

Why some accounting innovations fail? A case study of a New Zealand public tertiary education institution

Abstract

This paper examines why activity-based costing (ABC) and the balanced scorecard, two most significant accounting innovations in recent years, failed to be successfully implemented in a large tertiary education institution in New Zealand. The findings demonstrate that the implementation of both systems presented significant challenges. ABC failed because it was perceived to offer a low relative advantage, was highly complex, its implementation was not trialled, the benefits were not visible, and there was lack of communication, inadequate training and no change agent facilitating adoption. The balanced scorecard failed because the institution was caught in a performance evaluation trap with bureaucratic compliance to government requirements preventing any real improvements, adoption was symbolic to give legitimacy but suffered from a lack of rationale or logic, and there was no real observable influence on performance improvements. The politically imposed measures with an emphasis on financial performance forced the institution to play the numbers game rather than deliver 'real' performance.

Keywords: accounting innovation, activity-based costing, balanced scorecard, public sector, tertiary institutions.

Introduction

Accounting innovation in the public sector is receiving increasing attention of many researchers (e.g. Jackson and Lapsley, 2003; Lapsley and Wright, 2004; Nasi and Steccolini, 2008; Northcott and France, 2005; Olson, Humphrey and Guthrie, 2001; ter Bogt and van Helden, 2000; Ezzamel, Hyndman, Johnsen, and Lapsley). This research adds to our understanding of the diffusion of accounting innovations in the public sector and more specifically in tertiary or higher education. Using the specific context of a large public tertiary institution in New Zealand, the study investigates why some innovations in accounting fail to get adopted or fail to achieve their intended objectives. Accounting innovation, in the context of this study, refers to accounting practices and changes that are perceived as new by users and organisations proposing its adoption (Rogers, 2003). Activity based costing and the balanced scorecard has come to be regarded as the most significant accounting innovation in recent years (Cropper and Cook 2000, Northcott and France, 2005). This study examines why both these techniques have failed to be implemented successfully in the case study organisation.

Extant literature recognises that accounting reforms in the public sector has its origins related to practices in the private sector (Hood 1991, 1995) and the decision to adopt innovative practices has largely been the result of government pressure to fundamentally transform public financial management and accountability systems (Lapsley and Wright, 2004). However, not all accounting changes get successfully implemented. There are material knowledge gaps relating to why some accounting innovations successfully diffuse whereas others fail to be adopted or achieve their intended organisational objectives (Christensen and Skaerbaek, 2007; Jackson and Lapsley, 2003; Naranjo-Gil, 2009; Nasi and Steccolini, 2008).

This study distinguishes itself from prior studies on diffusion of accounting innovation in the public sector in a number of ways. First, the empirical evidence is based on a longitudinal analysis that helps make a real assessment of accounting changes since users have had more time to learn about the reforms (Christensen and Skaerbaek, 2007). Second, the study of a large public tertiary institution provides a different context to most previous studies concentrated in central government (e.g. Ezzamel, et al., 2014, Arnaboldi, Azzone and Palermo, 2010; Perera, McKinnon and Harrison, 2003, and the health sector (e.g. Melletta, Marriott and Macniven, 2009; Northcott and France, 2005; Arnaboldi and Lapsley, 2004). The diffusion of accounting innovations in public tertiary education institutions remain largely unexplored (Broad, Goddard, and Alberti, 2007). Third, instead of just relying on a single innovation, this study examines two most common accounting practices to help determine if adoption of both systems generates similar responses from users.

The remainder of the paper is organised as follows. The next section continues with a review of literature. The literature review is followed by a discussion of the theoretical framework used in this study. The research setting and research method is outlined next, followed by the findings of the study. A discussion of the findings and some concluding comments are provided in the final two sections.

Literature Review

The diffusion of accounting techniques into the public sector has attracted the attention of many researchers (e.g. Ezzamel, et al., 2014; Cavalluzzoa & Ittner 2004; Jackson and Lapsley, 2003; Lapsley and Wright, 2004; Nasi and Steccolini, 2008; Northcott and France, 2005; Olson, et al., 2001; ter Bogt and van Helden, 2000; Ezzamel, et al., 2014). Most studies note that the pressure to adopt or diffuse innovative accounting technologies in the public sector have arisen mainly from the need to provide cost-effective and efficient service and help improve overall financial performance and accountability. For example, Cavalluzzoa and Ittner (2004) reveal that considerable emphasis has been placed on implementation of new performance measurement systems that better support organizational objectives, provide a means to increase accountability and improve decision-making. Ezzamel et al. (2014) found that the introduction of Resource Accounting and Budgeting was initially sought as a mechanism to enhance democratic accountability. Cropper and Cook (2000) found that activity-based costing was most expected to achieve an improved awareness and understanding of costs and aid the decision-making process. Similarly, a study by Arnaboldi and Lapsley (2004) reveals that the adoption of activity-based costing in UK's National Health Service was intended to facilitate the production of more precise costs to support the internal market of health care products.

Jackson and Lapsley (2003) in their survey found that most common management accounting innovations are taking place in costing, budgeting and performance measurement. In costing, the activity-based costing technique has been recognised as the most significant costing innovation in recent years (Cropper and Cook 2000). Likewise, the balanced-scorecard has come to be recognised as perhaps the most important recent accounting innovation that attempts to improve performance management, efficiency and accountability in the public sector (Northcott and France, 2005). Questions remain, however, about the appropriateness and usefulness of many accounting innovations (Christensen and Skaerbaek, 2007; Jackson and Lapsley, 2003; Naranjo-Gil, 2009; Nasi and Steccolini, 2008). Prior research suggests that both the activity-based costing and the balanced scorecard has met

with only limited success (Arnaboldi and Lapsley, 2004; Cropper and Cook, 2000; Northcott and France, 2005). Top management commitment, decision making authority, training, and good information systems design has been emphasised as a pre-requisite for the successful implementation of these techniques (Cavalluzzoa and Ittner, 2004, Modell, 2004). According to Lapsley and Wright (2004, p. 359), “The single most important reason for accounting innovation in public sector organisations is statute, regulation or government pressure.” Arnaboldi and Lapsley (2004) found in their study that activity-based costing was a legitimating exercise, as the organisation was seeking to portray itself as modern. Broad, et al. (2007), in their study noted concerns over imposed measures and found that lack of formalised reporting systems, no chain of authority or ownership, a weak performance culture, gaming, and strategies without definable measures as common problems associated with ineffective performance measurement systems.

Most studies have also shown that the reforms often produce unintended results and gaps exist between intended and actual changes. For example, in their study on accounting change in a number of governmental organizations, ter Bogt and van Helden (2000) found that a wide gap exists between the ideal concept of formal accounting change and its ultimate development, and between the newly-developed accounting instruments and their actual application. Olson et al. (2001) found that standardized accounting techniques transmitted from the private sector, though fashionable, was ineffective and accounting reforms in fact resulted in a weakening of managerial systems in the public sector. Nasi and Steccolini (2008) revealed that accounting reforms led to a reduction in accountability with little attention paid to the attainment of outcome and long-term goals and there was poor disclosure and communication mainly related to external reporting.

Much of the accounting innovation in the public sector has origins related to practices in the private sector (Jackson and Lapsley, 2003; Lapsley and Wright, 2004). Indeed activity-based costing and the balanced scorecard are among the most popular accounting innovations that emerged from the private sector. Some authors have raised concerns that private sector techniques and practices cannot be realistically transplanted to the complex public-sector context and still achieve the intended objectives (Arnaboldi and Lapsley, 2004; Nasi and Steccolini, 2008; Northcott and France, 2005). According to Nasi and Steccolini, (2008) it is important to consider the unavoidable differences between private and public sector organizations, among different types of public organizations, different countries and contexts. The fact that accounting tools have been successfully implemented in the private sector does not guarantee that they will be successfully implemented, and be useful, in the public sector (Northcott and France, 2005). There is also considerable concern that even though techniques have been around in the private sector for some time, little is known about the way in which these techniques are transmitted and diffuse throughout large and complex public sector organisations (Bjornenak, 1997; Lapsley and Wright, 2004). Our understanding of why some accounting innovations fail to be implemented or are transformed into something different from their stated aims is limited (Christensen and Skaerbaek, 2007; Naranjo-Gil, 2009).

Theoretical Framework

The diffusion of innovations theory (Rogers 2003) has been recognised as offering a useful framework for understanding the adoption of new techniques across and within organisations (Bjornenak, 1997; Ezzamel et al., 2014; Lapsley and Wright, 2004; Malmi, 1999; Perera, et al., 2003). According to this theory, diffusion and adoption of new technology is contingent upon the degree to which an idea is better than the idea it supersedes (relative advantage); the

degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters (compatibility); the degree to which an innovation is perceived as relatively difficult to understand and use (complexity); the degree to which an innovation may be experimented with on a limited basis (trialability); and the degree to which the results of an innovation are visible to others (observability) (Rogers, 2003: 229-258). Innovation is more likely to be successfully adopted if it is perceived to offer greater relative advantage, have higher compatibility, trailability and observability, and lower complexity (Rogers, 2003). The inability to convey the merits of reforms can also lead to later implementation difficulties (Arnaboldi, et al., 2010). Other factors contributing to the full diffusion and routinisation of adopted innovations identified by Rogers (2003: 428-430) include: the extent of participation of organisational members in the innovation process; re-invention, which provides a sense of ownership of the innovation; and the involvement of an innovation champion or change agent.

While most adoption of new technologies are assumed to occur because of the potential benefits and efficiencies gained through implementation, Abrahamson (1991: 590) questioned this “model of (efficient) choice in which (internal organizational) adopters make independent, rational choices guided by goals of technical efficiency”. Abrahamson (1991) adds three further perspectives – forced selection, the fashion perspective and the fad perspective to the diffusion of innovation theory. Forced selection occurs when the motive of the adopter may not play a part in implementation because external organisations such as regulatory bodies, government agencies or one supplier who has influence over all interested parties dictate adoption of an innovation. The fashion perspective results when many potential adopters are implementing the technology because external parties such as management consultants are inducing organisations to adopt the latest technology. The fad perspective occurs when organisations adopt a technique in order to appear legitimate and retain competitive advantage, rather than for more rational reasons. Within the public sector, the government perceptions of what constitutes the optimal policy choice may lead to forced selection or induced adoption of accounting innovations (Jackson and Lapsley, 2003; Lapsley and Wright, 2004). While forced selection may be valuable to successful organisations, it may perpetuate poor performance in poorly performing organisations (Van de Ven, 1986). These perspectives are complemented by institutional theory that argues that public sector management reforms are not only influenced by economic and rational factors but essentially by a wish for legitimacy and an appearance of rationality and efficiency (DiMaggio and Powell, 1983). Institutional theory posits three dominant forces that influence organisational decisions and strive for legitimacy: formal or informal exogenous pressures (coercive isomorphism); imitation (mimetic isomorphism); norms and standards of professional groups (normative isomorphism) (DiMaggio and Powell, 1983).

Perera et al. (2003) claim that the advantage of using Roger’s theoretical framework is that it explains adoption of innovation at the individual and/or group level within organisations. Gallivan (2001: 53) sees adoption as a two stage process – “a firm level decision to adopt the innovation (primary innovation), followed by actual implementation, which includes individual adoption by users (secondary adoption).” According to Gallivan (2001), secondary adoption is more crucial in explaining the adoption process because even if innovations are mandated at the primary organisational level, this does not ensure that innovations will be effectively implemented or used by target users. Literature has highlighted the importance of communication in the innovation process (Jackson and Lapsley, 2003; Midgley, Morrison and Roberts, 1992; Van de Ven, 1996). Jackson and Lapsley (2003) emphasise that good communications network with internal and external contacts are essential for new accounting innovations to be transmitted and diffused throughout large and complex public sector organisations. The theoretical concepts outlined

above have potential relevance to explaining why some accounting changes fail to be implemented or do not achieve their intended objectives, whereas other changes are successful and arguably develop into powerful tools.

Research setting and method

The research setting for this study is a large public tertiary education institution located in Auckland, New Zealand's largest city. The name and type of the institution has been disguised as Institution XYZ to preserve the anonymity of the interviewees. In 2013, approximately 25,000 students were enrolled across three campuses. In addition to various undergraduate and post-graduate programmes, Institution XYZ also offers vocational and applied training programmes. The institution ranks in the top 10 public tertiary institutions in New Zealand measured by the size of student enrolment, government funding received and overall financial performance (TEC, 2012).

Data for this study has been drawn from archival sources, participant observations, semi-structured interviews, informal conversations and literature reviews. Participant observations were made during the period 1996-2006 which covered the pre-implementation, implementation and post implementation stages of both activity-based costing and the balanced scorecard. This was also the period the researcher held a senior faculty management position in the institution which gave a unique advantage of "comparing the rhetoric of reform with the reality of experience" since "there has so far been very little, if any, systematic empirical research into practitioners' experiences" (Norman and Gregory, 2003: 35). To minimise researcher bias and help improve the trustworthiness of the data, this paper triangulates data from archival sources, interviews and a review of literature. Archival data sources include an extensive corpus of publicly available government documents, accompanying legislative frameworks, funding documents, tertiary institution's strategic plans, minutes of meetings, budgets, financial information, annual reports, audit reports, internal communication and web-site documents.

During the period 2007-2009, a total of 10 semi-structured interviews each between 40-60 minutes were conducted. 7 interviews were held with senior managers and staff within the tertiary institution and 3 interviews was held with government officials. Interviews were tape recorded and transcribed and data analysis involved the identification of common themes that became an evidential base in determining the factors that contributed to the failure of the accounting reforms.

Findings

Prior to 1990, the management and funding of public tertiary institutions was largely under the control of the Department of Education, a central government agency. The Department of Education determined the funding levels and made payments of line-item expenditure which was described in a ministerial working party report as "*...highly centralized and interventionist... inhibits the speed at which the institutes/colleges can respond to new situations, and it limits their options*" (Probine and Fargher, 1987, p. ii). Managers within tertiary institutions had little understanding of the origins of costs incurred by their departments and were not held accountable for performance. In 1990, the Education Amendment Act made major policy changes that revolutionised the funding of tertiary institutions with the introduction of bulk funding. The Act also made all tertiary institutions independent legal crown entities led by a chief executive and held accountable by individual charters which described the institution's

role and long-term plans. Under the new bulk funding system, public tertiary institution's received formula-based funding determined by an analysis of institutional charter goals and statement of objectives, projected student enrolments, assessment of the current and previous years' performance in achieving student enrolments and government's tertiary education strategy. The bulk funding system imposed new managerial responsibilities which according to Coy et al. (1991, p. 92):

"...should facilitate better strategic planning and management control, and greater public accountability and institutional responsiveness".

The new managerial responsibilities complemented with greater financial autonomy and decentralisation of decision-making led to developments in budget planning and control, costing/pricing and resource management. While most accounting developments were successfully implemented, activity-based costing and balanced scorecard implementation failed. The reasons for the failure are presented next.

Activity-based costing

Initially in the periods 1990 and 1991, Institution XYZ developed a conventional costing system that identified direct costs and made arbitrary allocations of indirect costs to courses and operating departments. Cost allocation became a necessary requirement to allocate indirect costs to outputs produced to complete the Statement of Cost of Services section of the financial statements. Cost allocation also became necessary to calculate unit cost per equivalent-full-time-student and the extent of surplus or cross-subsidies and fees to be charged to students. The cost allocation system was fairly basic, and used simple volume-drivers such as student and staff numbers as the prime basis of overhead cost allocation. In 1992, bulk funding rate reductions and the autonomy granted to the institution (all tertiary institutions as a matter of fact) to set tuition fees increased the value and relevance of costing information. Costing became important *"based on its applicability to course development, budget preparation, efficient resource use and enhancing the institutions self-awareness by illuminating educational priorities"* (Faculty Dean). The conventional costing system also developed as a powerful tool to complement the budgeting process, provide a means for controlling expenditure, monitor the efficiency of responsibility centres and measure the effectiveness of various programs.

"...we derive and use cost information to serve different purposes...cost information is used in strategic planning... to judge our operational efficiency and make more informed decisions"
(Management Accountant).

As the tertiary education environment became more competitive by the mid-1990s, manager's felt that costing information still lacked value in terms of the rapidly changing tertiary funding environment. Questions started to arise over allocated indirect costs (overheads) to outputs produced to calculate the full cost of services and unit cost information to help determine student fees and charges and the extent of cross-subsidies or surpluses arising from courses, programmes and activities. As overhead costs started to increase, there was a greater realisation by management of the complexity of overhead cost structures. In an internal memorandum (November, 1994) to senior management, the Finance Director raised *"...the concern for greater accuracy and methods used to allocate costs to different courses, departments and faculties."*

In 1995, the institution decided to adopt the activity-based costing (ABC) system. The Finance Director initiated and designed the system solely by himself. ABC was very new to many staff including accounting staff that had no prior experience and hence did not

participate in its design and implementation. According to the Finance Director, *“a well designed activity-based costing system requires a fairly accurate identification of significant activities, activity drivers and estimation of resource consumption by activities and cost objects”*. Since staff had basically no idea of the system and how it worked, they relied on the Finance Director to come up with the best system. So, without much consultation and assistance, the Finance Director designed the ABC system based on his understanding of activities, activity costs, cost objects and cost drivers and made monthly allocation of total overhead costs to faculties. Faculties became very concerned when they realised their share of overhead costs had significantly increased through the new ABC allocation system. They became very concerned about the effect the high overhead costs allocation was having on faculty's profitability and through a subsequent reallocation, on school/department/course costs and pricing/fees. Some faculties that traditionally made substantial surpluses were now showing as making a loss. According to one Head of School, *“my overhead costs became 40% of my total school cost”*. These concerns led to lot of opposition to activity-based costing and the planned secondary implementation of the ABC system at the school/department/course level did not succeed forcing the institution to cancel the project in 1996 and continue with the conventional method of overhead allocation at the school/department/course level.

A number of factors contributed to the failure of the ABC system. First, this became perceived as the Finance Director's project and there were no change agents enrolled to assist with the implementation. Many managers and staff lacked knowledge and were confused about ABC and the purpose it served. According to the Finance Director, *“From a managerial perspective, no one really understood that to bring costs down, resource consumption via their consumption of activities must be reduced”*. He went on to say that *“the institution has complex overhead cost structures that include such items as the cost of senior management, student administration, enrolments, library, computer services, lighting and heating, security services, cleaning and grounds maintenance that need to be allocated to different faculties”*. The faculties, on the other hand, disputed their share of cost allocations. They felt that they were under considerable pressure to reduce academic costs to pay for higher overhead costs that kept increasing. These factors combined with unclear communication and inadequate training provided to users led to their loss of interest in the project. According to Head of School (2):

“HODs did not show much interest...they did not understand overheads...and were not responsible for costs they could not control. ABC was not going to reduce overhead costs and it did not result in an improved understanding of the overhead costs or aid in decision making...we are not convinced that it served any useful purpose”.

Some managers viewed ABC solely as an accounting department project that reflected fashion since the decision to adopt the system was taken hastily and largely influenced by a wish for legitimacy and appearance of efficiency. This was mainly because *“the government and auditors had promoted its use”* (Senior Management meeting notes, April, 1995). Within faculties and departments, there were concerns that ABC was not influenced by rational factors promoting increased transparency and accuracy in costing. By simply allocating costs, ABC failed to meet the expectations of internal users to help bring costs down.

“Our allocated overhead costs are very high. With ABC, our overhead costs were not coming down, so we were not convinced that ABC was going to increase transparency

and help control our costs...rather it did a more systematic allocation of increasing overhead costs instead of lowering the overall costs” (Faculty Dean).

A review of monthly finance meeting papers indicated a high level of frustration among managers regarding lack of consultation, training and details provided by the accounting team on how the actual activity-based allocations were made. Accounting department had limited knowledge of other department’s functions and was frustrated by the lack of participation from line managers to help refine the system. Apart from the Finance Director, no one else had any real experience with ABC. A review of ABC spreadsheets produced by the Finance Director revealed poor design of the model with some questionable cost drivers and activities that managers found hard to understand and act upon.

“...the Finance Director produced spreadsheets with activity cost allocations that no one really understood...” (Faculty Dean 2)

It became obvious that ABC did not change the mindset of the users since its benefits were not explored and communicated to the users. It also appeared that the Finance Director “gave up” with secondary implementation at the school/department level since the implementation costs outweighed the perceived benefits of the ABC system. So, it was business as usual with the reallocation using arbitrary basis of allocation of overheads at the faculty level. It was the failure to meet the expectations of users that led to the ultimate failure of the ABC project.

Balanced scorecard

The development of performance measures in public tertiary institutions commenced in 1989. The Ministry of Education required performance information to monitor the allocation and effective management of resources and to ensure that each institution’s obligations, goals and objectives as set out in their approved charter and strategic plans were met. The Education Amendment Act 1990 and the Public Finance Act 1989 made performance measurement and reporting a mandatory requirement via the annual reporting requirements to prepare the Statement of Objectives and the Statement of Service Performance. The Statement of Objectives required the specification of the mission, goals and objectives. The Statement of Service Performance required specific measures/targets and reports on the degree of achievements in both qualitative and quantitative terms. Throughout the 1990s, financial and non-financial performance measures were developed by Institution XYZ, but this development was described by one senior manager as *“piecemeal and dysfunctional.”* The dysfunctional effect of performance measures was obvious as it encouraged staff to concentrate only on measures that were funded, rather than deliver real performance. For example, notes from a Faculty meeting (October 2000) revealed comments made by a Head of School that:

“...since we get measured on student enrolments, we are encouraged to fill-up classes to make our performance look better and get more funding... we have not paid much attention to concerns relating to the quality of students we enrol...”

These notes also revealed that manager’s *“chose performance measures that were simple to measure and had funding implications”*. A review of strategic plans, internal management reports and annual reports revealed that key performance measures used throughout the period 1990 to mid-2000 were equivalent full-time student enrolments, cost per equivalent full-time student, staff-student ratios and net operating surplus. In 2001, the Auditor-General

became concerned that stakeholders were not getting the best information on performance and commented that:

“Development over the last decade has been uneven, with heavy emphasis on financial and output reporting, and too little emphasis on other areas – such as impact evaluation and outcome reporting” (The Audit Office, 2001, p. 3).

Following suggestions and guidelines issued by the Auditor-General on ways to improve performance reporting in the public sector, in 2003, senior management decided to develop and implement a balanced scorecard. A project team led by the Planning Director was appointed by senior management to be responsible for the design and implementation of the balanced scorecard. The balanced scorecard framework was developed and implemented in 2004 at the strategic management level. It was intended to provide a more integrated performance measurement system based on five perspectives – business results, stakeholders, internal processes, organisational development and environment. The senior management also used the balanced scorecard framework in strategic planning (to set goals and objectives) and externally report on performance. However, actual implementation of the balanced scorecard in user departments (secondary adoption) failed.

Essentially, inappropriate design and implementation difficulties contributed to the failure of the balance scorecard system. In terms of the design of the system, even though an attempt was made to reflect the organisations strategy, department managers and staff questioned the validity of many measures.

“In fact there were too many measures and we saw no rationale or logic for many measures” (Head of School 2).

Another Department Manager commented:

“It seems that the performance measurement system was not designed for internal use but for external reporting to satisfy government mandate for improved performance reporting”

A review of the institutions 2004 Annual Report revealed that of the 34 key performance measures, 16 mostly non-financial measures were reported as either not applicable or not achieved. According to a Faculty Dean, *“too many measures confused what our priorities were.”*

The balanced scorecard initiative also failed because of implementation difficulties arising from a lack of an integrated system to capture the performance data relating to too many measures. According to the Management Accountant:

“Finance department provides financial performance data but we rely on individual departments to provide non-financial performance data and often departments do not have any system to access relevant data from diverse sources or it takes too long to access the data.”

From the schools perspective, a Head of School commented:

“We spent too much time gathering data to measure too many things but spent too little time acting on performance data gathered.”

Another major factor that led to the failure of the balanced scorecard was that the institutional priorities kept changing to accommodate politically imposed measures and changes in government's tertiary education strategy. For example, in 2004, government introduced three performance-based research funding measures of quality evaluation of staff, research degree completions and external research income as a strategy to increase research output and quality. From 2010, the government introduced course completion and student progression and retention rates as key educational performance measures that integrated with the tertiary funding system to ensure that tertiary institutions contributed to the government's vision for the tertiary education system (TEC, 2013). With funding incentives attached to the research performance, research publications and external research funding became key measures of school and academic staff performance which according to a Faculty Dean,

"...made people feel threatened and caused divisions among academic staff ...some academics were mainly concerned about meeting their research outputs rather than improvements in teaching or course quality".

Some academics interpreted educational performance measures as pressure on them to pass students. One Head of School commented:

"We have been forced to play the numbers game and instead of delivering real performance; we deliver student numbers that makes overall performance look good"

A review of balanced scorecard measures revealed that the institution placed too much reliance on financial performance. This was mainly because of the strict monitoring of financial performance measures against benchmarks imposed by government. A review of strategic plans and financial reports revealed that net operating surplus, liquid assets, net cash flows, net working capital, debt ratio and quick ratios were the key financial performance measures against which the institution regularly reported. The institution felt threatened that failure to meet the financial performance benchmarks would place the institution under a strict performance monitoring regime of the Ministry of Education. According to information reported by the Ministry of Education:

In 2010, "28 of the 31 institutions had an operating surplus (before abnormal) above 3 percent of operating revenue – which is one of the Tertiary Education Commission's benchmarks for prudent financial performance, compared to 14 of 33 in 2005. Only one institution had an operating deficit (before abnormal), compared to nine in 2005" (Ministry of Education, 2012, p. 16).

Institutional managers expressed concern that accounting had a narrow focus on costs and efficiency and that there was too much emphasis on profitability and solvency measures of performance and accountability. However, it was generally agreed that financial viability was an important element of performance.

It became obvious from conversations with managers that where funding, rewards, and recognition and career progression was at stake, performance measures motivated behaviour of individuals to make performance look better than it actually was.

Discussion

The findings of this study reveal that implementation of activity-based costing and the balanced scorecard represented the greatest challenge. There were a number of reasons why both systems failed to be implemented. With ABC, the Finance Director perceived a need for greater accuracy and methods used to allocate costs to faculties and proceeded to implement it without adequate support or assistance from change agents. ABC failed to meet the expectations of internal users to help bring costs down. Generally, staff lacked knowledge and were confused about the purpose served by ABC. Rather, its selection was more related to what the Finance Director saw as the right solution to greater accuracy in cost allocations. This finding confirms Armstrong's (2002, p. 102) and Arnaboldi and Lapsley's (2004, p. 2) contention that ABC has achieved its prominence because of statements of belief and that *"people do not act according to the situation but according to their definition of it"*. There was no shared vision among management about what ABC was intended to achieve. Many managers viewed ABC solely as an accounting department project and felt that the decision to adopt the system was taken hastily by the Finance Director. Using Rogers (2003) theoretical framework, ABC adoption failed because it was not perceived to be better than the traditional costing system, that is, it had a low relative advantage. This was mainly because it did not help bring down the costs; rather it resulted in an increase in allocated overhead costs since these costs kept increasing. ABC system also failed because it was difficult to understand and use (had high complexity), its implementation was not trialled and the benefits were not visible (Rogers, 2003). Because of its complexity in terms of identification of activities, activity drivers, and estimation of resource consumption by activities and cost objects, ABC was not designed and used properly.

Arnaboldi and Lapsley's (2004, p. 2) citing Jones and Dugdale (2002, p. 152), challenged the widespread adoption of ABC to the public sector, especially universities, on the grounds that it *"did not capture the subtleties of the different kinds of changes which these organisations were experiencing"*. While this seems to be valid observation, the subtleties of different kind of changes will only be captured if there a clear understanding of the changes and the exact manner in which management tools can be applied to deal with these changes. In the case of Institution XYZ, it seems that from a managerial perspective, no one really understood how ABC worked and could be applied to bring costs down.

ABC also reflected Abrahamson's (1991) fashion perspective and arguably served a legitimating purpose since the government and auditors promoted its use. Its primary adoption seemed to signal an appearance of efficiency through better cost management but in reality costs were not reduced. According to Abrahamson (1991), fashion, in the adoption of an innovation occurs when an organisation mimics 'best practice' technologies. While the Finance Director championed the adoption of ABC with a blind belief that this technology offered greater accuracy in costing, secondary adoption failed because its development was flawed and there was no change agent facilitating its adoption. ABC was not viewed as an efficient-choice model (Abrahamson, 1991). These factors combined with unclear communication and inadequate training led to the user's loss of interest in the project.

One of the most striking reasons why secondary implementation of the balanced scorecard failed was that the institution was caught in the 'performance evaluation trap' (Olson et al., 2001) and performance measurement was considered an end in itself. The balanced scorecard also lost its effectiveness since it was not designed for internal use but for external reporting to satisfy government mandate for improved performance reporting. This confirms the findings of Christensen and Skaerbaek (2007) that public sector performance reporting that emphasises external accountability may turn out differently from the official stated aims. Indeed, the balanced scorecard became a bureaucratic accountability reporting

mechanism and most of the non-financial reporting was largely commentaries designed to give legitimacy and avoid public scrutiny (Christensen and Skaerbaek, 2007).

Kaplan and Norton (1992), stress that the key feature of a balanced scorecard is the use of a combination of financial and non-financial performance measures that help drive performance and ultimately achieve the organisational goals. Hence, the Kaplan and Norton have put strategy and vision at the centre of the scorecard emphasising the linkages and the cause and effect relationship between strategy and the measures. However, the performance measures developed by Institution XYZ were piecemeal, had no linkages with strategy and had a dysfunctional effect since it encouraged staff to concentrate only on measures that were funded, rather than deliver real performance. Broad et al. (2007), also found that the imposition of specific measures had dysfunctional effects on strategy since it was caused by the perceived need to improve performance against imposed targets, even though the organization did not necessarily wish to pursue such a strategy. In fact, Institution XYZ placed too much reliance on financial performance measures mainly because of the strict monitoring of financial performance by the government. This finding is contrary to Modell's (2004) argument that the public sector may be moving away from a financial emphasis towards a multidimensional performance measurement model.

The balanced scorecard implementation also failed because there were too many measures but no rationale or logic for many of these measures. There was no real observable influence of the balanced scorecard on management strategy and outcomes. Rather, it served a largely symbolic role. The institution pursued its financially oriented measures whilst paying symbolic attention to its non-financial measures. Hence, using Roger's (2003) diffusion theory, the perceived relative advantage of the balanced scorecard performance measurement system was relatively low and reflective of the 'fad' perspective since it gave an appearance of rationality and legitimacy. The implementation difficulties compounded by a lack of an integrated system to capture the performance data arising from too many measures was another important reason for the failure of the balanced scorecard. This confirms Cavalluzzoa and Ittner's (2004) finding that information system problems and difficulties selecting and interpreting appropriate performance measures play an important role in system implementation and use.

Also, the institutional priorities kept changing as a result of changes in government's tertiary education strategy. The politically imposed measures forced the institution to play the numbers game rather than deliver 'real' performance.

Conclusion

Accounting reforms have been central to the transformation of public tertiary institutions. Yet little is known about why some accounting reforms fail. Informed by the diffusion of innovations theory, this paper has addressed this research gap by examining the adoption, implementation and use of activity-based costing and the balanced scorecard in a large public tertiary education institution. Both initiatives failed to be fully implemented. The findings demonstrate that while primary adoption may be symbolic to legitimate organisational activities and improve public perception of accountability, secondary adoption is most likely to fail if the relative advantage of accounting changes perceived by internal users is low. Also, politically imposed accounting changes with performance-based funding implications may force a public sector organisation into a performance evaluation trap of bureaucratic compliance preventing any real improvements.

By and large, accounting reforms are most likely to fail if it offers a low relative advantage, is highly complex, its implementation is not trialled, the benefits are not visible, and there is lack of communication, inadequate training and no champion or change agent

facilitating adoption. Adoption will also fail if it is merely symbolic to give legitimacy but suffers from a lack of rationale or logic and has no real observable influence on performance improvements.

This study makes useful contributions to the research literature. It confirms and adds to prior research on diffusion of accounting innovations in public sector organisations and has addressed the lack of research into why some accounting reforms fail. Responding to prior research observations and limitations (Christensen and Skaerbaek, 2007; Naranjo-Gil, 2009), this study uses a longitudinal analysis and examines reforms that extend beyond the innovative stage of development in a large and complex public tertiary institution. This helps increase our understanding of common factors associated with the failure of these reforms.

The findings of this study also have practical implications. It provides a valuable source of learning for institutional managers and public sector reformers. Managers who want to encourage the introduction of accounting innovations to improve organisation effectiveness need to avoid the pitfalls that impede implementation of accounting changes. Public sector reformers need to recognise that secondary adoption of government imposed reforms will most likely succeed if it is perceived to satisfy both the internal organisational as well as external purpose.

References

- Abrahamson E (1991) Managerial fads and fashions: the diffusion and rejection of innovations. *Academy of Management Review* 7: 586-612.
- Armstrong, P. (2002). The costs of Activity-Based Management. *Accounting, Organizations & Society*, 27(1/2): 99-120.
- Arnaboldi M, Azzone G and Palermo T (2010) Managerial innovations in central government: not wrong, but hard to explain. *International Journal of Public Sector Management* 23(1): 78-93.
- Arnaboldi M and Lapsley I (2004) Modern costing innovations and legitimation: a health care study. *Abacus* 40(1): 1-20.
- Bjornenak T (1997) Diffusion and accounting: the case of ABC in Norway. *Management Accounting Research* 8(2): 3-17.
- Broad, M., Goddard, A., & Alberti, L. (2007). Performance, Strategy and Accounting in Local Government and Higher Education in the UK. *Public Money & Management*, 27(2), 119-126.
- Cavalluzzoa, K. S., & Ittner, C. D. (2004). Implementing performance measurement innovations: evidence from government. *Accounting, Organizations and Society*, 29(3/4), 243–267.
- Christensen M and Skaerbaek P (2007) Framing and overflowing of public sector accountability innovations: a comparative study of reporting practices. *Accounting, Auditing & Accountability Journal* 20(1): 101-132.
- Coy D, Tower G and Dixon, K (1991) Tertiary education in New Zealand: radical changes to funding and accountability. *Journal of Tertiary Education Administration* 13(1): 83-93.
- Cropper, P and Cook, R. (2000). Developments: Activity-Based Costing in Universities — Five Years On. *Public Money & Management*, Vol. 20(2), pp. 61-68.

- DiMaggio P J and Powell W W (1983) The iron cage revisited: institutional isomorphism and collective rationality in organizational fields. *American Sociological Review* 48(2):147-160.
- Ezzamel M, Hyndman N, Johnsen A and Lapsley I (2014) Reforming central government: an evaluation of an accounting innovation. *Critical Perspectives on Accounting* 25: 409-422.
- Gallivan, M J (2001) Organizational adoption and assimilation of complex technological innovations: development and application of a new framework. *The Database for Advances in Information Systems*, 32(3): 51-85.
- Jones, T. C., & Dugdale, P. (2002). The ABC Bandwagon and the Juggernaut of Modernity. *Accounting, Organizations & Society*, 27(1/2): 121-163.
- Hood C (1991) A public management for all seasons. *Public Administration* 69(1): 3-19.
- Hood C (1995) The 'New Public Management' in the 1980s: variations on a theme. *Accounting, Organisations and Society* 20(2/3): 93-109.
- Jackson A and Lapsley I (2003) The diffusion of accounting practices in the new "managerial" public sector. *The International Journal of Public Sector Management*, 16(5): 359-372.
- Kaplan, R. S. and Norton, D. P (1992), The balanced scorecard—measures that drive performance. *Harvard Business Review* (January–February), pp. 71–79
- Lapsley I and Wright E (2004) The diffusion of management accounting innovations in the public sector: a research agenda. *Management Accounting Research* 15: 355-374.
- Malmi T (1999) Activity-based costing diffusion across organisations: an exploratory empirical analysis of Finnish firms. *Accounting, Organisations and Society*, 24(8): 649-672.
- Melletta H, Marriott N and Macniven, L (2009) Diffusion of an accounting innovation: fixed asset accounting in the NHS in Wales. *European Accounting Review*, 18(4): 745-764.
- Midgley D F, Morrison P D and Roberts J H (1992) The effect of network structure in industrial diffusion processes. *Research Policy*, 21(6): 533-552.
- Ministry of Education (2012) *Profiles and Trends 2010: New Zealand's Tertiary Education Sector*. Tertiary Sector Performance Analysis, Wellington.
- Modell S (2004) Performance measurement myths in the Public Sector: a research note. *Financial Accountability & Management*, 20(1): 39–55.
- Naranjo-Gil (2009) The influence of environmental and organizational factors on innovation adoptions: consequences for performance in public sector organizations. *Technovation*, 29(12): 810-818.
- Nasi G and Steccolini I (2008) Implementation of accounting reforms. *Public Management Review* 10(2): 175-196.
- Norman, R and Gregory R (2003) Paradoxes and pendulum swings: performance management in New Zealand's public sector. *Australian Journal of Public Administration* 62(4): 35-49.
- Northcott D and France N (2005) The balanced scorecard in New Zealand health sector performance management: dissemination to diffusion. *Australian Accounting Review*, 15(3): 34-46.
- Olson O, Humphrey C and Guthrie J (2001) Caught in an evaluatory trap: a dilemma for public services under NPFM. *European Accounting Review*, 10(3): 505-522.
- Perera S, McKinnon J L and Harrison G L (2003) Diffusion of transfer pricing innovation in the context of commercialisation: a longitudinal case study of Government Trading Enterprise. *Management Accounting Research*, 14(2): 140-164.

- Probine M and Fargher R (1987) *The management, funding, and organization of continuing education and training: the report of a Ministerial working party*. Wellington, New Zealand.
- Rogers E M (2003) *Diffusion of Innovations* (5th ed.). New York: Free Press.
- TEC (2013) *Educational Performance Indicators – Definitions and Methodology Version 6, February 2013*. Tertiary Education Commission, Wellington.
- TEC (2012) *Tertiary Education Performance Report 2012*. Wellington: Tertiary Education Commission
- ter Bogt H and van Helden G J (2000) Accounting change in Dutch government: exploring the gap between expectations and realizations. *Management Accounting Research*, 11: 263 – 279.
- The Audit Office (2001) *Report of the Controller and Auditor-General: Reporting Public Sector Performance*. Wellington.
- Van de Ven, A H (1996) Central problems in the management of innovation. *Management Science*, 32(5): 590-607.