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Accrual Accounting & Financial Reporting in the Public Sector: Reframing the Debate

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Abstract

Over the past decade, the governments of a growing number of jurisdictions throughout the world have elected to implement accrual accounting and financial reporting as the basis for their reformed financial management architectures. This phenomenon has been widely debated in public management circles, and within the academic literature. Many of these debates however, have been arid and narrowly technically focused. A growing quantity of empirical evidence drawn from jurisdictions where accrual accounting and financial reporting has already been implemented within the public sector is providing a new avenue for research in this area. This paper reviews both the previous debates surrounding the adoption of accrual accounting and reporting in the public sector, argues for a reframed approach to debates about the impact of this type of reform, and reports evidence that far from having an exclusively positive impact on the quality of financial decision making in a public sector context, the adoption of accrual accounting and financial reporting may in fact be undermining the quality of certain key decisions, including those related to outsourcing and competitive tendering.

Keywords

1 Introduction

Debates about the adoption of accrual accounting and financial reporting techniques by the public sector have been so widespread over the last decade that they may be labelled, without risk of inaccuracy, peripatetic. Questions as to whether accrual based techniques should be adopted by public sector entities are largely passé in the antipodes where they have penetrated every layer of the public sector over the past decade, making the question moot (Pallot, 1994; Shand, 1995; English et al, 2000). However, these same issues are still being pondered by interested parties in jurisdictions which have only recently adopted comprehensive sector wide accrual based financial management and reporting frameworks, for example the UK (Likierman, 2000), or which are at the stage of announcing future moves to accrual based reporting and management frameworks, for example Hong Kong (Awty, 2002).

The literature on accrual accounting and reporting in the public sector, whilst burgeoning over the past decade, has also fractured into at least four main streams. The first of these, noted above, ponders questions as to the desirability of introducing accrual accounting into the public sector. The second, taking adoption as a factual given, pays attention to the question of why the adoption took place (Brorstrom, 1998; Ryan, 1998). The third broad stream of literature ponders questions pertaining to mode and manner of implementation, for example, should the accrual based methodologies adopted by public sector agencies reflect identically the techniques and processes used by private sector organisations or incorporate differences reflecting unique attributes of the public sphere? These questions have been posed at both a conceptual level (Newberry, 2001) and in relation to particular technical phenomena such as the vexed issues associated with accounting for cultural, defence and heritage
assets (Barton, 1999a; Barton, 1999b; Carnegie and Wolnizer 1995; Carnegie and Wolnizer 1999; Micallef and Peirson, 1997).

A fourth stream of literature concerns questions as to the capacity of accrual accounting and reporting as integrated elements of the public sector financial management fabric to effect performance improvements. Such questions have been raised from both a macro-economic perspective (Robinson, 1998a; Salinas, 2002) and using a critical / analytical theoretical lens (Guthrie, 1998).

Given the breadth and depth of extant literature on the subject, scepticism on the part of the reader as to the capacity of yet another paper on the subject to make a meaningful contribution to the literature would be entirely natural. Yet gaps do exist in our understanding of the implications of the decision, on the part of many jurisdictions, to transform accounting, reporting and financial management processes from cash to an accrual footing. These gaps have been tantalisingly hinted at in the extant literature, but to date, pursued either insufficiently, or not at all. Conn (1996, p.82) notes that:

“in reality, the term ‘accrual accounting’ has become a code for a much wider-ranging set of changes”.

Mellor (1996, p. 81) states, somewhat more directly that:

“accrual accounting is only a means to an end...accrual accounting and reporting simply provides the overall framework and reporting structure for the implementation of financial and other management reforms which have as objectives a more efficient, effective and responsive public service.”
While observations such as those abstracted above abound in the literature, a more systematic analysis is now required, especially given the sequence of public sector financial management reforms, including capital charging (Carlin, 2003; Heald and Dowdall, 1999; Robinson 1998b) and accrual output based budgeting (AOBB) techniques (Carlin & Guthrie, 2001a) which have been implemented in the wake of the adoption of accrual accounting.

Although an extensive literature locates public sector accrual accounting within its broader social, economic and political context (its external context) (Broadbent & Guthrie, 1992; Guthrie, 1994; Humphrey et al, 1993; McCulloch and Ball, 1992), insufficient attention has been paid to the question of accrual accounting’s location and role within the context of the wide ranging international public sector financial management reforms of the past decade, that is, its internal context. This paper contributes to the literature by demonstrating the internal context of accrual accounting and financial reporting in the public sector, drawing upon empirical observations as the evidentiary basis for the conclusions reached.

It is argued that despite the surface level appearance of comparability between the accounting and financial reporting structures of the public and private sectors afforded by the introduction of accrual techniques into the former, decision making premised on the assumption that the numbers yielded by the accounting systems of competing public and private sector organisations (for the purposes of benchmarking, tendering and outsourcing) is likely to be materially flawed. This arises from the radically different assumptions which underpin the application of accrual accounting in typical public sector settings when compared against private sector practices.
The remainder of the paper proceeds as follows. Section 2 reviews international patterns of adoption of accrual accounting and reporting in the public sector. Section 3 examines in detail the nature of debates about public sector accrual accounting, while section 4 draws upon that discussion to frame a new territory for research and debate. Section 5 reports the results and implications of an empirical study into the impact of the adoption of accrual accounting in one jurisdiction, Victoria, while the paper’s conclusions are set out in section 6.

2 International Adoption of Accrual Accounting in the Public Sector

Accrual based accounting and financial reporting in the public sector is not, despite appearances to the contrary, an entirely new phenomenon. By way of example, it has been noted that in Australia, the Postmaster-General’s department commenced preparing commercial accounts (including a full profit and loss statement and balance sheet) in 1913, and continued to use this form of reporting through time (Standish, 1968). Generally however, cash rather than accrual accounting has been the mainstay of accounting and financial reporting in the public sector throughout the world (OECD, 2002).

The shift towards a comprehensive accrual oriented public sector accounting and financial reporting structure began to take place in the late 1980s, most notably in Australia and New Zealand. The latter jurisdiction became the first sovereign nation to fully implement accrual accounting at both a national and agency level. By the early 1980s, many New Zealand GTEs had adopted accrual accounting and financial reporting (IFAC, 1996). However, the most significant impetus for wholesale
adoption of accrual accounting in the New Zealand public sector\(^1\) can be attributed to two pieces of legislation, the *State Sector Act 1988* (NZ) and the *Public Finance Act 1989* (NZ).

The first of these milestone pieces of legislation created a new legal framework for the relationship between departmental heads and their Ministers. The fundamental goal of redesigning these relationships was to increase the accountability to Ministers of departmental heads for their performance and that of their departments.

Reconstituting the accountability framework in this manner entailed modifications to the broader accountability infrastructure. These were embodied in the *Public Finance Act 1989* (NZ) which included requirements that audited accrual financial reports be produced at both a whole of government and an agency level. The act came into effect on 1 July 1989. By December 1990, all 49 New Zealand government departments in existence at the time had migrated to an accrual accounting environment, leading to the production of the first accrual based whole of government reports a year later (Ball et al, 1999).

In Australia, accrual techniques had also been used selectively from the early 1980s onwards. Statutory authorities\(^2\) of both the Commonwealth of Australia and the state of New South Wales\(^3\) adopted accrual based financial reporting from 1983 onwards.

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\(^1\) There had of course been a more wide ranging contemplation of the issue than is necessary to catalogue here. For example, in 1978, the New Zealand Comptroller and Auditor General had advocated accrual accounting as a means of improving cost and asset management (NZ Audit Office, 1978).

\(^2\) Which later became so called “Government Trading Enterprises” (GTEs) or “Government Business Enterprises” (GBEs).

\(^3\) Australia is a federal state. The Commonwealth Government is the national tier of government. A second tier of government exists in relation to the states and self governing territories. A third tier of
(Funnel and Cooper, 1998, p. 130), an outcome informed significantly by the findings of a lengthy though influential report\textsuperscript{4} issued by the Commonwealth Joint Committee of Public Accounts\textsuperscript{5} (JCPA, 1982), as well as the general framework for reform of the public sector discussed in the earlier Royal Commission into Australian Government Administration (RCAGA, 1976)\textsuperscript{6} and the “Willenski Report” into NSW government administration which issued reports in 1977 and 1978\textsuperscript{7}.

The most direct impetus for change however, came with the election in 1988 of a conservative government in New South Wales, under the premiership of Nick Greiner\textsuperscript{8}. Prior to coming to office, Greiner evinced an intention, if elected, to introduce business like practices and techniques to government, specifically including accrual accounting (Christensen, 2002). Immediately upon assuming office, he instituted\textsuperscript{9} a Commission of Audit, a key recommendation of which was that NSW proceed to adopt accrual based accounting and reporting at both a whole of government and agency level. Though this type of recommendation would hardly be

\textsuperscript{4} Report 199.

\textsuperscript{5} It should also be noted that between 1978 and 1982 the Commonwealth Senate Standing Committee on Finance and Government Operations (SSCFGO) published a series of reports which indicated a clear preference for the adoption of accrual accounting techniques by statutory authorities. See for example SSCFGO 1980.

\textsuperscript{6} For a discussion of the accounting and financial implications of the Royal Commission, see: Parker & Guthrie, 1990.

\textsuperscript{7} Neither the Royal Commission on Government Administration nor the Review of NSW Government Administration (Wilenski Report) specifically addresses the question of accrual accounting. However, both reports had the effect of shaking the at that point ossified structure of public administration, leaving the way open for the contemplation of reforms such as the adoption of accrual based accounting and financial reporting.

\textsuperscript{8} Greiner is a Harvard MBA graduate and came to government with an avowed intention to make government more businesslike, and thus efficient.

\textsuperscript{9} This quickly became a time-honoured tradition in Australian government. Many changes of government during the late 1980s and 1990s were accompanied by the instigation of a Commission of Audit by the incoming administration. These have included: NSW 1988, Tasmania 1992, Victoria 1992, Victoria 1993, Western Australia 1993, South Australia 1994, Queensland 1996 and Commonwealth 1996. All of these recommended the adoption of accrual based accounting and financial reporting by the governments in the relevant jurisdictions.
viewed as such today, when made, it was described as innovative and radical (Groom, 1990, p.153).

Relatively swift implementation action took place after this point. The 1990/91 NSW Budget Papers announced the government’s intention to adopt accrual accounting and reporting throughout the state public sector over a three year roll out period (Nicholls, 1991, p.34). This was achieved within the proposed timeframe, and in advance of the implementation of accrual systems in any other Australian state or territory (Walker, 1995, p.10). The Commonwealth government announced its commitment to the cause in November 1992 (Christensen, 2002, p.29). Victoria implemented accrual reporting from June 1996 onwards and by the conclusion of the decade, all Australian jurisdictions had adopted accrual based accounting and financial reporting systems\(^{10}\).

Canada, another constitutional monarchy which inherited its traditional governance and public sector financial management arrangements from the basic Westminster model, has also adopted accrual accounting. Early indications of interest in accrual accounting in the Canadian public sector can be traced back at least as far as 1962, when the Royal Commission on Government Organisation (the Glassco Commission) observed that it was desirable that public sector organisations adopt accounting systems which tracked the complete cost of producing goods or services, in order to facilitate better decision making (Glassco, 1962). A later enquiry directed specifically at the issue of financial accountability and management, the Lambert Commission (Lambert 1979) reached similar conclusions in relation to the desirability of

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\(^{10}\) As distinct from budgeting systems.
implementing accounting systems (such as accrual or modified accrual systems) capable of more fully capturing the cost of government operations.

However, unlike the position in Australia and New Zealand in which the eighties represented a time of gathering momentum for the introduction of accrual accounting and reporting, in Canada, there is little evidence of substantial progress during that period. In 1987, the Office of the Auditor General of Canada issued a document entitled the “Financial Management and Control Study” (CanAG, 1987). This document echoed the sentiments of the Lambert report and suggested that the state of Canada’s accounting and reporting systems was, at the time of publication, still incapable of providing information adequate for the needs of improved sector wide financial management.

In 1989, the Treasury Board of Canada announced its approval of a proposal to develop and implement a government wide Financial Information Strategy (FIS), centred on the adoption of full accrual accounting. Strength of intention did not translate into swift action, and despite numerous reiterations, on the part of senior Ministers to adopt accrual accounting and reporting, the timetable was pushed back to a goal of phase-in by 2001\(^{11}\), a delay of more than a decade from the original point of adoption of the FIS (CGAAC, 1999).

The move towards accrual accounting and financial reporting in the United States followed a similarly tortured path to that trod in Canada. An important milestone in the journey towards this outcome was the formation, in 1984, of the Government

\(^{11}\) At the time of writing, the OECD still records Canada as having a partial rather than full accrual system by reason of its policy of expensing rather than capitalising long lived assets at date of acquisition. (OECD 2002).
Accounting Standards Board (GASB) in the United States. By 1987, this body had issued Concepts Statement No. 1, which established several key foundations for future public sector financial reporting, including explicit consideration of matters pertaining to intergenerational equity, efficiency and compliance. Though Concepts Statement No. 1 was not focused on the question of accrual accounting, nor did it explicitly prescribe or mandate the technique, reconciliation with the stated foundation principles of intergenerational equity, at the very least, seems to strongly suggest an ultimate preference for accrual accounting and reporting.

The remainder of the 1980s, through to the late 1990s were characterised by much the same stop start process which had defined the Canadian experience through the same period. However, By 1997, GASB had mapped out a comprehensive framework for government wide accrual accounting and financial reporting, an initiative brought to fruition for all financial years ending after June 2001 (Ball et al, 1999).

Across the Atlantic, in the United Kingdom, matters moved somewhat more quickly. In 1992, the first widespread application of accrual accounting methodologies in the UK public sector came with the creation of NHS Trusts (Broadbent, 1992). However, the application of accrual practices within the UK national health system may be viewed as a pilot application, the model adopted within one sector providing the basis for a later public sector wide roll out.
Thus in 1993, the Chancellor of the Exchequer announced, as part of that year’s budget proposals, that “resource accounting”\textsuperscript{12} would be implemented throughout the UK public sector over the successive 3 – 5 years (H M Treasury, 1993). Further details were released and a period of public consultation period (of eighteen months) was announced in 1994 (H M Government, 1994), at the conclusion of which, a timetable requiring the adoption of accrual accounting by 1998 was set in place (H M Government, 1995). The actual implementation of public sector wide accrual accounting and reporting took longer than envisaged, the original timetable being amended to require dry run accounts for the 1998/99 year, and full audited and published accrual accounts for the financial year ending March 31 2000 (IFAC, 2002).

In addition to the jurisdictions discussed above, full accrual reporting for budget funded agencies has been adopted in the Netherlands (OECD, 1997), Finland, Japan, Portugal, Sweden and Switzerland (OECD, 2002). Iceland uses a modified accruals system, differing from the “full” accrual model only in that as a matter of policy, all long lived assets are expensed at the point of acquisition. In other jurisdictions, a primarily cash based reporting framework is maintained, supplemented by additional accrual disclosures.

Table 1 below provides an overview of the international adoption of accrual based accounting and financial reporting for budget funded agencies. A three way classification system is adopted, jurisdictions being categorised as using “full accrual” (largely indistinguishable from typical commercial practice), “modified accrual”

\textsuperscript{12} A term of the art used in the United Kingdom which encompasses, amongst other things, the adoption of an accruals framework.
(essentially reflecting commercial practice but with less emphasis on comprehensive statements of financial position) or “cash with accrual disclosure” models of reporting.

<table>
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<tr>
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<th>Full Accrual Basis</th>
<th>Modified Accrual Basis</th>
<th>Cash Basis With Supplementary Accrual Data</th>
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<td>United States</td>
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(Source, OECD 2002)
The necessarily brief review of international adoption of accrual accounting and reporting by budget funded agencies set out above suggests that although the implementation experience has differed significantly between jurisdictions, particularly on dimensions such as degree of public consultation and gestation period, the trend towards the adoption of accrual accounting is a global, rather than an English speaking “club” phenomenon.

Indeed, the repetitious reference in technical and academic literature to the experience of Australia and New Zealand in particular, as early adopters of comprehensive accrual frameworks, may have resulted in insufficient recognition of the breadth and depth of the impetus towards the adoption of accrual accounting and financial reporting techniques within the public sectors of a growing number of jurisdictions throughout the world. Even in those jurisdictions where the least reforming fervour has been demonstrated, for example parts of continental Europe and South America, it is difficult to find remaining examples of pure cash based accounting and reporting frameworks (Morphett, 1998).

It does not follow however that because the adoption of accrual accounting and financial reporting has become so widespread within a relatively constrained time period, the transition has taken place without debate or controversy. On the contrary, the decision to adopt accrual accounting within the public sector has been the subject of considerable debate, a review of which is set out in section 3 below.

3 Debates About Accruals in the Public Sector
The introduction of accrual based accounting and financial reporting to the public sectors of many jurisdictions throughout the world was not the result of a silent revolution. The weight and volume of material produced both in support of and against the whole project, either wholly or in part, has been both considerable and sustained. For a small sample of papers in support see (AARF, 1991; AARF 1993; AARF, 1998; Barrett, 1993; Barrett, 1994; Evans, 1997; Gillibrand & Hilton, 1998; Heald & Georgiou, 1995; IFAC, 1994; IFAC, 1996; IFAC, 2002; JCPA, 1995; NSWPAC, 1988; NSWPAC, 1994; NSWPAC, 1996; Pendlebury & Karbhari 1998; Rowles, 1992; Rowles, 1993; Rowles, 2002; Talbot, 1998). For a small sample of papers expressing critical views see (Guthrie, 1993; Guthrie, 1998; Jones & Puglisi, 1997; Ma & Matthews, 1993; McCrae & Aiken, 1994; Mellett, 1997; Walker, 1988).

That body of literature which expresses support for the widespread adoption of accrual accounting and financial reporting throughout the public sector is generally characterised by the evangelism of its tone and the lack of empirical evidence put forward to support its claims (Potter, 1999). Several recognisable themes run through this corpus of work. At the most simplistic level, some literature justifies the adoption of accrual accounting on grounds of inevitability (Carter, 1994; McPhee, 1994, OECD, 1993). Other authors have justified their assertion that public sector organisations ought adopt accrual accounting and reporting by reference to another bald assertion, that is, that accrual based reporting systems are “superior”\(^{13}\) to alternative systems (MacIntosh, 1992; McPhee, 1993; DOF 1994a; Mellor, 1996).

\(^{13}\) Generally there is little specification as to the cause of the asserted superiority. It is almost as if, for certain authors, the proposition is so obvious that it speaks for itself (a case of res ipsa loquitur).
These works are more akin to sermonising than serious explications of principle. They constitute accrual accounting as a “good thing” in public management but do so on essentially emotive grounds. As such they represent, at best, a call to action, a statement of “why” organisations within the public sector ought adopt a new reporting structure, but not an explanation of “how” this ought to be carried into practice, nor “what” the effects will be once the task of implementation is complete.

At a greater level of sophistication, three related themes appear and reappear in appeals for the adoption of accrual accounting and reporting. These do address the “what” as a key element of their rhetorical structure. First, it is often argued that the adoption of accrual reporting will enhance transparency, both internally and externally (Boxall, 1998; Denis, 1993; Micallef, 1994; Wong, 1998). Second, whilst on occasions increased transparency in and of itself is suggested to represent a sufficient basis for recommending the adoption of accrual accounting over alternative systems, more frequently, asserted increases in transparency, particularly internal transparency, are said to in turn drive greater organisational performance, primarily through improved resource allocation (Ball, 1992; Churchill, 1992; Kelly, 1998; Likierman, 2000; Slamet, 1998;) A third and closely allied argument is that accrual accounting allows organisations to identify the full cost of their various activities, again leading to greater efficiency, better resource allocation and improved performance (DOF, 1994b; Evans, 1995; Webster, 1998).

Each of these lines of argument is ripe for criticism. Claims that a particular model of accounting offers greater transparency are implicitly claims as to the believability and objectivity of the numbers produced therein. In the context of the private sector there
exists a burgeoning literature on the susceptibility of accrual accounting and financial reporting to obfuscation and diminished transparency (Clarke et al, 1997; Griffiths, 1995; Jensen, 2001; Mulford & Cominskey, 2002; Naser, 1993; Rezaee, 2002; Schilit, 2002; Smith, 1996). Yet in almost none of the literature on public sector applications of accrual accounting is a meaningful, direct challenge issued on this most fundamental point.

Some authors (Broadbent & Guthrie, 1992; Guthrie, 1994; Hines, 1988) dance around the issue when they conceptualise accounting technologies, whether cash or accrual based, as other than neutral and disinterested. Such a characterisation suggests that a range of agendas may lie behind the apparently objective veneer of accounting, in turn suggesting that transparency may have been diminished in a manner not immediately or readily noticeable to the world at large. However, this does not provide a direct answer to the matter at hand, namely, whether the introduction of accrual accounting to the public sector will have the effect of increasing transparency.

Other authors have labelled the product of public sector accrual reporting systems as observed in practice as “misleading” (Barton, 1999a p. 10). This would seem to fly in the face of claims made by those partial to a sanguine view of the enhanced transparency of accrual based financial reporting. Yet when examined closely, Barton’s arguments have little force in relation to the system, as opposed to the particular application of the system about which he complained so forcefully and eloquently. Barton’s _bette noire_ was the requirement, in _AAS 27 Financial Reporting by Local Governments_, that local government organisations ascertain the value of land

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14 Walker (1988) represents a clear exception.
underneath the roads under their purview, undertake a valuation and recognise the asset in each period’s statement of financial position. Barton’s argument is with this requirement, not with the adoption of accrual based accounting systems in the public sector, and certainly not with their potential degree of transparency, leaving aside specific technical anomalies such as that about which he complained.

Similar observations may be made in respect of recent contributions by Walker et al (1999, 2000a, 2000b), which focused on critiquing the use of current cost accounting by GTEs, suggesting that this lowered the serviceability of the resulting data for decision making purposes. Again, the core critique here is not of accrual accounting and reporting in the hands of general government sector agencies, but rather, about a particular technical aspect of a particular observed implementation. So, a central rhetorical weapon of the pro public sector accrual camp has been left almost entirely intact for the period of greater than a decade.

The is record equally poor in relation to the sequitur to the “transparency” argument, namely that this leads to improved organisational performance. While significant quantities of literature have been devoted to the issue of performance measurement systems and techniques within the context of the public sector (Bowerman & Humphrey, 2001; Neale & Pallot, 2001; Walker, 2001), literature which critically and empirically addresses the alleged linkage between the adoption of accrual accounting and reporting within the public sector and improved overall performance is essentially non existent. A limited amount of work touches on this question tangentially (Carlin & Guthrie, 2001b). There is a small quantity of published evidence which suggests

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15 The analysis provided by Walker et al is not directly on point for the purposes of this paper, because it concentrates on Government Trading Enterprises (GTEs). There has been little controversy about the applicability of accrual models of accounting by GTEs.
that the costs of implementing accrual based accounting and reporting may have outweighed the benefits (Jones & Puglisi, 1997), while Mellet (2002) provides a satirical insight into some of the absurdities which have resulted from the adoption of new techniques such as accrual accounting. Overall however, the critical response has been a muted one.

Part of this may be attributed to the sheer difficulty of gathering “hard” evidence on the linkages between a particular reform and related changes in performance within a complex environment, a task rendered even more recondite by the crowding of the reform space (as a result of the simultaneous or near simultaneous implementation of a group of new public management techniques) (Carlin, 2002). The position is worsened when, as is often the case, the adoption of new financial management and reporting structures is accompanied by recombinations of physical administrative structures, rendering the task of developing meaningful benchmarks, generating trend data or making valid cross sectional comparisons almost impossible (Pallot, 2001).

Nonetheless, given that the bulk of the “evidence” called upon by those disposed towards public sector accrual accounting to lend support to their claims of improved performance has been “soft”, that is, based essentially on impressions and opinions rather than data (e.g., Richardson, 1994), a greater weight of effective critical counter argument on this point might reasonably have been expected to emerge over time. Largely, as noted previously, that expectation has not been met.

The critical response has been measurably more effective in relation to the third key claim set out above, namely that the adoption of accrual accounting results in
improved capacity to measure cost, leading to better resource allocation decisions and overall performance. Robinson argues that the suggestion that accrual systems improve conceptualisation of cost only makes sense when the measure of cost being considered is “full accrual cost”. This includes all recurring and capital costs, including depreciation and some measure of the cost of capital employed to produce a particular good or service (Robinson, 1998a, p. 22). That this is so means that full accrual costs captured by an accounting and reporting system are contingent on a range of factors, including the valuation of assets (which feeds into depreciation and capital charges) as well as the assumed cost of capital.

This line of argument has been taken up by other authors who demonstrate, both empirically and analytically, that these choices, far from improving the accuracy and usefulness of cost estimates as asserted, may have the opposite effect, in the process generating poor quality investment and resource allocation decisions (Carlin, 2000; Johnstone, 1999). Even some of the most entrenched supporters of the public sector accruals ideal have acknowledged these arguments as “very powerful”. (Rowles, 2002, p. 358).

If the critical rejoinder to normative claims made by proponents of public sector accrual accounting has been relatively weak, what has been the nature of the large quantity of literature, much of it “critical”, devoted to the subject of public sector accrual accounting? Case studies of three distinct streams of papers will suffice to provide an answer to the question.
The first case study focuses on the apparently interminable argument fought out in the journals over the past decade in relation to the problems of accounting for heritage and similar assets. Writing in 1981, Robert Mautz pondered whether or not monuments, reserves, parks, roads and other physical and social infrastructure of the same ilk ought best be thought of as liabilities, rather than assets, because of the stream of cash outflows required to maintain and service them across time (Mautz, 1981). Almost a decade later, the same author lamented that his earlier contribution had not generated any significant comment or debate (Mautz, 1988). By the early 1990s, a small group of authors had begun to take serious interest in the difficult questions posed by heritage, cultural and scientific “assets” within the public sector context (e.g. Pallot, 1990). These early contributions stressed the need to carefully consider evaluating heritage, cultural and scientific “assets” according to different criteria than those used to measure and recognise conventional financial and physical assets.

A diametrically opposed response was not long in the making. This view asserted that private sector organisations had long controlled substantial collections of cultural, scientific and heritage assets, and had accounted for those assets in a manner consistent with accounting treatments adopted in relation to more conventional asset classes. That being so, there could be no reason, especially given the beginnings of moves towards accrual accounting (already in place by that time in New Zealand and in the process of implementation in New South Wales), why accounting for public sector assets of that ilk could not proceed commensurately with the private sector experience (Rowles, 1991). This approach informed the essence of a discussion paper
on the subject published by the Australian Accounting Research Foundation the following year (Rowles, 1992).

Sceptical voices soon emerged, a comprehensive critique of the official position being published by Carnegie and Wolnizer in 1995 (Carnegie & Wolnizer, 1995). These authors argued that to require comprehensive recognition of heritage, scientific and cultural collections as assets was flawed, because these items did not meet the definition or recognition criteria for assets set out in the (Australian) conceptual framework. Further, recognition and valuation of these items would offend the cost benefit trade-off for financial information made explicit in SAC 3, there being no identifiable users for the information. Finally, the authors argued, since the mission of government agencies with respect to cultural, heritage and scientific assets is “to be” and “to hold” rather than “to do business”, to engage in commercial style recognition and valuation would result in an information set fundamentally at odds with the core purpose of the agency to which the (offending) financial report related.

“Official” voices were quick to respond, suggesting that recognition and valuation of cultural, heritage and scientific assets, far from offending the core values of public sector organisations, was central to maintaining and furthering those values (Hone, 1997), that there were indeed demands for valuation data pertaining to these assets (Vic PAEC, 1995), and that neither the definitional or recognition requirements for assets according to the conceptual framework were offended as a result of the valuation and incorporation of cultural, heritage and scientific collections into the statements of financial position of public sector entities (Micallef & Peirson, 1997).
Delving into the issue at successively deeper levels of intricacy, the main protagonists have continued, since the mid 1990s, to stand firm to their originally stated positions, hurling literary missiles, and missiles against one another’s missiles (Carnegie & Wolnizer, 1996; Carnegie & Wolnizer, 1997; Carnegie & Wolnizer, 1999; Carnegie & Wolnizer 2002; Micallef & Peirson, 1997; Stanton, 1997; Stanton, 1998), in a debate which does not appear to be any closer to a satisfactory resolution now than at the time it commenced.

A second case study examines the stream of literature concerning the question of whether it is appropriate that the conceptual framework for accounting which governs financial reporting in private sector contexts be imported without modification into public sector settings. While the origins of this debate may be traced back to at least the late 1970s (Anthony, 1978), a significant quantity of literature devoted to the question was published from the mid 1990s onwards. Two fundamentally opposed schools of thought have emerged. The first leans towards what might be described as “sector neutrality”, the idea that one conceptual framework, and thus one essential body of accounting and reporting rules ought function equally well for both private and public sector applications (MacIntosh, 1999; McGregor, 1999; Micallef & Peirson 1997).

The alternative view is that the nature of the public sector is so fundamentally different, (because of the different markets within which governments operate, the different objectives of public sector organisations and the differing nature of many of the assets and liabilities of governments and public sector agencies when compared against the private sector), that a different set of rules ought be implemented to govern
accounting and financial reporting in the public sector (Barton, 1999a; Barton, 1999b, Barton, 2002a; Barton 2002b; Carnegie & Wolnizer, 1999). As with the debate on heritage, cultural and scientific assets reviewed above, the public sector conceptual framework debate shows signs of heightening rhetoric (recent contributions speaking of the outrage, vehemence, and demonisation of others’ positions displayed by authors of opposed views (Barton 2002b)), but little sign of resolution.

The “accruals as a rhetorical device” literature forms the basis for a third case study. This collection of papers argues against the wholesale introduction of commercial style accrual accounting into the public sector largely on the grounds that the *raison d’etre* of accounting in private sector settings is fundamentally and irreconcilably different than in public sector settings. Authors who have adopted this line of argument suggest, for example, that the key focal objects of private sector accounting, namely profitability, solvency and capital structure wither into irrelevance in public sector settings (Aiken & Capitano, 1995; McCrae & Aiken, 1994; Ma & Matthews, 1992; Ma & Matthews, 1993). This fundamental mismatch between the core objects of accounting technologies appropriate to private sector applications and techniques pertinent to public sector settings suggests firstly that the widespread decision to adopt accrual accounting within the public sector has been grounded in rhetoric rather than reality and secondly, following on from this, that it may have been adopted as part of a broader agenda (Guthrie, 1998).

At first glance these three streams of literature may seem irreconcilable, save for the trivial observation that they all touch on, in one form or other, debates which concern public sector accounting and financial reporting. However, a common element of each
is the degree of introspection which they exhibit, and the lack of a framework they offer for understanding accrual accounting in the public sector in its new internal context. Thus debates about accounting for cultural, heritage and scientific assets, appropriate conceptual frameworks and implementation rhetoric versus reality, whilst executed with eloquence and stamina, have not resulted in a materially improved capacity to comprehend the impact of accrual accounting systems in place in public sector settings.

That this has been so may be attributed to several factors, including the highly technical and semantic focus of many of the (reviewed) contributions to the public sector accounting literature, but also the comparative recency of some novel additions to the public financial management constellation, in particular the construction of credible markets and quasi markets for goods and services traditionally produced monopolistically by public sector agencies, the implementation of accrual output based budgeting and the introduction, in some jurisdictions, of capital charging. These represent fundamental contextual transformations, and suggest the need for a broadened analytical perspective.

This is not to derogate from the contribution made by the pre-existing literature. Debates about conceptual frameworks, the nature of public sector assets and liabilities, the match or mismatch between the goals and objectives of public sector organisations and their adopted modes of representing and managing their financial positions have been and remain important. However there is a growing recognition that a vital, though to this point under-researched question has been as to the impact of the public sector pulling on new financial management clothing, such that there is a
strong outward resemblance to commercial enterprise management and reporting systems, when inwardly, fundamental differences remain (Newberry, 2001; Newberry, 2002). It is to concerns such as these that this paper now turns, in a bid to reframe the debate on public sector accrual accounting.

4 Reframing the debate

The broad sweep of public sector accrual accounting literature surveyed in this paper has largely displayed most concern for the detailed, technical dimensions of reforms, rather than how the impact of these reforms interacts with simultaneous and subsequent changes to public management regimes which have been implemented over the past decade. Thus authors agonise about whether a museum collection constitutes an asset in any meaningful sense, or whether a particular set of conceptual guidance principles apply equally well in one sector of the economy as in another, but pay scant attention to the position of accrual accounting within an overall composite reform architecture.

Ultimately, whether accrual accounting is the “appropriate” technology for the public sector or not is hardly a question likely to yield useful research results as time goes forward. Governments throughout the world have expended considerable sums in studying, implementing and expanding the ambit of accrual accounting and reporting throughout the public sector (Jones & Puglisi, 1999). They are unlikely to dismantle this infrastructure in the short to medium term. However, changes to the assumptions made within the existing infrastructure may be made at a far lower cost. Therefore, a study of actual implementations of accrual systems already in place is not a pyrrhic
activity, since though public sector accrual accounting and reporting systems appear likely to be a persistent rather than transient phenomena, the internal assumptions required to drive these systems need not be.

It has been observed that far more fiction has been created in the realm of financial reporting as a result of zealous adherence to prevailing accounting standards, than by blatant rejection of generally accepted accounting principles (Clarke et al, 1997, p.18). In a similar vein it seems plausible to observe that far more confusion as to identity and purpose has been created as a result of the cloaking of the public sector in the same financial reporting fabric, that of accruals, as worn in the commercial realm.

Earlier literature has insisted that the application of accruals technology to the public sector is inappropriate because of the fundamentally differing objective sets of the public versus the private sector (e.g Guthrie, 1998). That may be so, but a more important consideration, at a pragmatic level, is that once similar technologies are adopted by one sector of the economy as another, a significant barrier to surface level analytical comparability has been demolished. The “sameness” which has been achieved between accounting and reporting standards in the public and private sectors is itself a powerful rhetorical tool, but one which may lead to confused and suboptimal outcomes.

As discussed above, the adoption of accrual based accounting and reporting has not been an end in itself (Mellor, 1996). Rather, the role and impact of accrual accounting is better understood as forming one part of an interconnected chain of reforms to
public financial management techniques. This chain of reforms is depicted in Figure 1 Below.

**Figure 1 – The Public Financial Management Reform Environment**

Viewed in this way, the changes to public sector financial management which have occurred over the past decade may be classified as falling into one of three categories. The first category consists of “precursor” reforms, so called because the adoption of such techniques is a necessary precondition to the subsequent implementation of a range of other techniques. Accrual measurement and reporting fits into this category.

The recording and reporting apparatus acts as a feeder mechanism for the second category of reforms, here labelled “hub” reforms. The “hub” technique of accrual output based budgeting (AOBB) lies at the centre of the new public financial management environment. It characterises all activities carried out by public sector agencies as the production of outputs measurable both in terms of their physical and financial dimensions.
The implications of this new financial calculus are profound. Since public management now revolves around choices as to which mix of outputs to purchase in the pursuit of a range of policy defined outcomes, the locus of production becomes an object of indifference. Thus the hub reforms, having reconceptualized the product of public sector agencies in terms of definable outputs with known cost functions, transmit these data into the third (consequent) layer of the public financial management reforms, the markets and quasi markets within which outputs are traded. This architecture fits well with the vision of competitive neutrality between the public and private sector mapped out, for example, in the national competition policy adopted by Australian governments during the 1990s (Hilmer, 1993; Industry Commission, 1996).

Recall that neither the “hub” nor the consequent markets and quasi markets for outputs can function without a precursor data feeder system, in this case accrual financial accounting and reporting. It therefore follows that the output costs calculated within the AOBB and transmitted into output markets will be sensitive to assumptions made within the accrual accounting reporting system, for example in relation to asset value and depreciation schedules.

A naïve analysis of public sector financial management arrangements prevailing in jurisdictions in which accrual based accounting and reporting has been adopted may lead to the conclusion that one result is direct comparability with the financial dimensions of private sector organisations. The inherent logic of this train of thought is that if the underlying financial data system is the same in both segments of the
economy, then the product of the system, for example output cost data must also be directly comparable.

However, this argument is rendered absurd when it can be demonstrated that there are fundamental differences in the assumptions inherent in accrual accounting and reporting as practiced in the private versus the public sector, and that these differences in accounting policy choice have or have the potential to have a material impact on the measurement of the financial position and performance and efficiency of public versus private sector entities.

5 An Empirical Examination of the Victorian Position

Though flirted with briefly but quickly discarded by the private sector (Clarke, 1982; Clarke, 1998; Tweedie & Whittington, 1984; Tweedie & Whittington, 1987; Whittington & Pong, 1996), asset valuation based on current replacement cost has flourished in Australian public sector settings. This single factor represents a significant barrier to comparability between the financial statements and apparent efficiency of public and private sector organisations, even though they are using ostensibly the same accounting and reporting methodologies and structures.

The State of Victoria is used as a case study to illustrate the impact that this differential approach to asset valuation can have on comparative financial analysis. Table 2 below sets out data on the proportion of non current physical assets controlled

---

16 Victoria is Australia’s second most populous state.
17 Victoria is chosen as the object of study for several reasons. First, it was an early adopter of a range of public financial management reforms, meaning that at the time of writing, adequate quantities of historical, post implementation data is available for scrutiny and analysis. Second, the structure of Victoria’s public sector has remained relatively static over an extended period. This means that analysis can proceed without the obfuscating effect of departmental amalgamations, integrations, reorganisations and so on. The overarching departmental structure has remained essentially unchanged over the period studied.
by Victorian government departments\(^{18}\) between 1998\(^{19}\) and 2001\(^{20}\) which were measured and reported in departmental statements of financial position at written down historical cost. The data clearly reveal a bias away from the use of historical cost as the prime asset valuation methodology employed across Victorian government departments.

### Table 2 - % of Physical Non Current Assets at Historical Cost – Victorian Government Departments

<table>
<thead>
<tr>
<th></th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>Period Av</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>16.50%</td>
<td>18.48%</td>
<td>19.95%</td>
<td>20.70%</td>
<td>18.91%</td>
</tr>
<tr>
<td>Human Services</td>
<td>9.50%</td>
<td>11.60%</td>
<td>9.60%</td>
<td>8.50%</td>
<td>9.80%</td>
</tr>
<tr>
<td>Natural Resources &amp; Env</td>
<td>25.08%</td>
<td>20.14%</td>
<td>7.80%</td>
<td>8.60%</td>
<td>15.41%</td>
</tr>
<tr>
<td>Justice</td>
<td>19.14%</td>
<td>31.69%</td>
<td>16.91%</td>
<td>17.03%</td>
<td>21.19%</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>51.73%</td>
<td>22.18%</td>
<td>54.65%</td>
<td>38.10%</td>
<td>41.67%</td>
</tr>
<tr>
<td>State &amp; Regional Development</td>
<td>52.51%</td>
<td>71.60%</td>
<td>44.89%</td>
<td>57.24%</td>
<td>56.56%</td>
</tr>
<tr>
<td>Premier &amp; Cabinet</td>
<td>11.93%</td>
<td>25.18%</td>
<td>26.49%</td>
<td>11.49%</td>
<td>18.77%</td>
</tr>
<tr>
<td>Treasury</td>
<td>69.67%</td>
<td>66.21%</td>
<td>75.52%</td>
<td>59.42%</td>
<td>67.71%</td>
</tr>
<tr>
<td>Period Average</td>
<td>32.01%</td>
<td>33.39%</td>
<td>31.98%</td>
<td>27.64%</td>
<td>31.25%</td>
</tr>
</tbody>
</table>

On average, across the eight departments for the four years studied, approximately 70% of assets were valued at other than historical cost. The predominant alternative measure used was replacement cost. The extent to which this practice differs from that adopted by private sector organisations may be gauged by even a brief examination of the data reported in Table 3.

### Table 3 - % of Physical Non Current Assets at Historical Cost – ASX Listed Companies Sample\(^{21}\)

\(^{18}\) There are 8 main departments, data for all of which is reported and analysed in this paper.

\(^{19}\) By 1998 all Victorian Government departments had adopted full accrual accounting and reporting.

\(^{20}\) The most recent period for which data is available as at the time of writing.

\(^{21}\) As at 30 June 2001, the aggregate market capitalisation of the Australian Stock Exchange (ASX) was AUD $730 billion. Of this, mining & resources stocks were capitalised at $104.8 billion, and Financial Services & Insurance stocks were capitalised at AUD$267.8 billion, leaving $357.4 billion in manufacturing and other services. The market capitalisation of the selected sample of stocks (drawn from the Standard & Poors ASX 50 index) was $110.7 billion, representing 31% of the non mining &
<table>
<thead>
<tr>
<th></th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>Period Av</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aristocrat</td>
<td>83.51%</td>
<td>88.72%</td>
<td>89.96%</td>
<td>82.06%</td>
<td>86.06%</td>
</tr>
<tr>
<td>Amcor</td>
<td>81.80%</td>
<td>83.60%</td>
<td>82.70%</td>
<td>100.00%</td>
<td>87.03%</td>
</tr>
<tr>
<td>Coca Cola Amatil</td>
<td>94.10%</td>
<td>94.48%</td>
<td>71.40%</td>
<td>75.60%</td>
<td>83.90%</td>
</tr>
<tr>
<td>Coles Myer</td>
<td>93.62%</td>
<td>92.10%</td>
<td>92.30%</td>
<td>92.80%</td>
<td>92.71%</td>
</tr>
<tr>
<td>CSR</td>
<td>76.10%</td>
<td>75.70%</td>
<td>76.98%</td>
<td>80.10%</td>
<td>77.22%</td>
</tr>
<tr>
<td>Fosters</td>
<td>33.90%</td>
<td>42.02%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>68.98%</td>
</tr>
<tr>
<td>Fairfax</td>
<td>92.67%</td>
<td>94.52%</td>
<td>80.53%</td>
<td>100.00%</td>
<td>91.93%</td>
</tr>
<tr>
<td>James Hardy</td>
<td>81.45%</td>
<td>73.35%</td>
<td>76.83%</td>
<td>84.10%</td>
<td>78.93%</td>
</tr>
<tr>
<td>Mayne</td>
<td>70.50%</td>
<td>47.61%</td>
<td>53.74%</td>
<td>30.10%</td>
<td>50.49%</td>
</tr>
<tr>
<td>News Corporation</td>
<td>99.70%</td>
<td>99.70%</td>
<td>99.80%</td>
<td>100.00%</td>
<td>99.8%</td>
</tr>
<tr>
<td>Publishing &amp; Broadcasting</td>
<td>83.70%</td>
<td>96.98%</td>
<td>97.16%</td>
<td>97.30%</td>
<td>93.79%</td>
</tr>
<tr>
<td>Qantas</td>
<td>81.62%</td>
<td>87.40%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>92.26%</td>
</tr>
<tr>
<td>Southcorp</td>
<td>73.40%</td>
<td>76.20%</td>
<td>78.10%</td>
<td>100.00%</td>
<td>81.93%</td>
</tr>
<tr>
<td>Tabcorp</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
<tr>
<td>Wesfarmers</td>
<td>81.56%</td>
<td>80.67%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>90.56%</td>
</tr>
<tr>
<td>Woolworths</td>
<td>82.40%</td>
<td>86.60%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>92.75%</td>
</tr>
<tr>
<td>Period Average</td>
<td><strong>81.88%</strong></td>
<td><strong>82.48%</strong></td>
<td><strong>87.47%</strong></td>
<td><strong>90.13%</strong></td>
<td><strong>85.52%</strong></td>
</tr>
</tbody>
</table>

The data set out in Table 3 provides evidence of a systematic and persistent preference for the use of historical cost measures by private sector entities. This may be explained in part by the likelihood that the adoption of historical cost accounting is likely to result in higher apparent rates of return on assets and earnings per share\(^{22}\) than would be achieved were asset valuation techniques which tended to inflate asset values\(^{23}\) adopted. In addition, prevailing applicable accounting standards which touch on the question of the valuation of non current physical assets take a relatively permissive stance, allowing extensive use of historical cost accounting by private sector reporting entities\(^{24}\).

\(^{22}\) Via lower depreciation charges.

\(^{23}\) And thus diminish return on assets, as well as EPS by way of heightened depreciation charges.

\(^{24}\) See Australian Accounting Standard AASB 1041, *Revaluation of Non Current Assets*, Australian Accounting Standards Board.
That the adoption of replacement cost valuation methodologies by public sector entities has had the effect of inflating the size of the balance sheets of public sector balance sheets when compared against their private sector peers is able to be demonstrated by comparing the proportion of total assets made up of asset revaluation increments in both sectors. Data for Victorian government departments is set out in table 4, below.

**Table 4 – Asset Revaluation Reserve % of Total Assets – Victorian Government Departments**

<table>
<thead>
<tr>
<th></th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>Period Av</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>3.00%</td>
<td>5.88%</td>
<td>10.03%</td>
<td>13.79%</td>
<td>8.18%</td>
</tr>
<tr>
<td>Human Services</td>
<td>28.05%</td>
<td>29.04%</td>
<td>59.66%</td>
<td>55.08%</td>
<td>42.96%</td>
</tr>
<tr>
<td>Natural Resources &amp; Env</td>
<td>11.78%</td>
<td>28.43%</td>
<td>31.34%</td>
<td>31.16%</td>
<td>25.68%</td>
</tr>
<tr>
<td>Justice</td>
<td>1.15%</td>
<td>1.03%</td>
<td>7.12%</td>
<td>5.66%</td>
<td>3.74%</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>2.56%</td>
<td>4.66%</td>
<td>1.96%</td>
<td>7.03%</td>
<td>4.05%</td>
</tr>
<tr>
<td>State &amp; Regional Development</td>
<td>0.00%</td>
<td>0.00%</td>
<td>12.76%</td>
<td>6.96%</td>
<td>4.93%</td>
</tr>
<tr>
<td>Premier &amp; Cabinet</td>
<td>3.18%</td>
<td>2.78%</td>
<td>2.99%</td>
<td>5.22%</td>
<td>3.54%</td>
</tr>
<tr>
<td>Treasury</td>
<td>3.47%</td>
<td>3.18%</td>
<td>3.66%</td>
<td>9.84%</td>
<td>5.04%</td>
</tr>
<tr>
<td>Period Average</td>
<td>6.65%</td>
<td>9.38%</td>
<td>16.19%</td>
<td>16.84%</td>
<td>12.27%</td>
</tr>
</tbody>
</table>

Note that on average, across all Victorian government departments for the four year period studied, asset revaluation increments represented 12.27% of total reported assets\(^{25}\), as opposed to the whole of period average of 2.58%\(^{26}\) for the sample of comparator listed companies, as set out in Table 5.

**Table 5 - % Asset Revaluation Reserve % Total Assets – ASX Listed Companies Sample**

<table>
<thead>
<tr>
<th></th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>Period Av</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aristocrat</td>
<td>0.20%</td>
<td>0.16%</td>
<td>0.13%</td>
<td>0.08%</td>
<td>0.14%</td>
</tr>
<tr>
<td>Amcor</td>
<td>6.69%</td>
<td>6.31%</td>
<td>5.14%</td>
<td>2.05%</td>
<td>5.05%</td>
</tr>
<tr>
<td>Coca Cola</td>
<td>0.00%</td>
<td>4.86%</td>
<td>5.26%</td>
<td>0.37%</td>
<td>2.62%</td>
</tr>
</tbody>
</table>

\(^{25}\) With a minimum of 3.54% and a maximum of 42.96% across the 4 year study period.

\(^{26}\) Minimum value 0.00%, maximum value 7.97% across the 4 year study period.
A combination of the comparisons between the Victorian government departments and the sample of private sector entities on the dimensions of asset valuation choice and relative balance sheet inflation leads to the expectation that among public sector entities, depreciation charges as a proportion of total expense would also be higher than that observed for the private sector sample. This stems from the expectation that higher overall asset values will generally lead to higher period depreciation expenses.

This expectation is borne out in the data, as demonstrated by Tables 6 and 7 below.

**Table 6 – Depreciation Expense % Total Expense**

<table>
<thead>
<tr>
<th></th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>Period Av</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education</strong></td>
<td>6.57%</td>
<td>6.15%</td>
<td>4.73%</td>
<td>4.46%</td>
<td>5.48%</td>
</tr>
<tr>
<td><strong>Human Services</strong></td>
<td>12.41%</td>
<td>9.05%</td>
<td>8.55%</td>
<td>9.06%</td>
<td>9.77%</td>
</tr>
<tr>
<td><strong>Natural Resources &amp; Env</strong></td>
<td>3.56%</td>
<td>4.38%</td>
<td>3.77%</td>
<td>3.64%</td>
<td>3.84%</td>
</tr>
<tr>
<td><strong>Justice</strong></td>
<td>4.27%</td>
<td>3.49%</td>
<td>2.84%</td>
<td>2.96%</td>
<td>3.39%</td>
</tr>
<tr>
<td><strong>Infrastructure</strong></td>
<td>0.55%</td>
<td>0.22%</td>
<td>0.17%</td>
<td>0.18%</td>
<td>0.28%</td>
</tr>
<tr>
<td><strong>State &amp; Regional</strong></td>
<td>2.42%</td>
<td>3.42%</td>
<td>3.56%</td>
<td>3.01%</td>
<td>3.10%</td>
</tr>
</tbody>
</table>

27 Total expenses reported by Victorian government departments were modified for the purposes of this calculation. In most years under study, most Victorian government departments made grants, often material in size, to other entities, which then used those grants to deliver goods and services. There are no analogous expenses in the statements of financial performance of private sector entities. Therefore, on the basis that these were “administered” rather than “entity” expenses, these were excluded from the total quantum of expenses used for making the calculations set out in table 6.
The data in these tables should be interpreted carefully. First, note that on average, across the four year period under study, depreciation expense represented 4.38% of the total expenses of the Victorian government departments, as opposed to 3.48% of the total expenses of the selected sample of private sector entities. This difference is in the direction expected. However, there are reasons to believe that the magnitude of the observed difference may, for a variety of reasons, capture the full extent of relative distortions to measures of financial performance brought about by differing depreciation charges in public versus private sector entities.
One source of difficulty arises from the nature of the sample of private sector entities used. These were not chosen because of their inherent balance sheet or asset valuation choice characteristics, but rather, on the basis of their large market capitalisation. As a result, most of the private sector entities included in the research sample are capital intensive businesses, whereas certain of the Victorian government departments (e.g. Treasury, Premier & Cabinet) are almost purely administrative in their activities and would therefore be better compared against private sector entities drawn from the “services” sector\(^{28}\).

Despite this, the observed differences are instructive. The private sector businesses which form the comparator sample are, as noted, capital intensive businesses. On the other hand, if a two point categorisation model, characterised by “capital intensive” organisations on the one hand and “non capital intensive” organisations on the other were to be adopted, then given the service orientation of the public sector entities as opposed to the product orientation of the private sector entities, the former would most likely be classified as “non capital intensive”. It is therefore surprising that despite the capital intensity of the private sector organisations, the depreciation charges of the less capital intensive public sector organisations are observed to be larger in magnitude. This strengthens rather than diminishes the credibility of the direction of the observed differential in relative depreciation expense.

A second difficulty in interpreting relative depreciation expense data is that depreciation expense, quite apart from being a product of choices made with respect to asset valuation, is also a product of choices made with respect to other variables,

\(^{28}\) Unfortunately there are relatively few pure services business which maintain direct listings on the ASX, and those whose shares are listed for quotation tend to be small in terms of market capitalisation.
most significantly the period of time over which the depreciation is to proceed. Material differences in adopted timing regimes might also confound the results. In order to test for this, the implicit aggregate depreciation periods of the public sector and private sector entities were also calculated\textsuperscript{29}. These are set out in Tables 8 and 9.

\textbf{Table 8 – Implicit Total Depreciation Period (Years) – Victorian Government Departments}

<table>
<thead>
<tr>
<th>Department</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>Period Av</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>24.27</td>
<td>23.36</td>
<td>30.86</td>
<td>32.15</td>
<td>27.66</td>
</tr>
<tr>
<td>Human Services</td>
<td>66.67</td>
<td>72.46</td>
<td>76.34</td>
<td>76.92</td>
<td>73.10</td>
</tr>
<tr>
<td>Natural Resources &amp; Env</td>
<td>50.25</td>
<td>97.09</td>
<td>117.65</td>
<td>112.36</td>
<td>94.34</td>
</tr>
<tr>
<td>Justice</td>
<td>17.42</td>
<td>20.37</td>
<td>27.03</td>
<td>24.27</td>
<td>22.27</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>10.83</td>
<td>15.34</td>
<td>25.71</td>
<td>30.49</td>
<td>20.59</td>
</tr>
<tr>
<td>State &amp; Regional Development</td>
<td>6.85</td>
<td>5.06</td>
<td>5.91</td>
<td>8.87</td>
<td>6.67</td>
</tr>
<tr>
<td>Premier &amp; Cabinet</td>
<td>13.09</td>
<td>21.28</td>
<td>40.32</td>
<td>40.49</td>
<td>28.79</td>
</tr>
<tr>
<td>Treasury</td>
<td>22.42</td>
<td>18.80</td>
<td>16.21</td>
<td>17.45</td>
<td>18.72</td>
</tr>
<tr>
<td>Period Average</td>
<td>26.48</td>
<td>34.22</td>
<td>42.50</td>
<td>42.88</td>
<td>36.52</td>
</tr>
</tbody>
</table>

\textbf{Table 9 – Implicit Total Depreciation Period (Years) – ASX Listed Companies Sample}

<table>
<thead>
<tr>
<th>Company</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>Period Av</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aristocrat</td>
<td>5.09</td>
<td>5.41</td>
<td>5.63</td>
<td>6.76</td>
<td>5.72</td>
</tr>
<tr>
<td>Amcor</td>
<td>18.25</td>
<td>16.98</td>
<td>12.17</td>
<td>17.42</td>
<td>16.20</td>
</tr>
<tr>
<td>Coca-Cola Amatil</td>
<td>10.40</td>
<td>12.12</td>
<td>10.43</td>
<td>8.48</td>
<td>10.36</td>
</tr>
<tr>
<td>Coles Myer</td>
<td>8.44</td>
<td>8.50</td>
<td>8.31</td>
<td>7.70</td>
<td>8.24</td>
</tr>
<tr>
<td>CSR</td>
<td>14.08</td>
<td>14.18</td>
<td>12.25</td>
<td>12.94</td>
<td>13.37</td>
</tr>
<tr>
<td>Fairfax</td>
<td>8.40</td>
<td>7.02</td>
<td>8.33</td>
<td>10.42</td>
<td>8.54</td>
</tr>
<tr>
<td>James Hardy</td>
<td>13.04</td>
<td>12.48</td>
<td>11.11</td>
<td>16.03</td>
<td>13.16</td>
</tr>
<tr>
<td>Mayne</td>
<td>11.38</td>
<td>11.67</td>
<td>9.85</td>
<td>10.75</td>
<td>10.91</td>
</tr>
<tr>
<td>News Corporation</td>
<td>15.17</td>
<td>10.50</td>
<td>12.63</td>
<td>10.89</td>
<td>12.30</td>
</tr>
<tr>
<td>Qantas</td>
<td>18.42</td>
<td>20.83</td>
<td>20.88</td>
<td>16.72</td>
<td>19.21</td>
</tr>
</tbody>
</table>

\textsuperscript{29} The reciprocal of depreciation divided by total expense is a raw measure of the total period of time which it would take to write down the entire asset base of the entity to zero, assuming no replacement and a constant period depreciation function.
Again, the results of this analysis are instructive. Note that the observed implicit total depreciation period for the Victorian government departments was, on average over the period of the sample, approximately twice the rate observed for the sample of private sector entities. This means that the private sector entities are, on average, depreciating their assets at close to twice the rate at which the Victorian government departments are engaging in the process. Despite this, as set out in tables 6 and 7 above, the level of depreciation expense relative to total expense in the Victorian government departments was higher than that observed for the private sector entity comparator sample.

This suggests that if the public sector implicit total depreciation period were reduced to a level comparable with that observed for the sample of private sector entities, the gap between relative depreciation in both sectors would widen further. As it stands, even with a retarded depreciation function, the effect of heightened asset valuation in the public sector dominates to produce higher depreciation expense functions, and therefore a higher period by period total entity cost function. This suggests a flow through impact to the estimation of output costs, and therefore, a direct impact on a variety of resource allocation decisions, including those relating to outsourcing.

6 Conclusion

A central tenet of the arguments contained within this paper is that the adoption of accrual accounting and reporting by public sector entities must be analysed at more
than an introspective, techno-centric level. This is because the implications of the adoption of such a technology into the inventory of public sector financial management techniques range far beyond the fact of consequential changes in reporting format and content.

By conceptualising public sector accrual accounting as part of a chain of linked reforms, it is possible to extend debates about public sector accrual accounting such that they yield insights not just into the nature of accounting, but also into the consequences for subsequent decision making and resource allocation of the employment of accounting tools in particular ways. While the conceptual analytical framework suggested in this paper demonstrates the linkages between accrual accounting and other reforms which have been a feature of the changing public financial management landscape over the past two decades, the empirical data analysed in the paper clearly suggests that the introduction of accrual accounting to the public sector is unlikely to be neutral in its impact.

On the contrary, as implemented in Victoria, the data reviewed in section 5 clearly suggest that one impact of the introduction of accrual accounting has been to introduce an upwards bias to the assessed total cost function of government departments operating in that jurisdiction, relative to the apparent total cost functions of potential competing providers of goods and services from the private sector. This is an unfortunate result. If policy makers are placing reliance on what they perceive to be unbiased and reliable cost data when making resource allocation decisions, they may later discover that the true dollar cost savings brought about by outsourcing and
other restructuring initiatives have not lived up to initially projections, or worse, have been completely illusory.

If on the other hand, policy makers understand that an inbuilt bias currently exists such that it is not possible to make direct comparisons between the financial reports of private and public sector entities, then the adoption of accrual accounting, and in particular the decision to adopt replacement cost valuation approaches within the context of that system, might alternatively be understood as a decision based on an agenda of privatisation by stealth. Based on the data presented within this paper, either explanation is plausible. Neither is palatable.
References


