers reduces the need to acquire or upgrade computer hardware/software for the implementation of GST.

It is difficult to quantify the overall effect of the above opposing factors. In the absence of specific data, the most plausible course of action is to assume that those opposing forces cancel out. Taking the exchange rate as \$CAN1 to \$AUD1, it means that the average start-up compliance cost per GST registered firm in Australia is approximately \$2,540. Multiplying this by 1.6 million yields \$4.1 billion. This aggregate estimate appears to be compatible with the VECCI's findings of \$5 billion as well as some published information concerning the GST implementation budgets of large firms.³⁰

²⁷ Ibid, 22

²⁸ This is based on the average pre-tax wage rate for owners and partners in small businesses suggested by the Small Business Deregulation Task Force, *Working Overtime* (1996). The use of small sole traders is justified on the basis that 96% of registered firms employ no more than 19 employees (see ABS, *2000 Year Book of Australia*, 551).

²⁹ See ABS, *1998 Year Book Australia*, 661 and *2000 Year Book Australia*, 725. Internationally comparable CPI is basically CPI for all commodity groups excluding housing.

³⁰ P Cleary, "GST Start-up Costs Blow Out" *Australian Financial Review* (28 February 2000) 4.

It should be stressed that the VECCI figure of \$5 billion and the \$4.1 billion projected from the CFIB survey are only preliminary estimates of Australia's GST implementation compliance costs. They are not based on independent and scholarly studies and need to be confirmed by more rigorous studies in the future. Nevertheless these estimates appear to be the most plausible in view of the available data. The following analysis proceeds on the assumption that \$4.1 billion represents a reasonable estimate of the GST start-up compliance costs in Australia.

To estimate the various components of implementation compliance costs, some further calculations and assumptions are necessary. Using the results of the ATAX study, business weighted average marginal tax rate and the overall proportion of taxable businesses are estimated at 29.4% and 69.4% respectively.³¹ Of the remaining 30.6% non-taxable businesses, it is assumed that half of them (ie 15.3%) can still receive tax deductibility benefits so that a total of 84.7% (69.4% + 15.3%) of business taxpayers can take advantage of these benefits³². This implies:

$$\text{(8) Tax Deductibility Benefits} = 0.847 \times 0.294 \times \$4.1 \text{ billion} = \$1.0 \text{ billion}$$

Note that the above total will be received by business taxpayers over a number of years. For example, if 60% of the \$4.1 billion outlay is for labour costs and small capital expenses, businesses can deduct \$0.6 billion from their costs in one year.

To estimate the cash subsidies received by small and medium businesses, we make use of the facts that 96% of the expected 1.6 million registered firms are either small or medium-sized and each of which will receive \$200 cash subsidy.

This means that the total cash subsidies to business will be:

$$\text{(9) Cash Subsidies} = 0.96 \times 1.6 \text{ million} \times \$200 = \$0.3 \text{ billion}$$

This estimate appears to be consistent with the Federal Government's plan to spend about \$320 million in direct assistance for small and medium business. Since the Government's subsidies total \$0.5 billion, this means that the Government's indirect subsidies will be \$0.2 billion approximately.

Combining all the estimates so far yields:

$$\text{(10) Implementation Business \& Budget Sector Compliance Costs} = 4.1 - 1.0 - 0.3 = \$2.8 \text{ billion}$$

$$\text{(11) Implementation Costs to the Treasury} = 1.0 + 0.50 = \$1.5 \text{ billion}$$

$$\text{(12) Implementation Compliance Costs} = 2.8 + 1.5 = \$4.3 \text{ billion}$$

Note that the implementation social compliance costs are also equal to the value of resources expended by registered firms (\$4.1 billion) and the Government's indirect subsidies (\$0.2 billion). Note also that the above calculations exclude non-registered firms although they may also incur implementation costs due to the need to learn about the GST.

In its 2000/01 Budget, the Federal Government allocated an additional \$25 million to the ACCC for monitoring GST-related price changes.³³ The ATO's implementation administrative costs can be deduced from its own estimates presented in the Treasury's *Regulation Impact Statement*³⁴. They appear to be spread over the two financial years 1999/2000 and 2000/01. Summing different start-up cost categories together, an aggregate estimate of

³¹ See Evans et al, above n 10, 33 and 41-42.

³² Strictly speaking, this may overestimate tax deductibility benefits a little because some GST registrants are not taxable, for eg non-profit institutions or the budget sector

³³ Treasury, *2000-01 Portfolio Budget Statements*, ACCC (9 May 2000).

³⁴ See Treasury, above n 4, 9.

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about \$0.2 billion is obtained. Adding all relevant estimates gives:

(10') Implementation Costs to Business & Budget Sector = \$2.8 billion

(11') Implementation Costs to the Treasury, ATO & ACCC = $1.5 + 0.2 + 0.025 = \$1.725$ billion

(12') Implementation Costs = $2.8 + 1.725 = \$4.525$ billion

Assuming that the interest rate is 6% per annum,³⁵ the various annual equivalents are given by:

(13) Implementation Annual Equivalent Costs = $\$4.525 \text{ billion} \sim 6\% = \$271.5 \text{ million}$

(14) Implementation Annual Equivalent Business & Budget Sector Costs = $\$2.8 \text{ billion} \sim 6\% = \$168 \text{ million}$

(15) Implementation Annual Equivalent Treasury, ATO & ACCC Costs = $\$1.725 \text{ billion} \sim 6\% = \$103.5 \text{ million}$

Equation 13 means that, at an interest rate of 6% per annum, the GST implementation costs are equivalent to a perpetual series of annual costs of about \$272 million. This annual equivalent amount can then be added to the recurrent annual operating costs of the GST for the purpose of tax policy evaluation.

The table below summarises all the estimates obtained so far.

SUMMARY OF GST IMPLEMENTATION COST ESTIMATES (\$ million)

	Compliance Costs	Administration Costs	Operating Costs	Operating Costs (Annual Equivalent) ^a
Business & Budget Sector	2,800	0	2,800	168.0
Treasury, ATO & ACCC	1,525	200	1,725	103.5
Economy	4,325	200	4,525	271.5

^a An annual interest rate of 6% is assumed.

³⁵ This is hypothetical and used for illustrative purposes only.

5. SOME IMPLICATIONS

The estimated implementation costs of the GST seem to be high, both in absolute terms and relative to the estimated recurrent operating costs of the GST. Various estimates suggest that the implementation costs of the GST (\$4.5 billion) are almost twice as large as the first-year operating costs of the GST (\$2.5 billion).³⁶ This ratio is high and not consistent with the limited international evidence available to date, which suggests implementation costs are lower than one full-year recurrent costs.³⁷ However, implementation and recurrent costs are transferable. Higher implementation costs due to careful and comprehensive preparation now may imply lower recurrent costs down the track. This paper focuses on aggregate estimates and has not considered how the aggregate GST implementation burden are borne by different business taxpayers. It is known in the literature that recurrent tax compliance costs are regressive in business size (measured in terms of annual turnover).³⁸ If this also holds true for start-up costs, it will further worsen the position of small businesses relative to large ones.

The high value of the estimated GST implementation costs has negative consequences on the economy in various ways. This paper suggests that the introduction of the GST in Australia will give rise to \$1 billion of tax revenue losses, spread over a few years. Most of the impact will be felt in the 1999/2000 and 2000/01 financial years. The GST implementation induced tax revenue losses are significant in view of the projected federal budget

surplus of \$2.8 billion for 2000/01 (which includes the controversial net gain from the sale of telecommunications spectrum licences in 2000/01).³⁹ However, tax reforms are far reaching and there will be many conflicting forces at work. It is thus difficult to predict the overall impact of tax reforms on tax revenue.

As a result of its GST implementation, Australian business may incur additional one-off net costs of about \$2.8 billion. This total amount is very significant, representing about 10% of the expected GST revenue of \$27.2 billion in 2000-01.⁴⁰ Most of these costs will be ultimately passed on to the consumers. This will add further pressure to the one-off rise in the consumer price level as a result of the introduction of the GST. In its original tax reform package, the Treasury estimated a net increase of 1.9% in consumer prices.⁴¹ This has been subsequently revised upward to 2.75%.⁴² The Joint Government's Advocate claimed that the Treasury has included a specific allowance for the business compliance costs of GST set out in its RIS.⁴³ It is by no means clear how the Treasury has done it. But even if it did, the business compliance cost estimates used are not only underestimated (\$385 million instead of \$657 million) but also recurrent and no allowance has been made for implementation compliance costs.

Most seriously, the high implementation costs of the GST cast doubts on the supposed welfare gains of the GST-based tax reform. Simplicity is after all an aspect of efficiency. Without taking tax operating costs into considerations, estimated long-run efficiency gains from the GST range

³⁶ The first-year recurrent operating costs of the GST are derived by adding recurrent compliance costs (\$2.2 billion) and recurrent administrative costs (\$0.3 billion) together. See Tran-Nam, above n 3, 340.

³⁷ See CFIB, above n 15, 9-10.

³⁸ See Evans et al, above n 10, 79.

³⁹ This is known officially as the "underlying cash balance". See Treasury, *Budget Paper No 1*, Table 3, Part II (9 May 2000).

⁴⁰ Costello, *Tax Reform: Not a New Tax, a New Tax System* (1998) 130.

⁴¹ The Treasury estimated that the imposition of the GST will be equivalent to an additional consumer tax of about 5.1%, and that the reduction in taxes on business inputs will lower the costs of producing goods and services by 3.2%. This will generate a net increase in CPI of about 1.9% (5.1% - 3.2%). See Costello, above n 40, 162.

⁴² Treasury, *Mid-Year Economic and Fiscal Outlook 1999-2000, Part 2* (November 1999) 10.

⁴³ See Joint Government's Advocate, above n 6, 10.

from a welfare loss between \$1.8 billion and \$2.4 billion⁴⁴ to a welfare gain of about \$0.6 billion annually.⁴⁵ In particular, the work (based on the Monash model) by Professor Dixon and Dr Rimmer indicates that the indirect tax reform will generate a significant risk of reduced employment in the short run, not increase employment in the long run, reduce the terms of trade, and not significantly increase the revenue-raising power of the tax system.⁴⁶ It has been estimated that, as a result of the introduction of the GST, tax operating costs will increase by about \$1.5 billion annually. This is made up of \$1.2 billion increase in recurrent tax operating costs⁴⁷ and \$0.3 billion in GST implementation annual equivalent operating costs (see the table in part 4). The estimated increase in tax operating costs is clearly higher than the most optimistic GST-induced efficiency gains estimate. The results in this paper appear to further strengthen the conclusion reached by Professor Dixon and Dr Rimmer.

Over the next few years, much resources will be undoubtedly devoted to estimating the GST compliance costs in Australia. Whether it is a routine business survey or a specific-purpose study, researchers should try to avoid the pitfalls of earlier surveys. In order to achieve the best possible outcome it is necessary to address the following issues:

- Sample selection - ensure that the sample of respondents covers a wide range of turnovers and industrial sectors. In particular, there should be sufficient large number of respondents in the large business category.
- Non-response bias - if possible, analyse the extent of non-response bias and show how this affects the results obtained.
- Definition of compliance costs - provide respondents with a clear definition of tax compliance costs in terms of adviser fees, time spent by internal staff/owners and other related costs (training, computer, stationery, etc). Guide respondents in each category of compliance costs.
- Start-up versus recurrent costs - distinguish between recurrent and implementation compliance costs, especially in the early years, as far as possible. Pay careful attention to the design of questions on cost allocation.
- Qualitative data - it should be borne in mind that the knowledge of an accurate implementation costs is in itself not very useful unless it is accompanied by information that can be used to determine how to reduce recurrent costs in the future.

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⁴⁴ P Dixon and M Rimmer, "The Government/Democrat's Package of Changes in Indirect Taxes", Working Paper, 12th Australasian Tax Teachers Conference, Monash University (4 February 2000) 9.

⁴⁵ C Murphy, "Modelling a New Tax System (ANTS) - Comparing MONASH and MM303" in Senate Select Committee on a New Tax System, *First Report* (1999)

⁴⁶ See Dixon and Rimmer, above n 44, 1-2.

⁴⁷ See Tran-Nam, above n 3, 340.