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# *Measuring the managerial benefits of tax compliance: a fresh approach*

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## **Abstract**

*Managerial benefits of tax compliance have been identified by many authors in the tax compliance costs literature; they have however often been ignored when measuring the net effect of tax compliance on business taxpayers because it was believed that the measurement of such benefits was impossible or difficult. This paper first discusses the theoretical issues surrounding the valuation of managerial benefits, including the related tax/ accounting costs overlap problem; it then proposes a fresh approach for measuring managerial benefits. The proposed measurement model incorporates a subjective evaluation of useful accounting information by owner–managers and objective measurements of accounting costs. Two main components of managerial benefits are identified: the incremental value of managerial accounting information and the savings on reporting costs. A study of small businesses conducted in late 2006, compared accounting practices between tax complying entities (TCEs) and tax compliance free entities (TFEs) and investigated how accounting information was valued by owner–managers in TCEs. The research adopted a mixed methodological design including a major quantitative phase followed by a minor qualitative phase.*

*The results show that while a vast majority of TFEs maintained basic accounting functions, record keeping requirements imposed by tax compliance led to the implementation of more sophisticated accounting systems in TCEs. It was also found that TCE owner–managers assigned a relatively significant value to the managerial accounting information that is generated as a result of record keeping imposed by tax compliance, suggesting that substantial managerial benefits might be derived.*

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# 1 Introduction

Managerial benefits may be derived by business taxpayers as a result of the record keeping requirements imposed by tax compliance obligations.<sup>1</sup> These benefits come in the form of improved financial information and improved managerial decision making. The managerial benefits of tax compliance have been discussed by many authors in the tax compliance costs literature; however the empirical evidence about their source and about their significance has until recently been very limited. Furthermore, the measurement of these managerial benefits has long been a vexed issue which has been left in the “too hard” basket. Two reasons may explain this situation. Firstly, even though the *concept* of managerial benefit itself is rather straightforward, the reality of managerial benefits can be elusive because it is dependent on how the accounting information generated by tax compliance activities is valued by business owner-managers and used in business decisions. Secondly, there is some controversy as to what approach should be used for the measurement of these benefits.<sup>2</sup>

Related to the issue of measurement of managerial benefits is the problem of the overlap between core accounting costs and tax compliance costs (the so-called tax/accounting overlap).<sup>3</sup> The tax/accounting overlap problem has itself two dimensions: tax compliance related activities need to be differentiated from activities which relate to core accounting functions;<sup>4</sup> and an appropriate method must be determined to account and allocate joint costs between accounting and tax compliance activities.<sup>5</sup>

A study of accounting practices and tax compliance activities in small businesses in Central Queensland and Norfolk Island was undertaken in November-December 2006. The study adopted a mixed methodological design including a major quantitative phase followed by a minor qualitative phase. Its primary purpose was to explore the nature of managerial benefits and to identify the conditions in which they may be derived. Additionally, it was anticipated that a better understanding of managerial benefits would lead to the proposition of alternative methodologies and perspectives for *measuring* managerial benefits. Since this research was to examine firms virtually free of tax compliance, it was also expected that the comparison with entities exposed to tax compliance would give the possibility of further investigation of the tax/accounting overlap problem. The study focused on small businesses as it

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- 1 Benefits other than managerial benefits may also be derived by taxpayers from tax compliance activities; these include cash flow benefits and tax deductibility benefits. This study only considered managerial benefits. For a discussion of other benefits of tax compliance, see B Tran-Nam, C Evans, Walpole. M and K Ritchie, “Tax compliance costs: Research methodology and empirical evidence from Australia” (2000) 53(2) *National Tax Journal* 229, 229-52.
  - 2 B Tran-Nam, “Tax compliance costs methodology – a research agenda for the future” in C Evans , J Pope and J Hasseldine (eds), *Tax compliance costs : A Festschrift for Cedric Sandford* (2001) 51.
  - 3 Ibid; M Allers, *Administrative and compliance costs of taxation and public transfers in the Netherlands* (1994).
  - 4 I Wallschutzky and B Gibson, “Small business cost of tax compliance” (1993) 10 *Australian Tax Forum* 511
  - 5 Allers, above n 3, 31.

was believed that managerial benefits resulting from tax compliance activities were more likely to arise in such organisations where accounting information systems are relatively undeveloped.

The development of a method for measuring managerial benefits is considered to be of crucial importance to tax compliance costs research. If managerial benefits were found to be significant, they would represent an offset to compliance costs and therefore reduce the net impact of the tax compliance burden on business taxpayers. Furthermore, if managerial benefits were found to be chiefly realised by *small* business taxpayers, this would mitigate the so-called regressivity of tax compliance costs.<sup>6</sup>

The remainder of this paper is structured as follows. Section 2 reviews the existing literature on managerial benefits while Section 3 addresses the theoretical issues surrounding the tax/ accounting overlap problem and the measurement of managerial benefits. Following this analysis, Section 4 discusses alternative approaches for measuring managerial benefits. The research methodology used for the present study is briefly described in Section 5 and the results are presented in Section 6. The findings of the study are summarised and discussed in [Section 7](#). Finally, a few concluding comments are made in Section 8.

## 2 Previous literature

### 2.1 The concept of managerial benefits

The concept of managerial benefits was first introduced by Sandford in the early 1980s in his study of the tax compliance costs of Value Added Tax (VAT) in the United Kingdom (UK).<sup>7</sup> Sandford argued that the effect of complying with tax may not always be detrimental, as individuals who complete their tax return and file the necessary information, may at the same time be encouraged to engage in more efficient management of their financial affairs. These benefits are likely to be more significant in the case of businesses (hence the terminology “*managerial* benefits”) as compliance with the tax system will force the business owner to introduce a more

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6 P Lignier, “The costs and benefits of complying with the tax system and their impact on the financial management of the small firm.” (2006) 2(1) *Journal of the Australasian Tax Teachers Association* 121, 126-7. The regressivity of tax compliance costs measured as a turnover was highlighted in the survey of Australian business taxpayers undertaken by Evans et al in 1994-95. Net tax compliance costs ranged from 2.47 per cent of turnover for small businesses (annual turnover < \$100,000), to a net benefit of 0.06 per cent of turnover for large firms (turnover of \$10m and over); C Evans, K Ritchie, B Tran-Nam and M Walpole, “A report into taxpayer costs of compliance” (Australian Taxation Office, 1997), 81. Similar results were found by a recent survey of tax compliance costs in New Zealand SMEs; Colmar Brunton, “Measuring the tax compliance costs of small and medium size businesses: a benchmark survey” (Inland Revenue, 2005), 91.

7 C Sandford, M Godwin, P Hardwick and M Butterworth, *Costs & benefits of VAT* (1981), 90.

efficient financial information system.<sup>8</sup> Sandford described managerial benefits from compliance with VAT in this manner:<sup>9</sup>

“[...]It is clear that there are continuing and not inconsiderable cash benefits from the better record keeping which is necessary to comply with VAT requirements. It is not possible to put a realistic value on these benefits but they are an important offset to the compliance costs of some of the smaller businesses.”

Some years later, Tran-Nam proposed a broader definition of managerial benefits which extends to better decision making:<sup>10</sup>

“Management benefits come in the form of improved decision making brought about by the need to have more stringent record keeping in order to comply with the requirements of tax law.”

In the above definitions, record keeping, particularly more stringent record keeping, is identified as the main source of managerial benefits. However, record keeping is a broad concept which encompasses a number of varied and multifaceted activities from which business taxpayers may be able to derive specific managerial benefits, a number of which were described by Sandford.<sup>11</sup> Two broad sources of managerial benefits can be identified: benefits generated from improvements to the accounting information system; and benefits derived from savings on other costs.

## 2.2 The sources of managerial benefits

### 2.2.1 Improvements to the accounting information system

Improvements to the accounting information system (AIS) are achieved as a result of the necessity to have a complete record keeping system where all transactions are recorded. Compliance with Goods and Services Tax (GST) (or with VAT, its UK equivalent), for instance, requires taxpayers to keep a record of their sales and purchases. In recent years, increasing tax compliance obligations have also been a major driver of the acquisition of computerised accounting systems (CASs) by small businesses. Significant computer costs were typically incurred by small firms when a new tax was introduced or when substantial amendments were brought to an existing tax.<sup>12</sup> In Australia for example, small business owners interviewed prior to the introduction of GST in 2000, stated that the new tax was the main reason for acquiring a computer.<sup>13</sup> This acquisition of information technology was actively

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8 C Sandford, M Godwin and P Hardwick, *Administrative and compliance costs of taxation* (1989), 13.

9 *Ibid*, 118.

10 Tran-Nam, above n 2. 55.

11 Sandford, Godwin, Hardwick and Butterworth, above n 7, 89-95.

12 G. Bannock and H. Albach, *The compliance costs of VAT for smaller firms in Britain and Germany* (1987); Centre for Fiscal Studies, “The tax compliance costs for employers of PAYE and National Insurance in 1995-96” (University of Bath, 1998); J Pope, “Research methodology for estimating the compliance costs of GST” in A Lymer and D Salter (eds), *Contemporary Issues in Taxation Research* (2003) 69.

13 Pope, *ibid*, 75-6.

encouraged by the federal government through the provision of a grant and the possibility of immediate tax deduction.<sup>14</sup> The acquisition of computers is potentially an important source of managerial benefits for small businesses as the use of technology is expected to bring substantial improvements to the AIS.

These improvements come mainly in the form of the increased efficiency that is achieved when the use of a CAS enables staff to perform the same task in less time, more accurately and using fewer resources.<sup>15</sup> Effectiveness benefits can also arise because the use of technology allows owner-managers to perform new activities that contribute more to the value of the business than the old activities they replace.<sup>16</sup>

Better control mechanisms will often be associated with the adoption of more sophisticated accounting systems. These improved controls will assist small businesses in three main areas of financial management: cash flow monitoring, stock control and credit management.

Even though business operations are the major sources of cash inflows and outflows, in many jurisdictions the requirements of the taxation system are also likely to have a significant influence on the cash flows of small firms. There is some evidence that the introduction of GST in Australia had a positive impact on the ability of some small business owner-managers to monitor their cash flows.<sup>17</sup>

Sandford also expected that more stringent record keeping may lead to improved stock control.<sup>18</sup> This form of managerial benefits does not appear to be commonly perceived by business taxpayers;<sup>19</sup> however the widespread use of integrated accounting software incorporating stock management function could facilitate the systematic monitoring of trading stock in small businesses.

In many respects, record keeping associated with tax compliance may also be an incentive to develop credit management routines. For example, a comprehensive and up-to-date record of purchases will allow the firm to claim discounts more frequently. Likewise, a well kept sales transaction ledger will make it easier to follow customer payments and reduce losses from bad debts. A majority of Australian SMEs surveyed

14 Ibid.

15 M Roberts and M Wood, "The strategic use of computerised information systems by a micro enterprise" (2001) 15(1/2) *Logistics Information Management* 115

16 Ibid, 120.

17 M Drever and J Hartcher, "Issues relating to cash flow management for SMEs after the introduction of GST" (Paper presented at the Small Enterprise Association of Australia and New Zealand 16th Conference, Ballarat, 28 Sept – 1 Oct 2003), 8.

18 Sandford, Godwin, Hardwick and Butterworth, above n 7, 93.

19 Only 8 per cent of UK business taxpayers, 12.6 per cent of New Zealand taxpayers and 15 per cent of Australian small business taxpayers agreed that improved stock control was a benefit of complying with GST; Sandford, Godwin, Hardwick and Butterworth, above n 7, 92; C Sandford and J Hasseldine, "The compliance costs of business taxes in New Zealand" (Institute of Policy Studies, 1992), 77; C Evans, K Ritchie, B Tran-Nam and M Walpole, "A report into the incremental costs of taxpayer compliance" (Australian Taxation Office, 1996), 133, respectively.

in 2004 had in-house computer based record keeping systems and in almost all cases, a record of invoices was a feature of that system.<sup>20</sup>

In summary, many of the improvements to the AIS attributed directly or indirectly to tax compliance appear to have been brought about by the adoption of computerised record keeping. These improvements generally resulted in the production of more accurate, more reliable and more up-to-date accounting information, and in the implementation of systematic financial control practices.

### **2.2.2 Savings on other costs**

Where tax compliance encourages taxpayers to prepare their accounts internally, or at least to do their own bookkeeping, there will be potential savings on accountancy and audit fees.<sup>21</sup> Strictly speaking, savings on other costs should not qualify as managerial benefits as they do not result in additional information that will lead to better business decisions. However, since the costs associated with hiring an external accountant are essentially related to the acquisition of accounting or managerial information, it can be contended that savings on these costs constitute a managerial benefit.

The essence of Sandford's proposition was that, where businesses keep their records in-house for tax compliance purposes, they will not have to hire an external accountant to prepare their financial reports, or at least they will save on accountant time. This proposition assumes that the entity would still have to produce accounts either for external parties or for internal purposes even if it did not have to comply with tax laws. Evidence from Australia indicates that a large majority of small business taxpayers would not use the services of an accountant if they did not have to comply with tax obligations.<sup>22</sup> In view of this, one would expect that only a limited percentage of small business taxpayers would realise savings on accountancy fees because of tax compliance.

However, savings may also be realised where business taxpayers are obtaining additional services for which they would otherwise have to pay, had they not hired an accountant for tax compliance reasons. Empirical evidence suggests that many accountants or other tax advisers were providing a variety of business services incidentally to tax related activities. In Australia, accountants often completed compliance tasks for third parties other than the Australian Tax Office (ATO).<sup>23</sup> Many accountants also offered general business advice, financial planning and business

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20 C Evans, S Carlon and D Massey, "Record keeping : Its effect on tax compliance" (CPA Australia, 2005).

21 Sandford, Godwin and Hardwick, above n 8.

22 Evans, Ritchie, Tran-Nam and Walpole, above n 19, 120.

23 CPA Australia, "Small Business Survey Program : Compliance burden" (CPA Australia, 2003). An example of this is the financial report for businesses in the construction industry required by the Building Services Authority in many Australian States.

plans,<sup>24</sup> and were an important source of support in the selection and installation of computer software as well as the training of internal staff.<sup>25</sup>

Even where accounting practitioners charge their clients for these additional services, it is reasonable to expect that the fees would be higher if the services were provided separately from tax compliance activities. The main reason for this is that the accountant will be able to perform different tasks for the same client with increased productivity. Economies are achieved because in most cases a common base of information (accounting records) is used to provide different services and also because the practitioner is familiar with the client's financial affairs.

### 2.3 Evidence on the importance of managerial benefits

Only two studies in the UK, the Sandford et al 1981 VAT study and the National Audit Office (NAO) 1994 VAT survey have attempted to quantify managerial benefits.<sup>26</sup> Both studies relied on estimates provided by owner-managers of the benefits they received. In the 1981 Sandford et al study, respondents were asked to give values to specific managerial benefits, while the 1994 NAO study proposed an overall estimation of managerial benefits.

The report from the NAO valued the overall managerial benefits generated by compliance with VAT in the UK at £149 million (\$312 million), representing nine per cent of gross tax compliance costs. The value of managerial benefits relative to gross tax compliance costs ranged from 7.4 per cent for business in the £100,000 to £500,000 (\$210,000 to \$1,048,000) category to 28 per cent for businesses with a turnover of £19,000 (\$40,000) or less.<sup>27</sup>

The main outcome from the NAO survey was that managerial benefits (measured as a percentage of gross compliance costs) derived by small businesses were roughly three times as large as those derived by medium and large firms. These results confirmed earlier assumptions by Sandford, Evans and others that managerial benefits will be relatively larger in the case of smaller businesses.<sup>28</sup>

Research undertaken in New Zealand and Australia in the 1990s provided additional empirical evidence about the *perception* of managerial benefits by business taxpayers. Nearly 50 per cent of business owners surveyed in New Zealand in 1991 agreed that their purchase records were better kept following the introduction of GST.<sup>29</sup> In Australia, slightly more than half of small business taxpayers surveyed in 1994-95 agreed that the requirements of the federal tax system helped them in

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24 J Breen, N Sciulli and C Calvert, "The Role of the External Accountant in Small firms" (2004) 12(1) *Small Enterprise Research* 5, 11.

25 Evans, Carlon and Massey, n 20.

26 The report published by the National Audit Office in 1994 largely relied on the valuation undertaken by Sandford.

27 The exchange rate was the average exchange rate for 1994.

28 Sandford, Godwin and Hardwick, above n 8, Evans, Ritchie, Tran-Nam and Walpole, above n 18; Tran-Nam, above n 2, 55.

29 Sandford and Hasseldine, above n 19, 96-7.

improving their record keeping,<sup>30</sup> but there was little perception that tax compliance requirements assisted the manager with internal financial management, particularly among small business taxpayers.<sup>31</sup> A survey by CPA Australia conducted in March 2003 reported higher levels of managerial benefits perception among small businesses: 73 per cent of owner-managers in Australian small businesses were of the opinion that compliance obligations acted as an incentive to keep up-to-date records, and that the financial reports produced from the record keeping system helped them manage the business.<sup>32</sup>

In conclusion, even though the evidence on managerial benefits is extremely patchy, there is some indication that a significant proportion of small business owner-managers recognised that they were deriving benefits in the form of improved financial information (notably through the use of computerised accounting).

### 3 Theoretical issues

#### 3.1 Disentangling accounting and tax related activities

The problem of how to distinguish between accounting and tax compliance activities and their associated costs translates directly into how to distinguish between accounting induced and tax induced managerial benefits.<sup>33</sup> There are two aspects to the problem of disentanglement.

The first aspect is represented by the fact that many functions or activities within the business, or outsourced to external parties, are performed for several joint purposes. A common situation of joint purpose is where payroll records are kept for tax compliance reasons but are also required by the industrial relations legislation and may be used for costing purposes.<sup>34</sup> Evans et al asked business taxpayers to identify the time they spent on a list of core accounting activities and the time they spent on additional record keeping necessary to meet tax requirements. On the basis of the results obtained, the researchers considered that they had been able to separate accounting costs from tax compliance costs with some degree of accuracy, although they admitted that there were inconsistencies between the response to the question on core accounting activities and subsequent questions.<sup>35</sup>

This comment leads to the second aspect of the disentanglement dilemma which relates to the perception that the taxpayer holds of compliance costs. At one extreme, a taxpayer may regard all the costs involved in keeping records and preparing accounts as tax compliance costs because taxation is the only reason he or she recognises for

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30 Evans, Ritchie, Tran-Nam and Walpole, above n 19, 132-3.

31 Ibid.

32 CPA Australia, above n 23.

33 Tran-Nam, above n 2, 55.

34 J Turner, M Smith and J Gurd, "Recognizing the pitfalls in tax compliance costs research" (1998) 8 *Revenue Law Journal* 62, 66.

35 Evans, Ritchie, Tran-Nam and Walpole, above n 19, 15 & 92.

performing these activities. In this case, any use of the information for a purpose other than tax compliance which provides value to the business should be computed as an offset to compliance costs. At the other extreme, tax may be described as no more than a by-product of an ordinary accounting function.<sup>36</sup>

Sandford also argued that the definition of tax compliance costs was a matter of perception and therefore might differ between individuals. He illustrated his line of reasoning with the following example:<sup>37</sup>

“[...] Consider two university professors A and B, who undertake consultancy work in addition to their main employment. If there were no income tax requirement, A, who wishes to maintain a close check on his financial situation, would keep detailed accounts; B, with no such inclinations, would keep nothing recognisable as accounts, but only records to ensure he was paid for work done. If, then, income tax was introduced, the tax compliance costs of A would be modest and incremental. Those of B would be the whole of the accounting system he has been obliged to introduce to satisfy the income tax authorities.”

One might expand Sandford’s argument by adding that B, having set up an accounting system may realise that he has now at his disposal useful information which enables him to keep a close check on his financial situation. While B would be deriving a managerial benefit as a result of being obliged to comply with the tax requirements, in theory A would gain no benefit from complying with tax since he was already obtaining the same information before tax was introduced.

### 3.2 The allocation of common costs

Another problem that emerges as a consequence of the tax/accounting overlap is the allocation of common costs incurred jointly while performing tax compliance activities and accounting or other business functions. Most tax compliance cost studies have ignored incidental overhead costs because of the difficulty in tracing them to tax compliance tasks.<sup>38</sup> Johnston, who discussed the treatment of such costs, observed that the costs of shared facilities such as office space, lighting, etc were minimal and that in any case, they should only be taken into account if the elimination of a tax would cause a reduction of these costs.<sup>39</sup> An alternative treatment of overhead costs was proposed by Yocum. Yocum argued that for most business organisations, compliance work would increase operating costs and therefore tax compliance costs should include a proportion of overhead costs.<sup>40</sup>

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36 Tran-Nam, above n 2, 57.

37 C Sandford, “Improving the methodologies” in C Sandford (ed), *Tax compliance costs measurement and policy* (1995) 375, 394.

38 Tran-Nam, Evans, Walpole and Ritchie, above n 1, 236.

39 K. S. Johnston, “Corporations’ federal income tax compliance costs” (Ohio State University, 1963), 5-9.

40 J Yocum, *Retailers’ costs of sales tax collection in Ohio* (1961), 37.

Allers who considered both approaches concluded that all extra costs that would not be incurred in the absence of a tax should be assigned as tax compliance costs.<sup>41</sup> However, Allers also commented that the debate was largely academic as in practice the measurement of tax compliance costs is very complex and error margins are considerable.<sup>42</sup> Sandford whose own position on the matter seemed close to Johnston's maintained that, where overhead expenditure is independent from taxation, ie the cost would have been incurred even in the absence of taxation, the overhead compliance cost should be zero.<sup>43</sup>

A common allocation problem relates to the depreciation costs of assets (for instance computer and software) used jointly for financial management and tax compliance purposes. Should the acquisition cost (or depreciation cost) be allocated between tax compliance and financial management on the basis of usage or should 100 per cent be assigned to tax compliance on the ground that the primary purpose of acquiring the equipment was tax compliance?

The choice of cost allocation method has important consequences on the measurement of managerial benefits. If the "marginalist" method<sup>44</sup> is adopted and the whole depreciation cost is assigned to tax compliance, then the value of the benefit generated by the usage of the computer for other purposes should be recognised as a managerial benefit of tax compliance. On the other hand, if the cost is allocated between tax and accounting, the managerial benefit derived from the use of the computer should not be attributed to tax compliance.

As Allers pointed out, attempting to define the exact boundary of tax compliance costs in practice can be a futile effort. In view of this, Dean's suggestion to treat all extra costs incurred in order to comply with tax requirements as compliance costs appears to be a realistic approach to deal with the problem of common costs.<sup>45</sup>

### 3.3 The measurement of managerial benefits

#### 3.3.1 *The measurement dilemma*

As noted earlier in this paper, the only attempts to quantify managerial benefits were based on subjective evaluations by taxpayers. However, the report from the 1981 Sandford survey revealed that only 7.5 per cent among respondents who recognised to be deriving managerial benefits from tax compliance were able to assign a positive value to those benefits.<sup>46</sup> This outcome suggests that whereas business taxpayers would generally be aware that they are obtaining managerial benefits from tax compliance, they would not be able to accurately quantify them in monetary terms.

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41 Allers, above n 3, 32.

42 Ibid.

43 Sandford, above n 37, 396.

44 The terminology "marginalist" was used by Allers to describe Johnston's approach.

45 P N Dean, Some aspects of tax operating costs with particular reference to personal taxation in the United Kingdom, *PhD Thesis, University of Bath, UK* (1975), 102.

46 Sandford, Godwin, Hardwick and Butterworth, above n 7, 91.

The problem of the measurement of managerial benefits can be expressed in terminology borrowed from the utility theory in economics. Using that theoretical framework, it can be contended that the value of managerial benefits is represented by the marginal utility that is derived from using the improved information available to the owner-manager as a result of the record keeping requirements imposed by tax compliance.<sup>47</sup> On the basis of the key assumption of diminishing marginal utility made by this theory,<sup>48</sup> it can also be argued that the managerial benefits derived by the taxpayer are likely to decrease as the amount of accounting information increases. In theory, this means that a firm with no pre-existing AIS will derive more benefits from having to comply with tax record keeping requirements than a firm where a sophisticated AIS is already in place. Yet, in practice the very existence of managerial benefits and their magnitude will also depend on how accounting information is valued by the firm owner. In the extreme, if the owner-manager does not perceive any value in using the information generated by the record keeping system, either because the information is irrelevant to the decision making or because it is perceived to be irrelevant, then the value of the managerial benefits is likely to be nil.

It may also be contended that managerial benefits have an objective value, regardless of the manager's appreciation of that value. Managerial benefits can be conceived as being represented by the economic gains derived through the increased business performance that is brought about by improved decision making. **Yet again** the realisation of these gains is in fact dependent on how accounting information is used in decision making.

As reported earlier in this paper, empirical research provides evidence that at least a segment of the business taxpayer population recognised some value in using the financial information generated through the record keeping process. However, the findings from the Evans et al survey in 1994-95 also indicated that small business owner-managers generally valued financial information less than large firms.<sup>49</sup> This apparent inconsistency between the existence of managerial benefits in theory, and the reality of their perception by business taxpayers is at the core of the measurement dilemma.

### **3.3.2 How should accounting information be valued?**

The solution of the dilemma posed by the measurement of managerial benefits of tax compliance will depend largely on the possibility of valuing the additional managerial information generated through the tax compliance process. It is therefore necessary to examine the various approaches that have been proposed by economic theory and the

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47 R Lipsey and K Chrystal, *An introduction to positive economics* (8th ed, 1995), 128.

48 Ibid, 128. This basic assumption, sometimes called the law of diminishing marginal utility, can be stated as follows: "The utility that any consumer derives from successive units of a particular product diminishes as total consumption of the product increases while the consumption of all other products remains constant".

49 Only 37.5 per cent of small business taxpayers used financial statements for internal management, compared to 83 per cent of large businesses; Evans, Ritchie, Tran-Nam and Walpole, above n 19, 116.

information literature to value information in monetary terms and discuss how these principles could be applied to the valuation of managerial *accounting* information.

Information as a commodity differs from the typical economic good in that it is not divisible or appropriable, it is not inherently scarce and it may not lead to decreasing returns. In fact in many cases, the more information is used, the more it increases in value because information is often self-generative.<sup>50</sup> Because of these particular attributes, the two traditional approaches for measuring value, value-in-use and value-in exchange have been difficult to apply to information.<sup>51</sup> In the case of managerial information, the two types of value can actually be very divergent. Managerial information may have a high value in use, but its value in exchange will often be very low, mainly because managerial information has vastly different meaning depending on the receiver.<sup>52</sup>

A significant body of literature, generally referred to as information economics literature, has focussed on the problem of the valuation of information. Most authors proposed valuation models based on statistical theory concepts, where the impact of information systems is evaluated by a pay-off function expressed in terms of cash flows.<sup>53</sup> Mock argued that the concept of information value should be broadened beyond the context of statistical theory. In his view, information can be useful (and therefore have value) where it contributes to the decision maker's learning and appreciation of the world he or she lives in.<sup>54</sup> Stated in a different manner, this means that information can be useful even where it is not contributing directly to choice.

As observed by Simon, Kotzmetky and Tyndall, managerial information can be used by the small business owner to answer three questions:<sup>55</sup>

“Am I doing well or badly?”

“What problems should I look into?”

“Of the several ways of doing the job, which is the best?”

This broader conceptual approach to information is of particular relevance to the measurement of managerial benefits. Although it may be difficult to trace the effects of better record keeping to particular business decisions, it can reasonably be expected that these improvements will generate information which has a learning value for the decision maker.

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50 R Glazer, “Measuring the value of information: The information-intensive organisation” (1993) 32(1) *IBM systems Journal* 99, 101.

51 *Ibid.*

52 G Nichols, “On the nature of management information” (1969) 50(8) *Management Accounting* 9, 10.

53 G Feltham, “The value of information” (1968) (October) *The Accounting Review* 623.

54 T Mock, “Concepts of information value and accounting” (1971) 46(4) *The Accounting Review* 765, 766.

55 H.A. Simon, G. Kozmetsky and G. Tyndall, “Centralization and Decentralization in Organizing the Controllers” Department, Controllershship Foundation (1954), 2-3.

## 4 Alternative methods of measuring managerial benefits

### 4.1 Determining an “objective” value of managerial benefits

Theoretically, an objective value of managerial benefits could be determined either on the basis of the value of the economic gains actually derived by the business or on the basis of the costs of the resources which would have to be acquired in order to produce the same benefits.

The measurement of managerial benefits based on an “economic gains” approach would necessitate the valuation of the incremental cash flows generated as a result of improved business performance.<sup>56</sup> This method presents a number of conceptual and practical difficulties. Firstly, measuring managerial benefits on the basis of economic gains relies on the premise that the usage of accounting information *does* provide an advantage to the firm. At this stage, the relationship between comprehensiveness of accounting information and improved business performance has not been convincingly established.<sup>57</sup> Secondly, valuing the pay-off resulting from the better accounting information is in itself problematic because it is difficult to isolate the incidence of that particular factor on business performance.<sup>58</sup>

Following a valuation approach based on the cost of resources, the value of managerial benefits may be assumed to be equivalent to the cost of obtaining the same accounting information from the internal AIS or to the cost of seeking the information from an external party. The main advantage of this approach is that it is consistent with economic utility theory which posits that utility is measured by the largest amount that consumers would be prepared to pay to acquire the good from which they derive utility.<sup>59</sup> There are however a few problems associated with this method. Firstly, while the cost of obtaining the information from an external party may be readily available, the computation of the cost of obtaining the information internally may be more problematic, particularly because of the tax/accounting cost overlap mentioned earlier. Secondly, this approach assumes that accounting information will be used in the same manner by all business managers and that the same managerial benefits will be derived.

### 4.2 Assigning a subjective value to managerial benefits

The main advantage of a subjective valuation of accounting information is that it reflects the perception of usefulness by the owner-managers and therefore it will be an indicator of how effectively the information is used in decision making. The major

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56 Typically this approach would rely on a probabilistic valuation model. See R Due, “The value of information” (1996) 13(1) *Information Systems Management* 68, 70.

57 R McMahon, “Business growth and performance and the financial reporting practices of Australian manufacturing SMEs” (2001) 39(2) *Journal of Small Business Management* 152.

58 Rdue, above n 56, 70.

59 Lipsey and Chrystal, above n 47, 129.

flaw in this approach is that the degree of accuracy of the estimate depends on the ability of owner-managers to assign a value to accounting information which they use for running their business. The second problem is the absence of a benchmark which would allow the researcher to calibrate the estimates made by the managers.<sup>60</sup>

It can be anticipated that the ability of small business managers to assign a value to accounting information will be dependent in part on their personal characteristics (education, knowledge of accounting, business experience) but also on their capacity to compare two situations which occurred at different periods in time: the situation before tax compliance requirements existed, where there was supposedly very little record keeping, and the situation created by the requirements to comply with tax obligations. This comparison is difficult to achieve in practice: in Australia, most businesses have been exposed to income tax compliance since their establishment. GST obligations have only been in place since 1 July 2000; however one might question the ability of managers to recall accurately matters spanning a year or more.<sup>61</sup> Moreover, the availability of a quantitative benchmark supposes that the need for accounting information will be relatively similar across firms and that an objective and reliable measurement method can be developed to set this benchmark.

### 4.3 Proposed method: use of a mixed approach

#### 4.3.1 Introduction

While there are limitations to both objective and subjective methods of measuring managerial benefits, it is contended that a mixed approach combining objective measurement and subjective valuation would represent the optimal method for resolving the measurement dilemma. The proposed method is essentially based on the breakdown of managerial benefits of tax compliance into two components.

The first component is represented by the benefits that arise because additional or improved accounting information, perceived as useful for the management of the business, is generated as a result of tax compliance record keeping activities. This component can be described as the “incremental value of managerial accounting information”. The second component corresponds to the savings on reporting costs that are realised because tax compliance activities lead to increased efficiencies. Hence, the expression measuring the value of managerial benefits can be stated as follows:

$$\begin{aligned} \text{Value of managerial benefits} &= \text{Incremental value of managerial accounting information} \\ &+ \text{Savings on reporting costs} \end{aligned}$$

These two components are now examined.

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60 M. Carter, “The valuing of managerial information. Part IV: A practical approach” (1985) 10 *Journal of Information Science* 143; Roberts and Wood,

61 Sandford, above n 37, 378.

### **4.3.2 Incremental value of managerial accounting information**

The incremental value of managerial accounting information is defined as the difference between the perceived value of useful managerial accounting information available to the owner of a tax complying entity, and the cost that would be incurred to maintain core accounting functions:

$$\text{Incremental value of managerial accounting information} = \text{Perceived value of useful managerial accounting information} - \text{Cost of core accounting functions}$$

The perceived value of useful managerial accounting information is determined on the basis of what the manager would be prepared to pay to obtain useful accounting information, if there were no reporting requirements imposed by tax or other external parties. This perceived value is assumed to represent the value-in-use of accounting information used for managerial purposes. The cost of the core accounting functions includes the internal costs of maintaining these functions plus any external costs (eg bookkeeping) that the business would incur to maintain these functions in the absence of tax.

The main advantage of this approach over a purely subjective approach is that the manager is likely to assign a value to accounting information on the basis of the expense that is actually incurred by the business to prepare or obtain information for both accounting and taxation purposes. This amount also constitutes a benchmark which will allow the researcher to calibrate the estimated value. Unlike a measurement method based solely on the cost of resources, the proposed approach takes into account the perception that the business manager has about the usefulness of the managerial accounting information.

### **4.3.3 Savings on reporting costs**

In theory, savings on reporting costs would include savings on external accountancy fees and savings on internal accounting costs which are incurred for non-tax reporting purposes.

As discussed in s 3, savings on external accountancy fees may be realised because productivity gains are achieved when the accountant uses the same database for the purposes of tax and non-tax services. Non-tax services provided by the external accountant may include managerial advice or the preparation of managerial accounting information. However, the value of these services will be captured by the perceived value of useful accounting information measured in the first component. Therefore, only the fees charged for non-tax *reporting* services should be considered in this component.

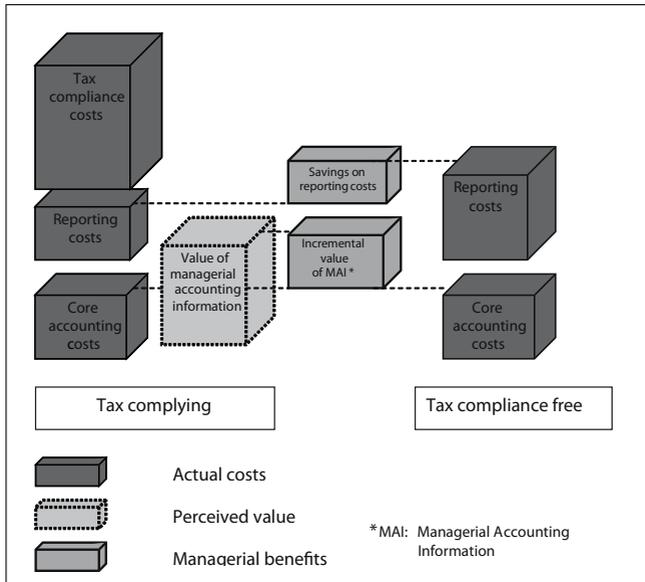
The amount of savings can be calculated as the difference between the fees that would have been charged by the accountant to perform non-tax reporting services only, and the proportion of the accountancy fees actually charged to a tax complying entity which can be assigned to these services:

Savings on reporting costs = Accountancy fees that would be charged for non-tax reporting services only – Component of actual accountancy fees relating to non-tax reporting services

Savings on internal accounting costs may be realised because many accounting functions will be performed jointly for tax reporting purposes and other reporting purposes. However, if the “marginalist” approach advocated by Johnston and Sandford is adopted to value tax compliance costs, all the costs that would have been incurred by the entity in the absence of tax will be assigned to accounting, and all additional costs will be assigned to tax compliance. As a consequence, no savings on internal accounting costs will be recorded.

In summary, a mixed approach to the measurement of managerial benefits would incorporate a subjective valuation of managerial accounting information by owner-managers and objective measurements of the costs actually incurred to maintain core accounting functions and to generate non-tax reporting information. Beside the incorporation of objective elements, the main advantage of this mixed method over previous methods used for valuing managerial benefits is that the subjective valuation of useful accounting information can be calibrated against the actual accounting and reporting costs incurred by a tax complying entity. The proposed model for measuring managerial benefits is represented by the diagram in Figure 1.

**Figure 1: Proposed model for measuring the managerial benefits of tax compliance**



## 5 Methodology

### 5.1 Quantitative phase: survey

The quantitative component of this research consisted in two contemporaneous mail surveys of two separate samples. One sample was drawn from a population of tax complying entities (TCEs) with less than 20 employees in the Capricornia region of Queensland. The other sample included business entities referred to as tax compliance free entities (TFEs) drawn from the population of small businesses in Norfolk Island, an external territory of Australia.

The list of entities used as the sample frame for TCEs was derived from the Yellow Pages directory of businesses. The initial list comprised over 6,000 business names, which after culling for double entries and out-of-frame entities was reduced to 3,425 entities. After listing businesses alphabetically, a random selection of one unit out of two resulted in a gross sample of 1,712 entities.

Small businesses in Norfolk Island were chosen as the sample frame for TFEs, as residents of Norfolk Island are exempt from income tax by virtue of a special exception.<sup>62</sup> In addition, Norfolk Island as all other Australian external territories falls outside the jurisdiction of Australia for GST purposes.<sup>63</sup> As a result of this special status, businesses on Norfolk Island were only exposed to custom duties and financial levies which did not require any specific record keeping.<sup>64</sup> The list of entities for the Norfolk Island survey was drawn from the Yellow Pages directory which after eliminating double entries and out-of frame-entities comprised 298 units.

A mailed questionnaire was used to collect data for both surveys. The survey forms were different for TCEs and TFEs as questions relating to tax compliance were only relevant to the first group. However, both forms had sections with identical questions which allowed the merger of the data into a common database.

The mail out of questionnaires was completed in December 2006, and resulted in 289 usable responses in the TCE sample and 65 in the TFE sample. The response rates obtained for both surveys were 23 per cent and 22 per cent respectively;<sup>65</sup> this result fell within the expected range for postal surveys of this type.<sup>66</sup>

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62 ITAA 1936 (Cth), Div 1A, s 24B- 24P.

63 ANTS (Goods and Services Tax) Act 1999 (Cth), s 195-1.

64 A local GST at the rate 9 per cent was being adopted by the Norfolk Island government at the time of the survey. The new tax took effect on 1<sup>st</sup> April 2007 after the survey had been completed.

65 These response rates were calculated on the basis of the net samples (after deduction of out frame responses) which contained 1,250 units and 291 units for TCEs and TFEs respectively

66 Rametse and Pope obtained a response rate of 27 per cent for they survey on the compliance cost of GST in 2002; Evans, Carlon and Massey scored a response rate of 28 per cent for their survey of record keeping in small businesses. Response rates for postal surveys relating to small businesses accounting were generally in the 17- 24 per cent range.

As a relatively low response rate was achieved, it was considered important to check whether a non-response bias could have an impact on the results.<sup>67</sup> Testing for non-response bias was conducted using wave analysis. This method assumes that late respondents are almost non-respondents, and tests whether there are any differences between the responses collected from the first wave of respondents and the wave of late respondents.<sup>68</sup> Three screening questions in the TCE survey and two in the TFE survey were selected for this purpose. Differences between early and late respondents were tested using an independent-sample t-test. No non-response bias was detected for either the TCE or the TFE surveys.

## 5.2 Qualitative phase: case study

The case study methodology appeared to be the best approach for the qualitative phase of this research as it allowed the collection of contextualised and meaningful information through semi-structured interviews.<sup>69</sup> The case study component involved the interviewing of 12 participants, 6 from each cohort, selected among respondents who had volunteered to participate in interviews. The case study used a protocol which included a set of questions and propositions, and an interview schedule as this was expected to reinforce the reliability and stability of the data collection procedure.<sup>70</sup>

Case study participants from the TCE cohort were selected according to two criteria: business size and “expected managerial expertise”; the latter criteria was evaluated on the basis of responses to the survey questions relating to level of education and knowledge of accounting. In the case of the TFE cohort, participants were selected according to business size and level of internal accounting information.

Interviews of TFE participants were conducted in April 2007 and interviews of TCE participants in early May 2007. Interviews were of a semi-structured form with open questions giving the interviewer the possibility of probing answers. Interviews lasted 1 hour to 90 minutes, and were generally conducted at the business premises giving the possibility of field observations.

Responses were recorded manually by the interviewer as it was anticipated that audio recording might have been seen as a threat to the confidentiality of responses by some participants. The data collected from the interviews was entered into *Nvivo*, a computer assisted qualitative data analysis system, which facilitated the coding of the data and provided enhanced rigour in the analysis.<sup>71</sup>

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67 J W Creswell, *Research Design : Qualitative, Quantitative and Mixed Approaches* (second ed, 2003), 160.

68 C Evans, *The operating costs of taxing the capital gains of individuals: a comparative study of Australia and the UK, with particular reference to the compliance costs of certain tax design features* (PhD Thesis, University of New South Wales, 2003), 134.

69 Sandford, above n 37, 382.

70 R Yin, *Case Study Research: Design and Methods*, Applied social research methods (3rd ed, 2003), 36.

71 H Marshall, “What do we code when we code data?” (2002) 2(2) *Journal of Qualitative Research* 56.

## 6 Results

### 6.1 Introduction

As stated in the introduction of this paper, the present study had a broad purpose in its investigation of managerial benefits; only the results relevant to the measurement of managerial benefits will be reported here. This includes the identification of core accounting functions, the comparison of accounting costs incurred by TCEs and TFEs and the incidence of tax compliance on the preparation of accounting information.

It was expected that the investigation of entities without tax obligations would give the possibility of identifying the core accounting functions that a small firm will maintain regardless of the fact that it has to keep records for taxation purposes. Information relating to the accounting practices was collected during both the survey and the case study phases of the research. Two aspects of accounting practices in TCEs and TFEs were investigated: the characteristics of the accounting system used by the firm and the accounting activities performed by these systems.

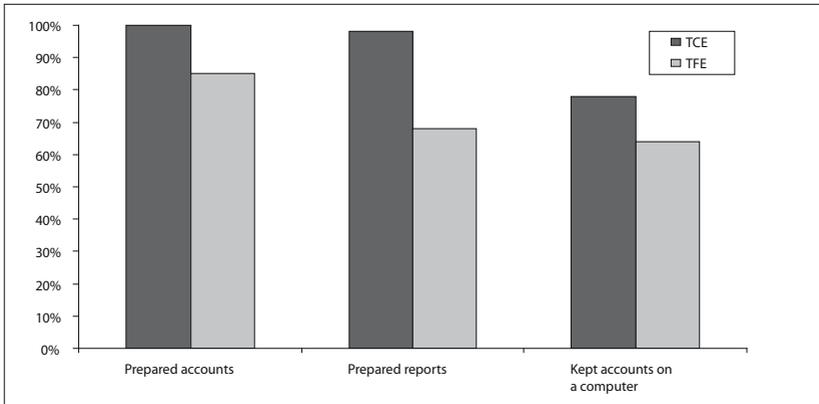
Finally, this section reports the findings of the research on the perceived value of accounting information by TCE owner-managers.

### 6.2 Identification of core accounting functions

#### *6.2.1 Comparison of the accounting systems in TCE and TFE*

Before investigating accounting practices in both groups of entities, it was necessary to establish whether TFEs would maintain an accounting system at all, even a rudimentary one. Since the TCE sample included a higher proportion of “larger” entities (with 5 employees or more) than the TFE sample, only entities with zero to four employees were considered for this analysis.

As shown in Figure 2, a vast majority of TFEs (85 per cent) stated that they kept accounting records of some sorts, but only two third (67 per cent) prepared accounting reports. Computerisation of the information system was also widespread among TFEs (69 per cent); however it was not as common as in the TCE cohort (85 per cent). The survey data also allowed an evaluation of the sophistication of the AIS based on a three dimensional construct representing the features of the computerised system, the number of accounting tasks performed on the computer and the number of accounting reports produced. The resulting score measured on a scale of zero to nine was found to be significantly higher ( $p < 0.05$ ) for TCEs, indicating that AISs were generally more sophisticated in TCEs than in TFEs.

**Figure 2: Accounting practices of TCE and TFE respondents\***

\* only includes entities with zero – four employees

Case study observations and interviews revealed that smaller TFEs where no CAS had been implemented, had very basic accounting systems consisting of a single book where sales transactions were recorded. In contrast, TFEs that used a CAS appeared to be performing the same accounting functions as TCEs with similar systems. In other words, the main factor behind the difference in AIS sophistication between the two groups seemed to be the more widespread usage of a CAS in the case of TCEs.

### **6.2.2 Comparison of accounting activities in TCEs and TFEs**

Notwithstanding the differences in the characteristics of the AIS, some core accounting functions will be performed irrespective of the existence of tax compliance obligations. Core accounting functions identified by Evans et al included the following activities: the recording of cash transactions, the recording of customer invoices and their payments, the monitoring of debtors, the payment of bills to creditors and the monitoring of stock.<sup>72</sup> One can add to this list the monitoring of sales and the monitoring of profit.

The measurement of the time and resources spent on these different activities was beyond the scope of this research. However, since the primary objective of an accounting function is to produce information, it was possible to evaluate the relative importance of a particular function by considering its information output and the frequency with which the information is used.

The figures in Table 1 indicate that TCEs and TFEs were monitoring their core accounting indicators with similar frequencies with the exception of the bank balance and stock levels. The fact that TFEs were less diligent in checking their bank balance might be attributed to the prevalence of cash transactions on Norfolk Island. Similarly,

72 Evans, Ritchie, Tran-Nam and Walpole, above n 19, 92.

stock levels may have been monitored with less regularity by TFEs because stock deliveries to Norfolk Island were not as frequent as on the mainland. This outcome suggests that even where there are no requirements to keep records for tax purposes, a substantial majority of businesses still maintain accounting functions which allow them to monitor basic indicators such as sales and profit levels, cash flows, debtors and creditors payments.

**Table 1: Monitoring of core accounting indicators in TCEs and TFEs with four employees or less**

Monitoring activity	Percentage of entities	
	TCEs	TFEs
Check bank balance at least weekly	81.5	64.3
Check sales at least weekly	56.7	53.6
Check profit at least monthly	58.0	60.8
Check stock at least weekly*	54.3	34.4
Check debtors at least monthly	85.8	87.4
Check creditors at least monthly	89.6	94.6

\* includes only entities that carry trading stock

The information in Table 2 shows that overall TCEs with 4 employees or less had a greater accounting report output than TFEs of similar size, with the exception of stock report. This outcome is further compounded by the fact that the statistics exclude the 33 per cent of TFEs that did not prepare *any* accounting report. The results would suggest that while most TFEs maintain a basic accounting system that provides them with regular information on key business indicators, the system often remains very informal and does not allow the systematic production of accounting reports.

**Table 2: Accounting report output in TCEs and TFEs with 4 employees or less**

Type of reports	Percentage of entities preparing this type of report	
	TCEs	TFEs†
Profit and loss statement	92.1	72.9
Balance sheet	75.6	52.1
Debtors trial balance	40.6	27.1
Cash flow report	35.0	14.6
Stock report*	16.3	34.0
Budgets and plans	19.5	8.3

\* includes only entities that carry trading stock

†excludes entities that did not prepare accounts

Information collected during the case study phase of the research appeared to confirm these findings. For instance, the researcher noted that several TFE participants were monitoring their debtors' payments in an exercise book or on a wall board; in contrast, all six participants in the TCEs cohort were producing formal debtors' schedules out of their computer.

### 6.3 Accounting costs incurred by TCEs and TFEs

Accounting costs incurred by businesses include the internal costs of preparing accounting information and accountancy fees paid to the external accountant. Internal accounting costs are difficult to measure in the case of very small businesses because they typically include a substantial proportion of owners or unpaid helpers labour time.<sup>73</sup> The collection of reliable data on internal accounting costs was not possible within the framework adopted for this research; however comprehensive data on fees paid to the external accountant was gathered by the survey instrument.

While accountancy fees paid by TFEs were assumed to be exclusively for accountancy work, fees charged by accountants to TCEs were typically for a range of services including the preparation and lodgement of tax returns, accounting services and business advice.<sup>74</sup> In the majority of cases, the accountant's bill was not itemised between different services, therefore it was necessary to calculate the proportion of fees attributable to non-tax services based on estimates provided by survey respondents. Individual estimates by respondents were expected to be imprecise and sometimes erratic, and therefore not completely reliable. However, assuming that individual estimates were distributed around the true proportion in a random manner, it was believed that an averaging of estimates would provide a more accurate result.

The analysis of the survey data indicates that there was a significant positive correlation between the amount of fee charged by the accountant and the estimated proportion of fees attributable to non-tax services.<sup>75</sup> Consequently, it was possible to compute an estimate of accountancy fees paid for non-tax services for each tranche of accountancy fees by multiplying the median accountancy fee by the average proportion of non-tax related services for that particular tranche. This estimate was then used to determine the mean accountancy fees paid for non-tax related services for each size sub-category of TCEs. Finally, this figure was compared with the mean accountancy fees paid by TFEs of similar size (Table 3).

The results indicate that overall TFEs paid more or slightly more for non-tax related services than TCEs did. This outcome was also confirmed when accountancy fees were compared at size sub-sample level. In other words, businesses that hired an accountant for tax compliance purposes appeared to be realising savings on fees related to non-tax related services.

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73 Allers, above n 3, 126; Evans, Ritchie, Tran-Nam and Walpole, above n 19, 113.

74 Very few TFE respondents reported to be receiving business advice from their accountant.

75 Pearson  $r = .192$ ,  $p < 0.05$ .

**Table 3: Comparison of mean accountancy fee paid by TCEs and TFEs for non-tax related services**

Size of entity (No of employees)	Mean accountancy fee paid the entity for non-tax services*	
	TCEs	TFEs
No-employee	\$300.06	\$571.43†
0-4 employee	\$698.89	\$705.88
5 employees or more	\$1251.31	\$3785.71†
Overall	\$863.50	\$1,370.97

\* includes only entities that use services of an accountant

†Indicates cells with less than 10 observations

This outcome should be considered with extreme caution for several reasons. Firstly, the number of observations for the TFE sample was extremely low in some sub-categories, and therefore generalisation of conclusions would be hazardous. Secondly, the hypothesis of cost savings was only verified on the basis of entities that actually hired an external accountant, therefore the finding that savings are realised would only apply to the minority of entities that used the services of an accountant even where there is no tax compliance.<sup>76</sup> Thirdly, there was a possibility that TCE respondents systematically under-estimated the proportion of fees attributable to non-tax services.

Finally, it is important to be aware that the savings on non-tax accountancy fees identified here overlap but do not equate with the “savings on reporting fee” component of the measurement model presented in s 4. This is because non-tax related services would include services of a managerial nature which would have a managerial value-in-use for owner-managers and therefore be captured by the “incremental value of managerial accounting information” component of the measurement model shown in Figure 1.

#### **6.4 Incidence of tax compliance on the preparation of accounting information**

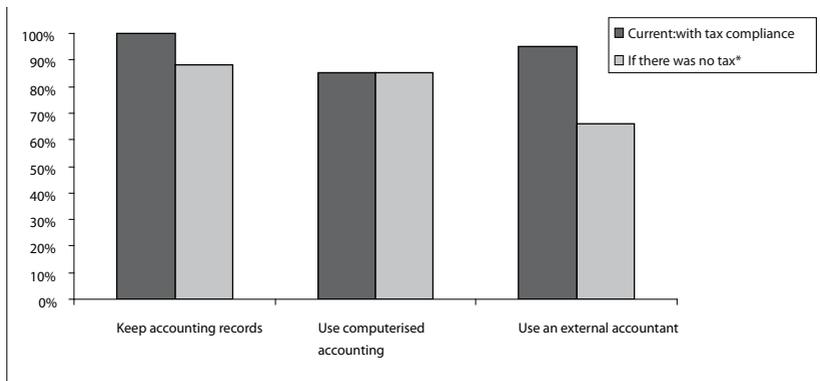
The comparison between TCEs and TFEs has highlighted a number of differences in the accounting systems and in the accounting functions performed using those systems. However, there was a possibility that these differences were not entirely attributable to the presence or absence of tax compliance obligations: exogenous variables such as the economic environment and the different management styles of owner-managers might also have influenced the volume and type of accounting information prepared. Since a procedure allowing the direct observation of the effects of tax compliance on the preparation of managerial accounting information could

76 Almost 94 per cent of TCEs used the services of an external accountant compared to only 48 per cent of TFEs.

not be realistically implemented,<sup>77</sup> it was necessary to use hypothetical situations where respondents were asked how they would respond to significant changes in tax compliance requirements.

TCE owner-managers were invited to identify changes they would bring to the way they prepared and kept their accounts in the hypothetical situation where tax compliance obligations were removed. Conversely, TFE respondents were invited to describe the consequences that an introduction of taxation to Norfolk Island would have on their accounting practices. Attitudinal questions in both TCE and TFE survey instruments were designed to measure the impact that such a change would have on several key aspects of the accounting process: the maintenance of accounting records, the use of computerised accounting and the role of the external accountant.

**Figure 3: Potential effects of the removal of tax compliance obligations on the accounting practices of TCEs**



The potential effects of a removal of tax compliance obligations on the accounting practices of TCEs are shown in Figure 3. It appears that the vast majority of TCEs (88 per cent) would keep maintaining accounting records and that virtually all businesses currently using computerised accounting would continue to do so. On the other hand, the data shows that about 30 per cent of businesses would probably stop using an external accountant if they did not have to comply with tax.

The outcome of the analysis of the survey data was confirmed by the information gathered during the interviews. Nearly all TCE interviewees stated that they would keep accounting records, albeit in a simplified form, if tax obligations were removed.

“Now, even if I did not have to comply with tax, I would still keep my accounts on the computer because I need to know where I am at.” Participant A.

<sup>77</sup> A measure of the effect of tax compliance on the preparation of managerial accounting information in real terms would require the observation of the same group of small businesses successively in a tax compliance free situation, then in a tax compliance situation.

“We would definitely [prepare accounting reports]. We would keep track of our income and expenses.” Participant C.

“We would prepare accounts even if the business did not have to comply with tax, as we need to have an idea of income and expenses. However, I admit that the accounts would probably not be as accurate and we would not be as particular as we are now.” Participant F.

It seems however that a number of businesses would stop using the services of their accountant even when they found those services helpful:

“If we did not have tax, keeping records of our debtors would be the only thing I would do. There would be no point in having an accountant.” Participant B.

While the previous discussion focuses on the consequences of a change from a tax compliance environment to a tax compliance free environment, questions in the TFE survey instrument aimed to evaluate the consequences of a hypothetical introduction of taxation to Norfolk Island; that is a change from a compliance free environment to a situation where the entity has to deal with significant tax compliance obligations.<sup>78</sup> The questions addressed the quantity and quality of the accounting information, the level of required training the role of the external accountant and the use of computerised accounting.

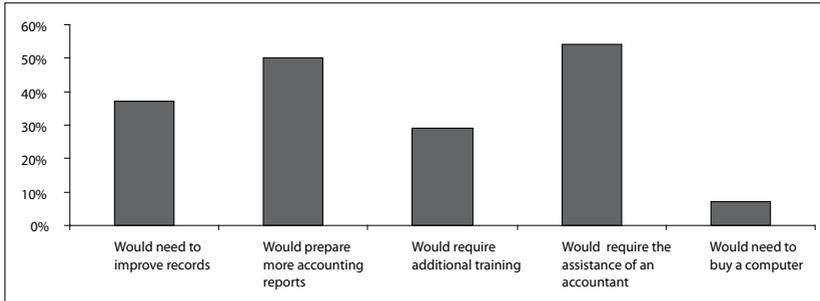
It seems that many TFE owner-managers perceived that the introduction of tax compliance obligations would result in significant changes in their accounting practices (Figure 4). Over 50 per cent stated that they would have to prepare more accounting reports, 37 per cent that they would need to improve their records and 54 per cent that they would need the assistance of an accountant. Interestingly, the introduction of taxation would not lead to a significant change in the use of computerised accounting.<sup>79</sup>

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78 The scenario was not entirely hypothetical as a local GST was about to be introduced to Norfolk Island a few months after the survey.

79 The question asked respondents whether they would buy a computer not whether they would start keeping their accounts on the computer. The survey data indicates that about 60 per cent of respondents were already keeping their accounts on a computer. Presumably many other respondents who did not have computerised accounts already had a computer and thought that they would not need to buy a new one. It can be further presumed that many businesses that were already equipped with a computer might have to purchase new software to meet their compliance obligations.

**Figure 4: Perceived consequences of tax compliance obligations on the preparation of accounting information for TFEs**



### 6.5 Perceived value of accounting information in TCEs

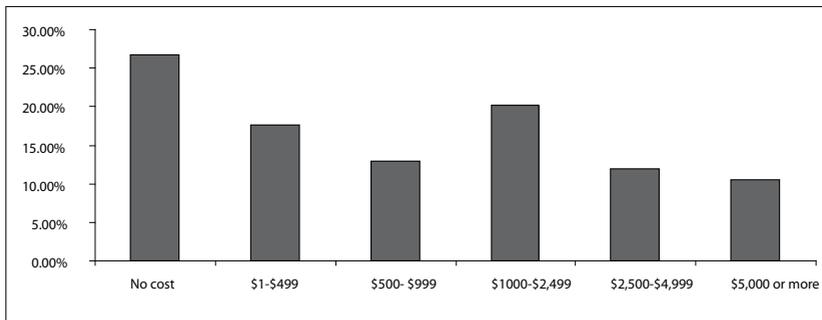
Bearing in mind the limitations of subjective evaluation discussed in s 4, this research asked survey respondents to assign a value to the accounting information they were using for the business. As previously discussed, many TCE owner-managers would regard “accounting” costs as essentially tax compliance costs. However, assuming that they saw any value in having accounting information at their disposal, owner-managers would still be willing to incur at least some of the costs involved in order to obtain that information in the absence of tax.

The TCE survey instrument was designed with the purpose of collecting that information. Respondents were invited to answer the following question:

“If you did not have to comply with tax obligations, would you be prepared to incur costs to obtain important financial information that would help you run your business, and if so, how much would you be prepared to pay per financial year?”

Nearly 75 per cent of TCE respondents stated that they would be prepared to incur costs to obtain accounting information for internal management purposes (Figure 5). In other words, three quarters of respondents gave a positive value to the managerial benefits they were deriving from using accounting information generated from their AIS or supplied by the accountant. However, it is important to emphasise that this value does *not* represent the value managerial benefits of tax compliance since some benefits included in that valuation would relate to the core accounting functions which the entity would maintain even in the absence of tax.

**Figure 5: Annual costs that TCEs would be prepared to incur to obtain accounting information if there were no tax compliance obligations**



An analysis of responses by business size category reveals that the perception of the value of accounting information was influenced by the size of the business. Predictably “larger” small businesses were generally prepared to spend more and very few (18 per cent) would spend nothing at all. At the other end of the spectrum, nearly 40 per cent of micro-businesses with no employee seemed to perceive no value in managerial accounting information.

## 7 Discussion

### 7.1 The taxation/accounting overlap

#### 7.1.1 Core accounting functions and tax related activities

The joint investigation of small business entities exposed to compliance obligations and entities free of tax compliance gave the possibility of identifying the core accounting functions’ which a business will perform regardless of the fact that it has to prepare reports for taxation purposes.

The findings of this study show that a vast majority of TFEs kept records of some form in order to monitor key financial indicators even though they did not have tax compliance reporting requirements; however a significant proportion did not prepare formal accounting reports. In contrast, it seems that tax imposed record keeping activities led to the implementation of more sophisticated AISs which gave TCEs the possibility of preparing accounting reports in a variety of formats.

One can conclude from these results that while small businesses will always maintain some core accounting functions, the manner in which accounting tasks are carried out is affected by tax compliance related activities. The difference between accounting and taxation activities appears more like a grey zone than a clear boundary. The introduction of tax obligations compels small businesses to develop their accounting functions and consequently the costs associated with these functions

increase. It seems however that the removal of tax compliance obligations would not result in a return to the pre-tax compliance situation.

Interviews revealed that an important difference between TCEs and TFEs was the level of tolerance of inaccuracy and incompleteness of records. While interviewees in both cohorts generally indicated that they were “satisfied” with the quality of their records, the emphasis on accuracy was stronger among participants from the TCE group. This confidence in the accuracy of records was supported by the fact that accounts were generally checked by an external accountant. Professionally designed accounting software also provided users with a number of foolproof checks (such as the equality of debits and credits) which guaranteed a minimum level of accuracy.

Since essential record keeping would still be performed by small business taxpayers regardless of the existence of tax compliance obligations, these activities should be classified as accounting activities even though they may be regarded by some owner-managers as tax compliance activities.

### ***7.1.2 Allocation of common costs between accounting and tax related functions***

Even where core accounting functions can be identified, many costs pertaining to these functions are also associated with tax related activities. A common situation where such joint costs might be incurred is where business transactions are entered into the computer at the end of a quarter and the data is used for the preparation of quarterly management reports but also for the preparation of the tax mandated Business Activity Statement (BAS).

In a traditional cost accounting system, these common costs would be allocated between the two functions according to a predetermined allocation base. In practice, the allocation of common costs between accounting and taxation may be problematic for two reasons. Firstly, as argued previously, many of the tasks performed for taxation and accounting are entangled and indistinguishable. Secondly, the choice of an appropriate allocation base is difficult because the tasks involved are often complex and consume resources along different patterns, for instance labour, computer time and power.

In contrast to methods allocating common costs, “marginalist” methods present the advantage of simplicity: only costs that would not have been incurred by the business in the absence of taxation should be assigned to tax compliance. Some authors in the tax compliance literature have relied on this argument to conclude that most accounting costs incurred by small business should be treated as tax compliance costs on the ground that most record keeping costs would not be incurred if tax compliance did not exist.

There are two main reasons to refute the argument that record keeping costs are mostly tax compliance costs. Firstly, as suggested by the findings of this research, a significant majority of small businesses, even the smallest entities, still maintain core accounting functions in the absence of tax. The presence of tax compliance obligations merely changes the manner in which accounts are kept but does not

introduce record keeping. Secondly, the vast majority of small business taxpayers state that they would still prepare accounts even if they did not have to keep records for the tax authorities. In other words, most owner-managers saw record keeping as a core function of their business. In view of this, there is a strong reason for allocating most record keeping costs to the accounting function, while only assigning to taxation those costs specifically incurred to comply with tax obligations.

There is however some uncertainty as to whether the same costs would be incurred by a TCE or a TFE to maintain the same core accounting functions. The evidence collected during this research suggests that as a consequence of tax compliance requirements, TCEs will keep their records more accurate and more up-to-date, and therefore will incur higher costs compared to TFEs. Following Johnston's logic, additional costs incurred on record keeping should be computed as tax compliance costs even though they are related to an accounting activity. These tax compliance costs will be offset by a managerial benefit if the entity derives any value from the improved information generated by the accounting system.

Johnston's "marginalist" approach can also be applied to the treatment of external accountancy fees. The outcome of this study confirmed previous findings<sup>80</sup> that compliance with tax requirements was the main reason why many small businesses hire an external accountant. It also appears that a significant proportion of small business taxpayers would stop using the services of an accountant if tax compliance obligations were removed. In view of this, there is a strong case for treating fees paid to external accountants as tax compliance costs except where non-tax related services are identified or billed separately. The value derived by the firm from the non-tax related services provided by the accountant should be treated as a managerial benefit to offset the costs of tax compliance.

## 7.2 The measurement of managerial benefits

### 7.2.1 Summary of findings

The first valuation of the managerial benefits of VAT in the UK was proposed by Sandford et al in 1981 and the NAO in 1994. Both studies computed the value of managerial benefits on the basis of respondents estimates collected by Sandford *et al.* The data collected by the present research allowed the measurement of the value of useful accounting information derived by small firms as a result of complying with all taxes.

The findings show that a large majority of small business taxpayers assigned a relatively significant value to the managerial accounting information that is either produced from their record keeping or obtained from their accountant. The mean perceived value of accounting information was slightly over \$2,000; however there were notable differences between the perceived value in micro-businesses (\$1,000), very small businesses (\$1,300) and small businesses (\$3,000) (Table 4).

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80 See for instance Evans, Ritchie, Tran-Nam and Walpole, above n 18, 120.

**Table 4: Mean perceived value of accounting information in TCEs**

Size of entity (No of employees)	Perceived value of accounting information
No-employee (Micro-business)	\$1,030
0-4 employees (Very small business)	\$1,304
5 employees or more (Small business)	\$3,060
Overall	\$2,017

In order to compute the value of the managerial benefit corresponding to the incremental value of managerial accounting information, it would be necessary to offset from this perceived value the core accounting costs incurred by TFEs of similar sizes. The format of the research did not allow the collection of reliable data on internal accounting costs in TFEs; however interviews with TFE participants suggest that these costs were very small and mostly made up of owner-managers' personal time.

The findings of this study also suggest that additional managerial benefits may also be realised by TCEs in the form of savings on accountancy fees paid for non-tax related services. The savings appeared to be most significant for entities with 5 employees or more. However, because the analysis relied on very small numbers of observations in the TFE sample, these results should be confirmed by further research before they can be generalised.

### **7.2.2 Critical evaluation of the perceived value of accounting information**

The survey question relating to the perceived value of accounting information asked TCE respondents to indicate the amount they would be prepared to spend (if any) to obtain useful information to run their business in the absence of tax compliance. The answers were presumed to represent the value that TCE owner-managers attributed to the managerial accounting information generated by their record keeping system. Although valuations by information users were necessarily subjective, it was possible to assess their reliability by comparing them to a number of other variables measured in this study (Table 5).

**Table 5: Correlation of perceived value of accounting information with various variables**

Variable	Significant correlation?	Pearson r
Actual accountancy fee	Yes	0.446***
Business size (Number of employees)	Yes	0.351***
Usage of accounting information in decision making	Yes	
Importance of accounting information	Yes	0.199**
Number of managerial benefits	No	0.026
Managerial benefit perception	No	0.086

Degrees of significance:

\*\* p<0.01

\*\*\*p<0.001

Firstly, it was expected that respondents would use the actual fee paid to the accountant as a benchmark for estimating what they would be prepared to pay for useful accounting information in the absence of tax compliance. Results in Table 5 show that there was a very strong positive correlation between the two variables.<sup>81</sup> However, there was also a possibility that respondents only took into consideration external accountancy fees in their valuation and ignored the cost of maintaining their internal AIS.

Secondly, the analysis also indicates that respondents who used accounting information in their decision making, valued accounting information significantly more than those who did not. The perceived value of accounting information was also positively correlated with the perceived importance of accounting information in managerial decisions.

Finally, it was also expected that the perceived value of accounting information would be correlated with the perception that respondents had about the managerial benefits of tax compliance. The findings in Table 5 suggest that neither the number of specific managerial benefits perceived, nor the overall perception of managerial benefits were predictors of the perceived value of accounting information. In other words, respondents who perceived managerial benefits were not necessarily those who assigned the highest value to accounting information. Two reasons may explain this unexpected outcome. Firstly, TCE respondents had different level of education, different knowledge of accounting and different business experience; all of these variables were found by the research to influence the perception of managerial benefits. Secondly, the amount that owner-managers would be willing to pay to acquire accounting information was also dependent on the financial resources available to the entity: the entity may perceive that there are benefits in the accounting information

81 Since actual accountancy fees were correlated with business size, there was a possibility that business size was a mitigating variable.

generated from its tax records but may be restricted by the amount of cash it could spare to obtain that information.

In conclusion, comparisons with a number of benchmark variables suggest that the amount that owner-managers would be willing to pay for accounting information in the absence of tax provided a reasonably good estimate of the value they perceived in the accounting information that was actually available to them. However, it was possible that respondents made their estimates on the basis of the amount of “visible” fees paid to their external accountancy and ignored internal accounting costs. The valuation may also have been influenced by the existence of financial constraints.

## **8 Concluding comments**

### **8.1 Limitations imposed by the context of the study**

The data collected by this research gave the opportunity of new insights into the tax/ accounting overlap issue. The findings also suggest that a large majority of TCE owner-managers assigned a relatively significant value to the managerial accounting information generated as a result of the record keeping imposed by tax compliance. However, despite its significant contribution the research had a number of limitations that must now be considered.

The first limitation this study was imposed by the fact that the data collected did not allow the computation of the incremental value of managerial accounting information. The measurement of this component of managerial benefits would have required the knowledge of core accounting costs which were assumed to be represented by (the mostly internal) accounting costs incurred by TFEs. The survey questionnaire was believed to be an unreliable instrument to collect such data. Similarly, the case study format adopted for the research and limited financial resources did not allow the researcher to spend enough time to investigate these costs.

The second limitation relates to the calculation of the accountancy fees paid for non-tax services. Since accountancy bills were generally not itemised, the research had to rely on estimates of non-tax related fees made by respondents. Although care was taken to smooth out individual errors by using averages, there was a possibility that respondents had systematically over-estimated the tax component (and thereby underestimated the non-tax related component) of their accountancy bill .

The third limitation was imposed by the sample frames used for this research. The sample of TCEs only included entities from a particular region of Australia and there was a possibility that local environmental factors influenced some of the outcome. The sample of TFEs was relatively small and therefore the number of units in sub-samples was sometimes too low to allow a valid statistical analysis.

## 8.2 Validity of the measurement model

Although it is believed that the proposed measurement model will potentially deliver reliable values of managerial benefits, its validity must be appraised in the light of the assumptions that have been made. In addition to the assumptions which have been discussed, three further methodological issues need to be addressed.

The first issue stems from the fact that there is no way of controlling what owner-managers consider to be “useful accounting information to help run the business”. Although this element is intended to represent the value of *managerial* accounting information, there is a possibility that some owner-managers will include in that value the costs pertaining to the preparation of reporting information for external parties. In that case, there may be an overlap between the two components of managerial benefits identified by the measurement model. This potential problem may be limited by using carefully worded questions and cross-checks in the survey instrument.

The second issue relates to the assumption made by the model, that owner-managers believe the accounting information they are obtaining as a result of tax compliance record keeping activities represents all the useful accounting information they can get. It could be argued that if small businesses did not have to incur tax compliance costs, they might be able to shift resources in order to acquire accounting information not available to them now. If this was the case, the amount that owner-managers would spend to acquire useful accounting information in the absence of tax, may be different to the perceived value of the accounting information actually generated as a result of tax compliance activities. This argument though valid in theory may be a moot point as other findings from this research suggest that in reality small businesses not exposed to tax compliance tend to spend less on accounting functions rather than more.

Finally, the assumption is made in the measurement model that tax compliance is the only activity apart from core accounting functions that generates useful accounting information. Whilst this may be the case of a majority of small businesses where tax is the only or the main source of record keeping obligations, it could be argued that for some entities, compliance activities or reporting requirements imposed by other authorities or by third parties may also be a source of managerial benefits. For these entities, managerial benefits derived as a result of tax compliance would be difficult to disentangle from managerial benefits induced by other reporting activities.

In summary, although the above issues are relevant from a theoretical point of view, in practice their incidence on the measurement of managerial benefits is likely to be negligible.

### 8.3 Suggestions for further research

Although the findings of this research represent a significant advance towards the resolution of the managerial benefits measurement problem, it is clear that further research is required in order to obtain a reliable measurement of those benefits. The limitations imposed by the context of this study provide the framework from which suggestions can be made for further research.

Firstly, further attempts to measure managerial benefits need to rely on comprehensive data from a large sample that will include a wider cross-section of small businesses selected. Such a large scale study will reinforce the external validity of findings. It will also give the possibility of examining managerial benefits for different categories of small businesses.

Secondly, it is essential to collect reliable data on internal costs incurred by small businesses to maintain core accounting functions. Such data can be collected through case studies where participants record the time spent on accounting functions in a diary kept in a logbook format. This data collection method will minimise the problems associated with respondent recall in surveys.<sup>82</sup>

Thirdly, a comprehensive measurement of managerial benefits should take into consideration savings realised on reporting fees. Reliable data regarding accounting fees and the services provided by accountants to small business taxpayers can be collected by means of a joint survey of small businesses and accounting practitioners.

Fourthly, case studies involving contextual interviews of owner-managers over an extended period will allow the triangulation of data on managerial benefits gathered by the survey instrument. This is particularly important in order to obtain reliable information about the perception that owner-managers have of the usefulness of accounting information.

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82 C Ryan, C Newton and M McGregor-Lowndes, "How long is a piece of red tape? The Paperwork Reporting Cost of Government Grants" (The Australian Centre for Philanthropy and Nonprofit Studies, 2008).