

## **The dynamics of management accounting change: a longitudinal study of a public sector organisation in Australia**

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### **ABSTRACT**

This paper draws on the earlier works of (Cobb, Helliard, & Innes, 1995; Ter Bogt & Jan van Helden, 2000) and empirically examines the management accounting systems (MAS) change in a large public sector organisation in Australia. A case study approach has been used to explore the research problem. Data were collected from archival sources, semi-structured interviews and press clippings over a twelve-year period. Later data were analysed using the pattern model (Yin, 2003) to make generalisations about the MAS changes in the researched organisation. The findings confirm earlier literature on management accounting change and suggest that it is triggered by some precursors and catalysts; the change is affected by the mindset of the employees, the formalisation of routines imposed on the accounting practices, and finally an endorsement of the top management to pursue the change. The reasons behind and the processes of the changes are explored and analysed, and some directions for further research are also outlined.

Key words: Management Accounting Systems (MAS), Accounting Changes, Key performance Indicators (KPIs, ABC.)

### **INTRODUCTION**

Accounting changes in organisational contexts has been widely researched for at least a decade, more empirical case studies were conducted over the last decade that attempted to explore the reasons, processes, impacts and consequences of such changes on organisations functioning.<sup>1</sup> There are revelations that the accounting is implicated and its importance relegated to other priorities of an organisation when such changes are made in a system based environment (Jazayeri & Hopper, 1999). Though empirical literature is replete with the description, analysis and recommendation of such changes, only Hopwood (1987) provided theoretical insights into the mechanism of accounting change. While the literature on accounting change was plenty, only a handful studied Management Accounting Systems (MAS) change in organisational contexts. There are also calls for more research into the reasons for and the processes of MAS change (Atkinson et al., 1997, p. 86; (Hopwood, 1987); Libby and Waterhouse, 1996). Studies on MAS changes in the context of public sector organisations are even rarer. This study is aimed to fill in this gap in literature and provides an account of the reasons for and the process of such change. In light of the calls for more research into MAS change, two major research questions are explored: why does MAS change over the years (the policy questions) and how does the MAS change (the process question). Other questions are peripheral and are explored as part of the broader research questions (Bruggeman & Slagmulder, 1995)

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<sup>1</sup> (Arunachalam & Beck, 2002; Baines & Langfield-Smith, 2003; Baxter & Chua, 2003; Bhimani, 1993; Bloom, Elgers, & Murray, 1984; Briers & Chua, 2001; Bryer, 2000; J. Burns & Scapens, 2000; J. Burns & Vaivio, 2001; Chua, 1995; Cobb et al., 1995; Dyckman, Hoskin, & Swieringa, 1982; Flamholtz & Cook, 1978; Harrison & McKinnon, 1986; Hopwood, 1987; Hussein, 1981; Kasurinen, 2002; Laitinen, 2001; Malmi, 1999; Miller, 1990; Nahapiet, 1988; Robson, 1991; Ter Bogt & Jan van Helden, 2000; Toms, 2002; Vaivio, 1999; Vergoossen, 1997; Young, 1994, 1995)

The rest of the paper is organised as follows: in the next section, relevant literature is reviewed, in the third section, the research method is described, in the fourth section, the empirical evidence is provided, in the fifth section, evidence is discussed to make some generalisations and the penultimate section rounds off this paper with some directions for further research.

## **REVIEW OF RELEVANT LITERATURE**

Accounting change literature is replete with research from multiple perspectives. Some authors argue that accounting change is a broader change in the external reporting practices while the other see that such changes are triggered by the change in the governance style of an organisation. Some other argues that accounting change is a dynamic process of the interplay between the internal work environment and external pressures. The accounting change literature is, therefore, too vast to be discussed in a small paper like this. As such, the topic begs narrowing down of focus. Instead of exploring accounting change, this paper explores management Accounting systems (MAS) change. The relevant literature on management accounting change is located within the broader framework of accounting change and in some cases; it has interfaces with the Accounting change literature.

### ***Accounting changes***

Accounting change in organisational context has been studied for a while and included factors affecting changes, rationales, environment and the agents. Some studies are purely descriptive in nature and discuss the reasons for and the processes of accounting change. While the other studies discuss the change in light of theoretical frameworks and relays the message to the audience about the reasons for and the processes of accounting change. These studies use metaphors to describe the change processes. The change also included changes in external reporting (Grojer, 2001) that has important bearing on the income level of organisations, and changes in internal management accounts through Management Accounting Systems change (MAS).

### ***MAS changes***

MAS change literature is not too vast, as it has been emerging as an offshoot of the broader Accounting Change literature. Even though they are emerging as a potential area for research, the studies are not diverse. The studies are stereotyped and provide evidence of MAS change in terms of economic theory, organisational operating environment affecting the MAS changes and demand for better Information. There is a prevalence of a group of researchers who argue that MAS change is triggered by external and internal pressures on a firm (Amat, Carmona, & Roberts, 1994; Baines & Langfield-Smith, 2003; Cobb et al., 1995; Jazayeri & Hopper, 1999; Ter Bogt & Jan van Helden, 2000) and that the changes take place to cater for better information needs to survive in a competitive (Baines & Langfield-Smith, 2003; Cobb et al., 1995). The internal factors are mainly factors unique to the organisations and too numerous to describe. Overall, they range from operational aspects, and human elements involved in the change process. On the other hand the external pressures are factors outside the control of the organisations studied such as operating environment, regulatory environment and global competition. These studies suggest that MAS changes to address the changing need of a newly emerged organisation structure. Hopwood (1987) and Ogden and Anderson (1997) argue that MAS changes first and is followed by Organisational change. In reality, Organisational and MAS changes should happen concurrently and each should support the other for better performance.

## **RESEARCH METHOD**

A case study approach has been adopted to explore the research problem. Before commencing the study, prior literature was reviewed to prepare and enhance the data collection process. Authors argue that prior theoretical knowledge is necessary before commencing a case study research.

Data have been collected through semi-structured interviews and archival documents. Later data were analysed using the common case study analysis techniques. A program logic model has been used to analyse such data. Yin (2003) argues that program logic model is a useful data analysis technique for longitudinal studies. This study, being a longitudinal one, is considered suitable for the application of this model.

Validity issues are of major concern for the generalisability of a case study. Specifically, internal validity is poorer than external validity in a case study research (W. J. Burns & Kaplan, 1987). In this particular study, external validity issue is more important than the internal validity as the site is a rarely accessed site, and the potential of the conclusion derived from the data are more robust than those of any other frequently visited site (cf. (Ansari & Euske, 1987)

## **THE CASE STUDY**

### ***Background of the organisation***

The researched site is one of the largest city councils in Australia in terms of geographical area and the recipients of the services. It was established in 1901 and was one of the oldest city councils in Australia as well. The organisation has been a dedicated provider of quality services to the ratepayers. Some of the service areas are so good that lots of users had outstanding achievements in international sports arena such as the Olympic games, and significant other international sporting events. Besides these, it earned reputation as an attractive area for the wealthy natives of the Eastern Sydney region. Because of its geographical and historical importance, the cost of services and the rates imposed on the taxpayers were one of the most expensive ones within Australia.

The accounting system of the organisation was typical of local government accounting systems in vogue in Australia and had been in use since its inception in 1901. There were some changes in the past about the financial reporting requirements and these were made pursuant to the local government act, and other acts specifically issued to local government bodies. The MAS was always subservient to the broader accounting system and did not receive any prominence from the external users. This stance changed over since 1989 when the council realised for the first time that a sophisticated MAS was always a requirement for any local government body. The need was strongly felt when it had to use input based budget data on services and relate those to the outputs of a particular department. The change in the MAS also followed a decade long Organisational reform which dated back to 1990s. The aim of the organisational change program was to ensure cost reduction in running the organisation. It was also carried out by the initiative of the Mayor of the council at that time. A massive restructuring program was initiated during that time and continued until 1997 when another wave of change required to council to strengthen its cost cutting initiatives, improve employee productivity, increase the level of services, and finally to introduce commercial style management and accounting systems. At the core of these changes, the MAS received prominence in that without it, the others could not be judged at all. The MAS change in an evolutionary way. This longitudinal study captured the changes in the MAS because it is suitable to capture changes over a continuum.

### ***The MAS of the researched organisation (from 1989-1997)***

The management Accounting systems in local governments in Australia were more or less non-existent until the 1997. This was due to the regulatory nature of these organisations, the nature of their service provision, the importance of them in the economy, the need for them to articulate the federal and state grants, the importance of them in the local politics within their jurisdiction (Dollery & Marshall, 1997). This local government was considered as a pioneer among the local governments in embracing contemporary management fads. That included adopting different organisational design in response to external pressures for compliance and improvement of performance in its service delivery systems.

### ***Budgeting and costing system***

The budgeting system in local city councils followed few different patterns. First, line item budgeting was used which focussed mainly on the inputs (or dollars). The focus of such budget was on inputs. The budgets were the aggregated sum of all the line items (i.e. items that appear in the profit and loss statement and the balance sheet) across the organisation, followed by the allocation of those items by responsibility centres. The discussion with the staff revealed that the budget was not popular because of its obscure nature and non-existence of relationship with the objectives of the researched organisation. The second generation of budgeting were introduced to overcome the deficiencies of the old budgeting system. This new format, known as the Planning, Programming and Budgeting Systems (PPBS), was introduced in the early 1990s to align the inputs to some approximate output measures. This type of budgeting system had been used in the other tiers of the public sector in Australia and elsewhere in the world. The PPBS system was further detailed down at the divisional levels and to the program level format.

The annual budget of the researched organisation was mainly used as a control device in that it was used to compare with the actual expenditure to ensure that the allocated funds were spent within the parliamentary approval limit. Even though cost containment was a priority, it could not be maintained at times due to sudden surge in demands for the services in some areas (e.g. stormwater management during the wet season, sudden breakdown of major roads, outbreak of seasonal fire). This surge in demands was met primarily from internally generated surpluses or from the allocated budgets in other program or service areas. In rare occasions, there were shortfalls that were met from institutional borrowing.

The study revealed that the monopoly regime was the major reason for not maintaining any costing data on services. Besides, it was not required at service levels (or in terms of outputs). One of the key respondents described it as 'a system that required some mechanism to capture costs of the elements directly traceable at the program or service level'. He also added that costing of all the factor inputs was useless and wastage of valuable resources as there were no users of those data. The finance professionals were the only the bean counters and used cost data for services. However, this was not informal and non-routinised. Quite often they supported ad-hoc costing needs.

While explaining about the need of cost data of services, the management accountant and one of the key finance staff informed that the complex nature of the organisational structure, the interdependencies within the departments and the knowledge level of staff handling budgets, and finally, the lack of sophisticated information technology systems were some of the reasons for not being able to maintain any cost data. The manager of financial services said, 'with nearly 400 services on offer, it is nearly impossible to accurately factor all inputs and cost them.'

### ***Non-Financial Performance Measures***

Non-financial performance measures for all the services were used to capture the performance of the services performed and the funds utilised in performing them. It followed a continuum and changed over this period in that the measures had been refined over the years in consultation with the recipients of the services. In fact, the input based budgeting system during the old era accommodated for all the non-financial measures as the benchmarks to be achieved in different service areas and are used as proxies for output measurements. Very little was known about the effectiveness of the uses of these non-financial measures because the recipients of the services were not interviewed or asked to explain about any aspect of this study.

### ***The responsibility accounting system***

The responsibility accounting system was used in hindsight in the organisation and revolved around the variance reporting at fixed time intervals. There were at least 140 responsibility centres, most of

them were cost centres and was led by a manager reporting to the divisional manager of the organisation. The managers were to prepare variance reports on a quarterly reporting cycle where they were to present the actual expenditures from their allocated budget and report the variances, amend programs and estimate of costs. These variance reports were used throughout the year to keep expenditures under control and also to ensure that the priorities were changed and adjusted on the basis of the dynamic operating environment (for example, fire prevention during the summer, flood mitigation during the wet season, emergency repairs etc.).

Within this responsibility accounting system, the managers were held accountable for the utilisation of the budgeted funds. The service provision and the budget allocation were seen as two non-related issues, they were never tied together and seen as the two sides of the same coin.

The efficiency and effectiveness of utilisation of funds were intertwined with the allocated budgets and the broader responsibility accounting system. Because of the absence of input-output (i.e. budget-services) relationship, the efficiency and effectiveness issues were measured by some proxy measures. One of the managers holding up to 35% of the council's budget were sceptical about the systems used to gauge efficiency and effectiveness of the allocated budgets. In his words, 'the efficiency and effectiveness of the services were measured by the ability of the managers to spend the funds allocated to them. So they (the managers) were naturally inclined to spend more and more without paying any attention to the level of the services performed. What happened was that the managers competed for quick spending of money within the budget period and never looked back to the ultimate consumers of the services.'

This inward looking focus was, however, changed over the years as the council embraced Performance budgeting and aligned the non-financial performance measurements to the allocated budgets of each of the responsibility centres. It also introduced informal discussion with the local residents about the quality of the services, discussed complains in monthly meetings and took measures, where appropriate, to address the inefficiencies. The formalisation of complaint handling mechanism was seen as a significant addition to the then Management Accounting Systems (MAS). The progress was, however, gradual and evolutionary and plans were made for gradual implementation of those in all operations areas.

In summary, the old MAS was not detailed and had no similarities to commercial management accounting principles and practices. Because of the nature of the researched organisation, maintaining an expensive and robust MAS was not necessary though some ad-hoc management accounting information was required to make informed decisions. The need to have better MAS was felt but the resources were not available to introduce those across the board. The organisational change further reinforced this need, which had a plan to upgrade the MAS as an integral part of the overall Accounting Information System of the organisation. The responsibility accounting system was the main area that required major overhaul and upgradation. These changes were on the agenda and were made gradually. When these changes were being made, the Public sector reform in the UK and other part of the world influenced the Australian public sector.

### ***MAS after the Public Sector Reform***

#### ***The MAS after the local government reform (1997-date)***

The new MAS structure followed the earlier initiatives to improve the overall performance of service delivery and to reduce the overall costs of running the organisation. The mandate for a better MAS was intertwined with the organisational change that had commenced in the early nineties. The organisation, being a leader in embracing contemporary management practices, was at the forefront in introducing sophisticated commercial style accounting system. The public sector reform initiative taken by the Australian federal government and the introduction of the NCP were the two major external forces that shaped the operating environment into two competitive or business units and monopoly units. The demands for management accounting information were also different in that one-monopoly

units were heavily dependent on accurate costing of their services and the monopoly divisions were indifferent about the quality of the accounting information they were receiving from the MAS and the in-house accounting software. In addition to the external forces, the internal forces were also the catalysts for changing the MAS. The MAS change, which was an integral part of the new organisational structure, had imposed more changes in the governance style of the organisation. Overall, the organisational change was prioritised over the MAS change.

### ***The new organisational structure***

The new organisational structure was introduced in the wake of the mandates of the public sector reform imposed on the organisation. National Competition Policy was the specific policy document that set out the agendas for the changes in the organisational structure. Among the important changes, the organisation was required to introduce better governance structure, improve accountability, efficiency and effectiveness of the services. In keeping with these agendas, the organisation introduced few notable changes: it created a position for an internal ombudsman, split the operating units to a purchaser provider structure and finally, it introduced output measurements and aligned those to the funds allocated to the specific responsibility centres.

### ***The purchaser provider split***

The split of the departments or the divisions into purchaser and provider was introduced in the operating areas of the organisation. The purchaser and provider were the fundholders and the service delivers respectively. While the managers were assigned the responsibilities of a purchaser (i.e., the fundholders) and were the staff of the researched organisation, the providers could be anyone. Especially, they could be anyone willing to provide the services at a cost set either through competitive tendering, internal benchmarking or instruction of the provider. Though the internal providers mainly provided the monopoly services, the competitive service providers were required to follow the mandates of the NCP. Within this new structure, the Purchaser had more autonomy and power to utilise the resources efficiently. After the introduction of this structure, the purchasers were never scrutinised for their roles and performances. Only in one occasion, the managers were severely criticised for their bias towards an in-house winner of an expensive contract. There were other allegations and complains of the external competitors. The creation of the position of a new ombudsman was the recognition of the severity of the complains and the need to resolve those by an independent person.

### ***Creation of the position of an Ombudsman***

The position of the ombudsman was created in 2000. At that time, such a position was only the second of its kind in Australia. The role of the ombudsman was to arbitrate disputes and resolve those. He was also responsible for attending the concerns of the residents and resolving those, and maintaining his neutrality in resolving those. The roles of the ombudsman, however, were open to criticism in that he was the staff of the council and his decisions had the alleged prejudice towards the in-house staff.

While the restructuring of the organisation was in the process of completion, the accounting changes in general and the management accounting systems in particular were on the agenda for a major revamping. The documents and the interviews revealed some precursors and catalysts for this transition. Those can be categorised mainly into external and internal ones.

### ***The external pressures***

#### ***The national competition policy***

The NCP is one of the major policy documents used in Australia in recent times to boost both the performance of Australian industries and the international competitiveness of Australia ((Dollery &

Marshall, 1997). ). The public sector in Australia, being one of the biggest in the world<sup>2</sup>, is also targeted to come under the purview of this policy, which was also imposed on Australian local governments. The NCP earmarked some of the services for delivery in a commercial or businesslike manner (Dollery and Marshall, 1997). To meet these ends, various policy documents and guidelines—either in the form of professional publication, commonwealth departmental guidelines, or official publications from the Auditor General’s offices of each of the states<sup>3</sup> steered the respective units or organisations to cope with the changes pursuant to the NCP. The NCP mandated the adoption of their guidelines into an entity’s own guidelines.

Councils were also given the option to prepare or adapt the NCP to suit their particular organisational environment. The researched council was a proud advocate of many of the public sector reforms in Australia and it adapted the NCP to suit its own requirements. The adopted version of the NCP, the ICP, had the following features:

- the adoption of accrual accounting across the board for financial reporting and budgeting;
- the provision of depreciation for some of the infrastructure assets not done previously;
- the costing of services (including overhead allocation) was delivered to the residents;
- the division of services into business and monopoly categories,
- assurance of the quality, value for money, effectiveness and efficiency of services;
- the introduction of KPIs in important service areas to get customer feedback,
- the preparation of internal trading account within the internal trading environment (i.e. in a purchaser-provider scenario); and finally,
- preparing multi-year forecasts of budgeted income and expenditure.
- These changes were brought in by the organisational reform program of the early 1990s. . The ICP followed the organisational change agenda and advanced the cost cutting efforts of the council one step further, through the refinement of the councils AIS, with the emphasis mainly on the cost management agenda.

### ***The issuance of Local Government Act 1993***

In New South Wales, the old local government ACT replaced by the Local government Act 1993, which accommodated some changes in competitive aspects of service delivery, rules of contracting of services, and the management of assets. In the researched council, the major implication was on competition of services and guidance about tendering. The new legislation also required mandatory supply of some services. The implications of this legislation put pressure to make it capable of producing and generating cost data for internal use as well as an input to compliance and governance in the form of published reports to the stakeholders.

### ***The AAS 27***

AAS27 is one of the specific accounting standards issued for local government bodies in Australia. It encapsulates components of improved financial reporting to the stakeholders. It requires the councils to improve reporting to the stakeholders through the adoption of accrual accounting though the pressure is more on compliance to various sections and sub-sections of financial reporting. The implications of this guideline are that the staff will be busier for compliance reporting. An extensive user of AAS 27 stated that:

The AAS 27 is a pain in the backside. I will explain that to you: it provides good accounting information and allows us to show our councillors what we should be spending to maintain our

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<sup>2</sup> See Stiglitz(1995) for a survey of public sector contribution to GDP and employment

<sup>3</sup> See various auditor general office’s documents about these and also the auditor general’s office of New Zealand

assets. The information required and getting that information is really horrific degree of work for us. As a manager, that only covers a certain amount of information at the end of the year when the auditors arrive in the council. ...So out of the AAS 27 came a scientific based methodology for determining ongoing programs basically independent of any political interference. I finally have a scientific way of doing this. It said that you know just because someone thought that parks should be fixed so it will get fixed rather than determining the rules and programs.

The impact of AAS 27 was outside the actual requirement of AAS 27. At the moment we are providing the data for AAS 27 for all of our assets as required, except for our drainage assets. We are putting the data on our drainage assets because we haven't confirmed the deadlines for AAS 27 as we got an extension of couple of years. So the greatest impact of AAS 27 on us as an organisation and the staff involved is really on the ICP and the impact probably that we see flying through from the NCP and obviously what happened in Victoria. And the desires I believe of both parties of NSW are to ensure that the local government is seen to providing good services for us.

The employee's attitude has basically changed. They are now more aware of their costs; they tended to be more efficient because they understand that they have a threat, a subtle threat. Moreover, if they don't seem to be efficient, then they will lose their jobs. It's not a compulsory thing in New South Wales but that has already been adopted here [in this council]. If the survey office doesn't get the job, then the design office becomes redundant, they lose their job.

The attitude of some people is very positive and for other people it is significantly negative. Some people are quite reactive to that, some are worried about the impact of competition policy, others have embraced the challenge and have taken that, and other people see it as a threat. Generally in this council, most people have seen it as a challenge.

This standard also required reporting of non-financial indicators of performance. However, council staff perceived the requirements as redundant. Some respondents also raised concerns about the use of the improved reporting. The debate was consistent with similar debates in other tiers of Australian public sector financial reporting. The concerns revolved around the usefulness of local government financial statements and the understanding of the contents by the stakeholders.

In sum, the three policies/standards have combined impact on the change of the accounting system to better prepare the council to meet the competition requirements. These policies/standards reinforced each other. The NCP exerted pressure to gain efficiency of resource usage, to make necessary structural adjustments and to set up infrastructure, in terms of human resources and other logistics, to embrace the challenges of providing services through the shrinking revenue bases. On the other hand, the LG Act of 1993 simply outlined and guided the agendas brought in by the NCP, specifically the competition rules, and the tendering processes. Lastly, the AAS 27 was a 'watchdog' for the stakeholders to ensure external reporting in accrual accounting format and also supplement financial reporting by the KPIs.

In the wake of the introduction of the above, the staff within the council added the 'internal factors' to the 'accounting change agenda'. To others, these are the 'internal catalysts' for change to a new system, while to others these are the precursors for change to a system to the newly emerging organisation structure. While to the others this was an 'unnecessary exercise to maintain another white elephant'.<sup>4</sup>

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<sup>4</sup> Some used the term 'white elephant' to mean the excessive cost of updating and maintaining the existing 'CITIPACK' software

***The internal pressures***

***The need for costing of services***

The external catalysts, namely the NCP, the LG Act of 1993 and the AAS 27, prompted the council to change its accounting system in general and MAS in particular. These changes mainly addressed the deficiencies of costing of services under its old regime and provided valuable data for other areas of management needs. Management needed two specific types of cost data—about services in the non-business areas or those governed by regulation, and about business activities. This follows the NCP guidelines of grouping services according to the annual allocated budget. For the purposes of mandatory or voluntary competition, services were categorised according to their annual allocated budget. Services over \$2 million dollars were labelled as category 1 services and those below \$2 million dollars as category 2 services. Category 1 services were labelled as ‘business activities’ and those for category 2 as ‘regulated or non-business’ or ‘monopoly activities’.

Costing of business services was crucial, as the NCP required each council to meet competition from external providers. Seven units were categorised as business units of the council, who was required to cost their services either to stand competition or to lose the right of provision. The other category 2 services were monopoly in nature and accurate costing of them was not as crucial as for category 1. As the old budgeting and accounting systems were incomplete as to costing of both of these types of services, the council had to refine its MAS to meet its costing needs. The allocation of common costs across the board, which was not done before, was perceived as the most important area for consideration. The budget of 1998/9 showed that common costs accounted for 35% or \$63 million, of the annual budgets of the council. Except the allocated corporate costs, other costs were previously factored into service cost calculation. The challenge, therefore, was to address the allocation problem of the common costs incurred under the banner of ‘corporate costs’.

***Determining subsidy for services:***

It is argued in utility literature that subsidy is inevitable in the public sector (Fillauer, 1975, Elwood, 1996) and that costing systems aid in subsidy determination (Cohen, 1990). One offshoot of costing of services is determination of subsidy of services. Subsidy determination was crucial for the researched council in view of the declining revenue bases over the years and recent reforms in the public sector in other states. These required the council to look for alternative ways of meeting the expenditures, because grants from government to meet subsidy needs were declining in value and in different areas of services. Therefore, it was imperative for the council to have an accurate calculation of costs in order to request subsidies from the federal and state government. The implication of this on accounting system change was that the incorrect calculation could direct funds and attract subsidy internally, or put pressure on current budget in other areas, mostly neglected or overlooked regulated areas of service provision.

***Costs for decision making***

One of the major uses of cost data is decision making. This council also needed information to make decisions in at least two areas: market testing and tendering, and benchmarking. Costs for decision making in above areas required the council to consider its strategy of ‘providing as many services as possible from internal sources’ (ICP).

Tendering and market testing of category 1 services was the first need of the council that needed cost data. The council decided to adjust its ad-hoc data for use in the bidding or market testing exercise. As a matter of policy, the priority of the council was to be the service provider of majority of the services. Therefore, the cost data needed to be comparable to the potential bids. The second need, benchmarking, also required comparable cost data to facilitate service benchmarking. The objective

was to retain in-house provision of maximum number of services, so the staff needed cost data to rationalise in-house provision of the benchmarked services, whenever appropriate. As a pilot case, one of the service areas, the childcare services, had used such data to benchmark its services. The service was eventually kept in-house after rigorous analysis and testing.

In sum, external and internal pressures required the council to update its MAS. Overhead allocation was the major change area.

### ***Budgeting and costing systems (1997-date)***

The new budgeting system was introduced in 1997 for the first time and showed the budgets in a purchaser and provider format. The budget was seen as a control device for the fundholders (the purchasers) as they were asked to spend the money as efficiently as possible by exploring various service delivery options and their regime of contestability. To achieve their goals, the managers received inputs from the local residents, the councillors, and the local politicians and from their counterparts elsewhere in Australia. Later, these were translated into output measures and tied to the allocated budgets. To ensure better performance, variance-reporting cycle was reduced from quarterly to 6-weekly cycles. In this reporting cycle various aspects of the budgets were discussed: the actual vs. allocated funds, the need to re-allocate funds, the need to reprioritise service delivery arrangements, and overall, amendments to the existing budgets. The technical aspect of the budgets was very similar to that of the old budgeting style except that the organisation introduced Key Performance Indicators (KPIs) to capture the outputs of the budgets. Those were set in consultation with the community, the councillors, the politicians, and the counterparts in similar organisations within Australia. Even though the KPIs were coupled with the allocated budgets, the need to calculate the costs of services was required. The council upgraded its software to accommodate this need and wanted to introduce commercial style ABC system.

The commercial style ABC system was planned for organisation wide implementation after 1998. The Corporate development unit and the financial services department were the main sponsors for this ABC project. The main aim of this introduction was to primarily assist the competitive segments to cost their services accurately for internal bid preparation, benchmarking or determining the best value. The system was also planned for implementation across the board. One of the major uses of this new ABC system was to capture overhead consumption in a very complex operating environment where 10 support service departments provided services to all the operating units and internal trading environment had been used for performance measurement of the support units. One of the peripheral uses of this ABC was to assist in setting transfer prices as well. The users of this transfer prices had reservations about the validity of the numbers generated and some of them developed their own systems, and used those to negotiate transfer costs. The organisation placed a moratorium of three years for sourcing services from the external sources. One respondent rationalised this stance as the time required for transition to a new operating environment. There were, however, major concerns from the users in that they perceived the system as a semi-confusing as the competitive and the monopoly segment had different expectations of information from the system. Not only that, the monopoly segment were not proactive in embracing the new system and showed their indifference to provide accurate accounting numbers to the demanders of such information (e.g., the finance department). The competitive segments were, however, more cautious and were too keen to maintain their costing system as accurately as possible. This was confined to the information within their control and did not include the costs transferred from the other departments. Overall, the new ABC system was perceived as a very useful tool for costing, benchmarking and bid preparation by the competitive segments.

## **DISCUSSION**

The case revealed that MAS change is a complex and dynamic process that embraces both internal and external pressures. The change was gradual and has been continuing for decades. Before changing the

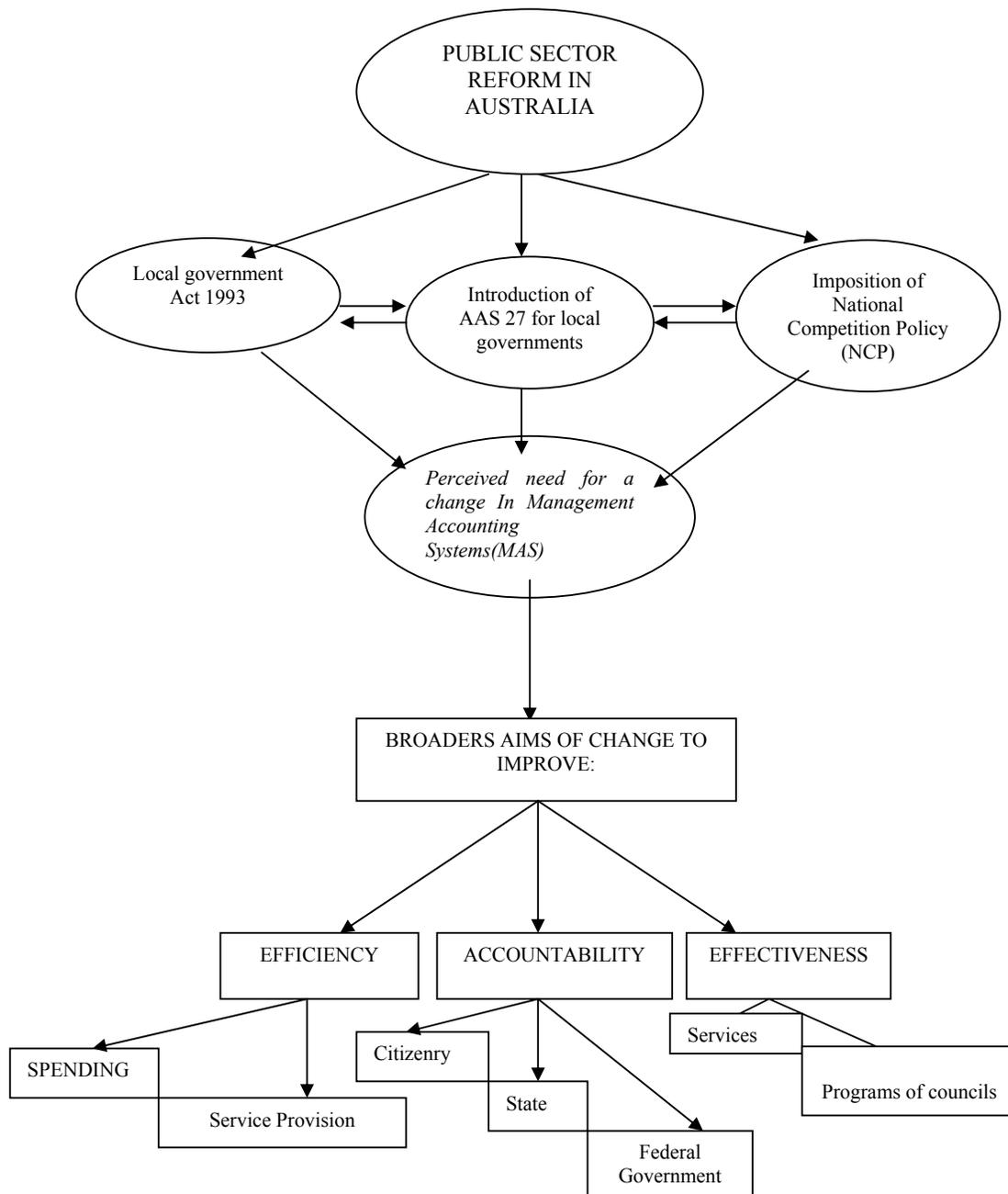
MAS, the organisation was being restructured. This was, however, a rare coincidence as it provides contrary evidence to extant research that accounting changes take place before the organisational changes (see for example, (Baines & Langfield-Smith, 2003; Hopwood, 1987).

The review of the archival documents revealed that the core of the organisation change agenda revolved around gaining efficiency of the white-collar employees. The revelation also suggested that support services areas were the most inefficient areas and contributed to the lion's share of the inefficiency. The organisational restructuring was seen as a means to cut costs in the support departments (or non-operating departments). The participants also indicated that the organisational change was successful in reducing the cost of running the operations of the organisation. The decade long change also embraced the reforms in the accounting systems in general and the MAS in particular to know the magnitude of the cost reduction and other peripheral numbers affected by such evolutionary change. During the same time, Public Sector reform in the UK and elsewhere in the world were also on the agenda. This particular time period reinforced the accounting change agenda further.

The organisation change later affected the MAS change agenda in that without involving the accounting section, it was perceived impossible to capture the success of the organisation reform program. The old accounting system that existed during the late nineties was suitable for compliance reporting only. The system was perceived useless to capture the dynamics of the organisational change program that hinged on the operating environment of the organisation. Besides, the old system was input focussed, a system suitable for score keeping functions of the monopoly organisations.

The MAS change was coupled with the organisational change agenda in that management wanted simultaneous capturing of the numbers reflecting the efficiency and effectiveness of the changes. The decade long change to the new MAS was triggered both by the external and the internal influences. The main aim of these revamped MAS was to maximise the value for money of the tax dollars allocated on each of the departments. Based on the analysis, the changes to the new MAS can be translated to a model in figure 1 below:

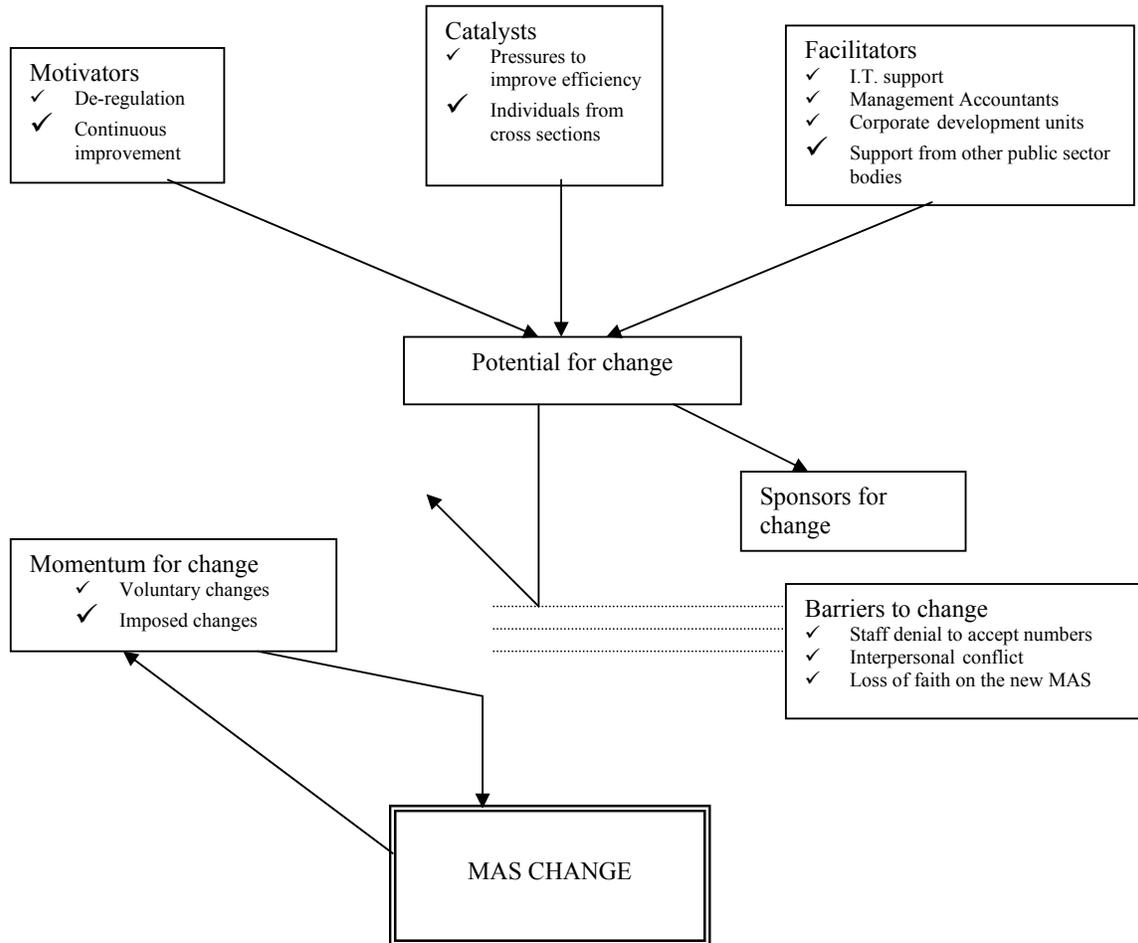
**FIGURE 1: THE PRESSURES FOR A NEW MAS IN THE RESEARCHED ORGANISATION.**



**Management Accounting Systems (MAS) Change:**

While the MAS change was a change imposed on the researched organisation, the study revealed that the internal accounting environment had to be prepared to embrace this new MAS. The factors can be clustered broadly into internal and external factors. These again had influenced the change process in a motivator-catalysts-facilitators fashion suggested by (Cobb et al., 1995, p. 173). Their model is modified to incorporate the factors that emerged from the field and shown in figure 2 below.

**FIGURE 2: MAS CHANGE MODEL**



The change model shows that the changes emerged due to some external and internal factors (Amat et al., 1994; Baines & Langfield-Smith, 2003; Cobb et al., 1995; Jazayeri & Hopper, 1999; Ter Bogt & Jan van Helden, 2000). Though the (Cobb et al., 1995) model was based on a profit oriented commercial bank, this model emerged from a public sector entity that has a two tiered service delivery units. One survives in an intensely competitive market while the other is indifferent to the MAS change. The implication of this MAS change on the competitive segment was that they had to be cautious in the management of their service delivery and innovate ways to improve their productivity. Most of the respondents of these competitive units were relieved and expressed their gratitude to management about this new MAS. However, one of the operating divisions was sceptical about the change in the MAS and labelled it as an inefficient system, did not have any faith on the MAS generated numbers. While another user of a competitive segment showed strong reluctance to use the numbers generated by the MAS. They negotiated their case by referring to the market price of similar services and eventually won the negotiation. To them, the new MAS was an imposed change where they did not have any opportunity to get heard. The sponsors had to accept the plea of the users and re-think about their plans for amendments to the MAS.

While the business units had to prepare for a change in the work practices and culture within their units, the monopoly units showed no reaction. A two tiered service provisions also existed within the monopoly units. However, at the time of the data collection, the respondents of these units suggested that it would be a while before they had any real concern about their service delivery rights. They were asked to participate and provide input to improved MAS that was planned for implementation in phases. At the time of the data collection, the first phase of the MAS change was nearly completed, the rest were due for completion within 2002. No contact was further made to inquire about the progress of the changes or about any aspect of the new MAS.

## **CONCLUSION**

This paper has provided a rich account of the reasons for and the processes of MAS systems change over a period of 12 years in a particular organisation. The explanations emerged from the field though they have similarities to different theoretical perspectives. In order to avoid prejudice to a specific theoretical lens, a wide array of literature is reviewed so that different constructs can be checked for divergence and convergence. No particular genre of research is imposed on this case; rather the constructs that emerged from the field were verified to ensure that they extend the current case study based research on MAS system change. Yin (2003) argues that the main objective of a case study is to add constructs to extant research and contribute towards a robust database for future researchers to conduct survey research. Very little is known about the MAS changes in the public sector organisations, this study has made a little contribution to this rarely researched area.

Future researchers can replicate this study in other tiers of public sector, in other cultural, legal and operating environment to explore more about the reasons for and the processes behind the MAS change.

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