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Contemporary management accounting techniques (such as TQM, BSC, JIT) are widely lauded by academia but the proposed relevance to business has not necessarily the view held by industry (e.g. Burns & Vaivio, 2001; Chenhall & Langfield-Smith, 1998; Innes et al., 2000. The purpose of this article is to investigate the acquisition by a modern multi-national firm of a major IT-based management accounting program to assess the relevance and usefulness of its functionality by identifying the type(s) of systems that are utilised and the rationale for upgrading or modifying its system(s).

This study relies on a single case based on two in-depth semi structured interviews with accounting and finance professionals in a multi-national manufacturing company that recently implemented a modern management accounting system.

The findings indicate that despite demonstrating some relevance of the management accounting information, the manufacturer deactivated components of the system that were deemed irrelevant at particular levels of the organisation.

This paper provides evidence about the non-reliance on management accounting information in a multinational company operating in Australia. The findings in the study imply that relevance is linked to implementation, planning and training will help managers to better prepare themselves in setting up contemporary management accounting systems.

Keywords

Change, IFRS, institutional, Portugal, principles, rules

Technical Note

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Daniel Watts[1], P.W. Senarath Yapa[2] & Steven Dellaportas[3]

Abstract

Purpose Contemporary management accounting techniques (such as TQM, BSC, JIT) are widely lauded by academia but the proposed relevance to business has not necessarily the view held by industry (e.g. Burns & Vaivio, 2001; Chenhall & Langfield-Smith, 1998; Innes et al., 2000. The purpose of this article is to investigate the acquisition by a modern multi-national firm of a major IT-based management accounting program to assess the relevance and usefulness of its functionality by identifying the type(s) of systems that are utilised and the rationale for upgrading or modifying its system(s).

Design/methodology/approach – This study relies on a single case based on two in-depth semi structured interviews with accounting and finance professionals in a multi-national manufacturing company that recently implemented a modern management accounting system.

Findings – The findings indicate that despite demonstrating some relevance of the management accounting information, the manufacturer deactivated components of the system that were deemed irrelevant at particular levels of the organisation.

Originality/value – This paper provides evidence about the non-reliance on management accounting information in a multinational company operating in Australia. The findings in the study imply that relevance is linked to implementation, planning and training will help managers to better prepare themselves in setting up contemporary management accounting systems.

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Introduction

Contemporary management accounting techniques such as Activity Based Costing (ABC), the Balanced Scorecard (BSC), Just in Time (JIT), Value Chain Analysis (VCA), Total Quality Management (TQM) are practices that have gained widespread attention in accounting, particularly since the latter decades of the 20th century (Argyris & Kaplan, 1994; Bromwich, 1999/2000; Bromwich & Bhimani, 1994; Horngren, 1995; Kaplan, 1994; Kaplan & Norton, 1992; Otley, 1983; Scapens et al., 1996). Where management accounting information has not kept pace with uncertain environments, the relevance of management accounting has been increasingly questioned by business unit managers (Murphy et al., 1995; Kaplan, 1986). The determination of academic research to maintain the relevance of management accounting is a noble pursuit but it is undermined by the choices made in industry and the lack of a pure definition for its achievement and worth (Bromwich & Bhimani, 1994). With a myriad of conventional management accounting systems and the ability to modify or specify alterations, the type and provision of contemporary management accounting systems is an important decision for many firms. The selection of an inappropriate system may result in a detrimental effect on the strategic or operational functioning and positioning of the firm (Burns & Vaivio, 2001; Coad, 1999; Langfield-Smith et al., 2000; Mintzberg, 1990; Mintzberg et al., 1998; MacDonald & Richardson, 2002). Whilst the benefits of contemporary management accounting techniques are evident, successful implementation remains an important and unresolved issue that constrains the benefits derived from new management accounting technologies. This occurs in part because of the contention that management accounting has not developed its own persona and remains merely a tool, rather than an essential component of the decision making process (Loft, 1995; Granlund & Lukka, 1998). Industry challenges of the ilk of globalised competition and fluctuating macro-economic conditions may be the saviour of management accounting as industry seeks to find any advantage, no matter how insignificant (Langfield-Smith et al., 2000). Until the worth of management accounting can be categorically demonstrated, its value may not live up to its potential.

The onset of globalised competition and ready access to high technology has forced companies to change the way they operate (Langfield-Smith *et al.,* 2000). Increasing IT investment is touted as the advantage that provides the leverage for achieving a stronger more flexible production process to deal with persistent change and improve organisational performance (Chenhall, 2003; Grandeet al., 2010). Dechow et al., (2007) claim that IT automates many control functions with use friendly systems capable of adaption to low level or line management. With the rapid development of high-end technology, efficient and instantaneous communication, and increased competition, many firms have been forced to seek comparative advantage to remain viable (Langfield-Smith et al., 2000). Management accounting systems and the resulting information used to assist management in its decision making process is argued to provide a comparative advantage in a dynamic and competitive environment (Chenhall & Langfield-Smith, 1998). Designing and maintaining effective cost management systems has become a fundamental task for corporations and their management accountants. IT now plays an important role in areas that are typically the domain of management accounting. A central and emerging theme arising from this discussion is the focus on how organisations utilise innovative technology-based management accounting systems across the value chain to support corporate strategy. The aim of this study is to investigate the acquisition and implementation of a major IT-based management accounting program with management accounting functionality by a modern multi-national firm and to assess its relevance by seeking to identify the type(s) of systems that are utilised at different organisational levels and the rationale behind upgrading or improving its system(s).

The identification and analysis of how well a management accounting system has been implemented and subsequently utilised in a multi-national firm provides a practical perspective on how industry perceives the relevance of management accounting. The installation of management accounting systems and the degree to which they are utilised is left up to individual firms (Bromwich & Bhimani, 1994). This study, based on a single case with semi-structured interviews, provides deep and personal insight on the issues facing an organisation in implementing a contemporary management accounting system, at a time where delays may mean loss in market share or an ill-needed drop in profitability. Dechow et al., (2007) contend that the role of information technology as a provider of information and facilitator for management accounting is an important area for further investigation. This study examines the relevance of a recently implemented technology-based management accounting system. Data is sought on the relevance of management accounting information by management in their strategic and operational decision making processes as well as the systems utilised (or discarded) and modified by the company. Identification of the type, level of detail and format that this information takes, in addition to external information will assist in forming the conclusions to this study.

The remainder of this paper is organised as follows: a review of relevant literature is presented in the next section. This literature review outlines the arguments that call for management accounting change and the impediments to effective implementation. This section also highlights the research objectives of this study. Section three outlines the methodology adopted in this study that is based on a single case with interviews as the primary method of data collection. This section is followed by a discussion and analysis of the findings in section four and a conclusion in section five.

Management Accounting Change

The prominence of modern management accounting emerged in the latter part of the 20th century with the promise of radical changes in management accounting techniques (Burns & Vaivio, 2001; Foster & Young, 1997). No longer was management accounting seemingly conjoined to cost accounting, as techniques such as TQM, JIT and ABC became popular adoption in industry (Bromwich & Bhimani, 1994). The motivations for the adoption of management accounting change generally fall into two broad categories, strategic or long-term change (Hubbard, 2000; Morgan, 1993) and operational or short-term change (Morgan, 1993). A firm may seek to address change by utilising both or either of these approaches but the implementation of a contemporary management accounting technique is generally considered strategic (Morgan, 1993; Bromwich, 1999/2000; Simons, 1990; Chenhall & Langfield-Smith, 1998, 1999; Langfield-Smith, 1997). Chenhall and Langfield-Smith (1999) outline four key steps for strategic management accounting system change that begins with “triggers for adoption” (p. 39). This step pertains to the key factors that management determine as paramount for the decision to move to a new management accounting system. The second part of the process relates to the “System Characteristics”. This step outlines the type of management accounting characteristics management decides are paramount to the transition. “Implementation Issues”, the third part of the change process, follows with a focus on specific issues that will hinder or assist the implementation of a new management accounting system. The final part refers to “outcomes” that relates directly to the results of the implementation. The outcomes highlight what features and benefits the firm will be faced with post implementation. This study is focused on the latter two parts of the change process that are critical to assessing the relevance of a newly developed management accounting system.

In spite of differences between firms, the triggers for the implementation and utilisation of management accounting systems are generally consistent across organisations and dominated by the need to respond to a crisis such as a loss of market share or a dramatic decrease in profitability (Chenhall & Langfield-Smith, 1998). Additional triggers for management accounting change include: increasing exposure to global competition; significant changes in manufacturing processes; significant technological changes to manufacturing processes; and benchmarking by parent companies against so that performance measures could be "…applied in consistent and reliable ways between entities in the group" (Chenhall & Langfield-Smith, 1999, p. 44). The triggers for a change in the management accounting systems may be prevalent in individual firms but the decisions concerning the type and success of such changes are not as easily recognisable. Indeed, even with triggers present for the adoption of new management accounting systems, the acceptance and uptake of a contemporary management accounting system is still not assured (Burns & Vaivio, 2001). All too easily recognisable from case studies are the differences in management accounting systems, but not necessarily why they are different (Simons, 1990).

Consider the case of contemporary management accounting tools such as ABC. Such tools assist organisations to achieve effective cost management accounting practice for the allocation of resources to activities, and then activities to cost objects through imputed causal relations based upon volume and non-volume related drivers (Cooper and Kaplan 1987; Cooper and Kaplan 1988; Cooper 1990; Cooper 1990). It is generally acknowledged that ABC brings several benefits by removing distortions from traditional cost accounting system and providing accurate cost information for: better decision making (Cohen et al., 2005; Cooper & Kaplan, 1988); more efficient strategic planning and operating performance (Cagwin and Bouwman 2002; Kennedy and Affleck-Graves 2001; O'Guin, 1991). Despite the theoretical superiority of ABC over traditional volume based costing models, the implementation of ABC in business organisations has yielded mixed results. Whilst 51% of Fortune 500 companies implemented ABC and ABM models, only 18% sustained such implementations for more than four years (Kiani and Sangeladji, 2003). It appears that a number of firms which sought to implement these cost accounting techniques subsequently abandoned them. Cobb et al. (1992) found that the implementation of ABC is costly and troublesome, particularly the selection of drivers and defining accurately relevant activities. Employees find it difficult to understand ABC categories, allocating resources to them and interpret the results.

On a broader level, contemporary management accounting techniques (e.g. ABC, BSC, TQM) are considered widely utilised by industry but the level of acceptance remains lower than expected (Burns & Vaivio, 2001; Chenhall & Langfield-Smith, 1998; Innes et al., 2000). Like cost accounting, contemporary management accounting will gain relevance and popularity as firms pursue development of internal accounting practices which don't easy fit into existing systems (Bromwich & Bhimani, 1994). Research evidence acknowledges that the successful implementation of ABC cannot rely on technical factors alone (Cooper 1990; Cooper, Kaplan et al. 1992), contextual, behavioural and organisational factors also influence effective implementation (Cooper et al., 1992; Shields, 1995). Both contingent factors (e.g. competition, technology and organisational strategy) and institutional factors (e.g. regulations and consultants) have been found to be an influence on firms to implement new management accounting such as ABC (se for example: Cooper and Kaplan, 1988; Kaplan and Cooper, 1998; Granlund and Lukka 1998; Hopper and Major 2007).

Research Question Development

Contemporary management accounting systems rarely develop in isolation of changes in the environment. The catalyst for developments in management accounting stems from developments of other processes in the firm (Chenhall & Langfield-Smith, 1999). Jazayeri and Hopper (1999) contend that management accounting develops in conjunction with the implementation of World Class Manufacturing (WCM). Paramount to this paradigm is the recognition that WCM on its own does not provide a stronger competitive position, only when it is combined with management accounting technology is this potentiality realised. With a vast array of management accounting options available to firms and the advent of computer technology providing opportunities for firms to refine pricing and measurement systems in a timely manner creates a distinct need to identify key areas of concern or interest in the adoption of management accounting systems. The overall purpose of this study is to examine the usefulness of a newly implemented contemporary management accounting system in a large multinational manufacturing firm by examining the relevance of the functionality with the needs of internal users. The relevance of a modern management accounting system in this study is examined from two dimensions, firstly, the extent to which the functionality of a modern management system is suited to the needs of the organisation, secondly, the perceived usefulness of the information produced by the management accounting system to decision making in all levels of management.

The first dimension relates to the level and complexity of information that is required from a management accounting system in a dynamic environment, especially as competition increases and pressures from stakeholders to perform to higher standards continues. Managers at all levels rely on the information made available from the management accounting system to make operational or strategic decisions. Operational decisions would be expected to occur generally at lower levels of management, and strategic decision-making accordingly are attributable to the more senior management. As a result, all levels of management would be expected to be looking at the management accounting system to assist in the operational and strategic decision making process(es). Relatively simple cost accounting systems may still have their place, but management is looking for greater amounts of information and from a more diverse information pool in order to help with the decision making process. In order to stay ahead in the globally competitive environment that a manufacturer operates in, the information requirements become increasingly complex.

> RQ1:To what extent does the modern management accounting system provide accurate and timely information to assist managers’ in their short/-long-term decision making.

The modification of contemporary management accounting techniques to support chosen strategies has been cited as a valid industry practice (Bouwens & Abernathy, 2000; Gerdin and Greve, 2004) but the determination of the suitability is a challenge that faces all firms seeking change. There is little doubt that every organisation has unique characteristics that go some way to the determination of the suitability of a contemporary management accounting technique.

Management accounting systems in a modern competitive firm by necessity have to be modified from the originally defined technique(s) in order to satisfy unique demands for information (Bouwens & Abernathy, 2000). The flexibility of these management accounting techniques therefore becomes a consideration when evaluating their suitability. Modifications, additions and possibly even subtractions of functions must be carried out to provide the firm with the functionality that they seek. Such modifications may reach such an extent that recognising the system implemented may prove to be a challenge, as it may no longer display the same characteristics of a contemporary management accounting system. In regard to the second dimension, relevance is assessed by examining the extent to which contemporary management accounting techniques required modification.

> RQ2:To what extent was the functionality amended on a newly installed modern management accounting system.

Data Collection

The research questions developed in this study are investigated using qualitatively research techniques based on a single multi-national manufacturing firm. The firm in question, designated "Company-A"[4] to protect the identity of the firm and its constituents, was selected for its size, multi-national presence and ultimately because of the access to highly ranked officers. Company-A is a manufacturing firm with a physical presence in 27 countries with sales to more than 100 countries. Company-A's head office is located on the East Coast of the US, but has regional and sub-regional offices in Melbourne, Australia. In order to establish the relevance of this firm to this study, data from comparative manufacturing firms was obtained for comparison and to help define the presence of this firm in the world market in its defined field of business. The publicly available data indicates that Company-A is ranked in the top 10 in market capitalisation and gross sales.[5] The focus throughout this study will be on the global operating conditions and factors wherever possible. Centralised management control, from the global headquarters will help eliminate regional bias and maintain focus on the global decision making process for Company-A.

Faced with highly competitive rivals, Company-A established a strategic plan to see them remain at the forefront of technology and production efficiency. Acquiring new high-technology firms in their industry sector and divesting mature divisions was part of this key strategic direction. Each new acquisition exposed Company-A to another management accounting system culminating in a system of disparate financial reporting and management accounting systems owing to a strategic path of acquisition and divestment. Incompatibility of such systems and pressure to improve operating performance were alluded to by the interviewees as being instrumental in the decision acquire and implement SAP R/3.[6] SAP R/3 provided Company-A

[4] The name "Company A" was designated to maintain anonymity for the firm and its officers.
[5] All relevant data for were obtained from individual firm's corporate websites.
[6] SAP (Systems Analysis and Program Development) is an accounting software system based on real-time data processing that is popular with large multinational companies who required real-time business applications with built-in multi-currency and multi-language capabilities. SAP R/3 is an enterprise-wide information software system coordinates all the resources, activities and information needed to complete various business processes. SAP R/3 is arranged into distinct and integrated functional modules, that includes Financials and Controlling (FICO), Human

with a multi-faceted system providing site-specific financial reporting, supply chain management, customer resource management and management accounting in one package. Prior to this homogeneous system, a variety of management accounting, financial reporting and supply chain management systems were utilised. This multi-facetted approach reflected the desire by Company-A to provide a single homogenous system as a foundation for the majority of their business functions and the acquisition of new business units. SAP R/3 cost Company-A in the order of $US250 million and took three years to implement. At the time of data collection, Company-A had marked a one year milestone since the implementation of a financial reporting and management accounting system based on SAP R/3 information technology platform. No data was sought from this system. All the data obtained for this research was obtained through the interview process and subsequent follow-up clarification questions.

This paper follows the method adopted in previous studies that investigates issues relating management accounting relevance (Scapens, 1990; Chenhall and Langfield-Smith, 1999). As an illustrative case study and interviews with key stakeholders provides the lens to identify and clarify relevant issues. Two interviews were planned and executed, one with the Australia and New Zealand Managing Director (MD) and a second interview with the Business Financial Manager, Australia, New Zealand and South East Asia (BFM). Both the MD and BFM were well versed in the processes and infrastructure of Company-A and were involved in the implementation of SAP R/3. The participants were qualified accountants, questions of a specific accounting nature were well within the guise of their expertise. The MD reports to the Global Chief Financial Officer and the Regional Chief Executive Officer and has been in the current role as MD for approximately six years. Prior to that, he held the position of Regional Financial Director for a little less than one year and the Australia-New Zealand Financial Director, which he held for a number of years. As a qualified Certified Practising Accountant (CPA), the MD's understanding of the underlying management accounting processes and capacity was considered sound. A list of questions in a sequential order was forwarded to the MD prior to the interview to ensure adequate time to review and clarify any points prior to the meeting. No clarification was sought from the MD. A 90 minute interview was conducted with the MD eliciting responses to the list of proposed questions and seeking further information on areas that were pertinent to this research. The initial list of questions devised served as a checklist of topics, and provided a foundation for the discussion of relevant issues. Follow-up clarification using email was utilised, most specifically for basic empirical data.

An interview was specifically sought with the BFM as a result of an initial telephone interview with the MD who nominated the BFM as an ideal candidate to discuss the management accounting information requirements of managers of plants and other operational positions. The BFM reports to the MD and Global Business Managing Director and has a strong accounting background as a qualified Chartered Accountant. Having worked in a number of countries as both a financial and management accountant, the BFM was expected to have a clear understanding of relevant concepts. The BFM was identified as a supplier of information to managers at different levels of the organisation. This allowed the research to identify the information needs, from a single source, of multiple managers, many of whom are in international locations. It should be noted that the BFM acts as a facilitator of this information,

Resources (HR), Materials Management (MM), Sales & Distribution (SD), and Production Planning (PP). A distinct advantage of SAP is its adaptability making its implementation unique to each adoption.

and is not responsible for the decision of which information is made available to these managers. This is crucial to avoiding potential bias on whether such information is assumed relevant. Similar to the MD, a list of questions was composed and forwarded to the BFM for clarification. The interview with the BFM was conducted in approximately 70 minutes. General utilisation specifics and global processes were openly discussed, again with the discussion kept on topic by the interviewer, allowing the BFM to explain all answers.

Findings

Chenhall and Langfield-Smith (1999) argue that a response to crisis is a significant factor in the introduction of a contemporary management accounting system. However, Company-A was in no such position. Rather than a crisis, Company-A was faced with a series of disparate financial reporting and management accounting systems owing to a strategic path of acquisition and divestment. The desire to provide a platform to incorporate all business divisions into a single instance system was considered paramount. The location or site-specific financial reporting and globally accessible management accounting information were seen as significant benefits and thus became an influential motivation for change. Consistent with the research questions presented in this study, the extent of the relevance of this newly implemented management accounting system is examined in two parts: (1) by investigating the usefulness of the information provided to managers in making decisions at all levels; and (2) the extent to which the functionality of the system required adaptation to meet the needs of key users.

The Relevance of The System to Decision Makers' Needs

While Company-A's structure is such that head office remains in control of all divisions on a strategic level, each division operates autonomously with regard to operational decision making. In describing the utilisation of management accounting information, it was revealed that each level of management utilise the system in various ways and to various degrees in order to perform their managerial tasks. The interviewees assert that lower level managers are highly involved with the management accounting system, utilising much of its functionality to make operational decisions. Middle management utilises the system in a different way, relying on information in different formats and additionally some external information to make tactical decisions. Senior management utilise the system sparingly and rely on significant amounts of external data in order to make strategic decisions. This varied utilisation of the management accounting system demonstrates a degree of relevance but much of it is focused at an operational and at a tactical decision making level (middle managers).

Operational decision-making

At an operational level, Company-A sets key performance indicators (KPIs) for each production facility. Making decisions about production issues, many of which have short-term timeframes, place this type of manager at the ground level of the organisation. These KPIs are generated fundamentally by historical precedent and are also based on internal and external benchmarking that relies on specific plan capabilities and supply chain mechanisms. Incremental improvement is constantly sought and is checked periodically using internal benchmarking. Some scorecards are utilised as is activity based management, though investigation of activity drivers is done so rarely that ABC and ABM are considered nearly non-existent or generally irrelevant. As the BFM mentioned:

> "We did not use ABC and ABM in our operations…. Internal benchmarking is done with other regional and global plants with respect to the specific product being manufactured. Variances are scrutinised and explanations sought."

Managers at the operational level have little control over some variances as they hold no authority over supply chain purchases. This is understood and eases pressure from operational managers with respect to some variances. As decisions at this level are based on information derived specifically from the management accounting system, relevance is considered absolute.

Tactical decision-making

Managers involved in tactical decision making assist in the generation of KPIs for plants. These decisions are part operational and part strategic, with an emphasis on a 6-12 month timeframe. Within this framework, these tactical managers also use the management accounting information as a key source for decisions making. Similarly this level of management has performance measured against its own KPIs. In a very similar fashion to operational managers, this level of management also reports variances. As revealed by the BFM: "Our tactical decisions are generally based on variances as well as external information, particularly relating to supply chain management and customer demand." At this level of the organisation, the management accounting information is deemed a crucial component of the tactical decision making, however some externalities are considered. Whilst relevance is evident, it is at this level of decision making that management begins to place emphasis on external information in addition to the information supplied by the management accounting system. Dealing with supply chain and customer chain issues, this level of management has little choice but to include external information into the decision making process. Similar to operational management, these tactical managers are heavily reliant on the management accounting information. Therefore the management accounting system remains relevant to Company-A.

Strategic decision-making

Management at the upper echelons of Company-A focus much of their attention on strategic matters (more than 1 year lead time). Seeking to satisfy the requirements of shareholders, employees, customers, and the community, strategic managers of Company-A tend to focus on externally sourced information significantly more than internally supplied information. Macro and micro-economic factors, global trends and significant global events form the basis for much of the information used by senior management for strategic decision making. The information available from and provided by the management accounting system is seen as inconsequential by this level of management. According to the MD:

> "Our main use of internal information is for historical checks and balances against globally expected trends. Most of this internal information is financial in nature and is generally similar to information made available to [external] stakeholders."

Given this practice, there is little doubt that managers responsible for strategic decision-making in Company-A regard the management accounting system irrelevant for their roles.

Overall, the management accounting information at Company-A is crucial at lower levels of management a declines in relevance as one moves up the corporate hierarchy. At an operational decision making level, the information from the management accounting system forms the majority of information from which operational management will base their decisions. Moving up the corporate ladder, tactical decision makers use the management accounting information as a key source for decisions making. It is at this level however, that management begins to place emphasis on external information in addition to the information supplied by the management accounting system. At the peak of the management pyramid, the strategic managers are faced with demands from a number of stakeholders that rely on external information. The internal management accounting system at this level is relatively inconsequential at Company-A and is used mostly to obtain financial reports. Consequently the strategic managers view the management accounting system as having 'little relevance'. Overall, the relevance of the newly implemented management accounting system, decreases proportionately with seniority and it is only the operational and tactical decisions that appear reliant on information from the management accounting system. Those in the position of making strategic decisions do use the system, but focus their attention on external information for their decision making. This again raises the question of relevance of the management accounting system. Based on the case study of Company-A, there is little doubt the system and the techniques are relevant, but not to those in a strategic decision making position.

Relevance of the System's Functionality

Company-A implemented a system that includes functionality that encompasses a variety of business functions but it is the choice systems adopted by Company-A that will determine the relevance of the system. Faced with the decision about which management accounting system to implement, Company-A chose to hedge and implement a range of techniques. Built into the SAP R/3 system is ABC, BSC, JIT, TQM, standard costing and benchmarking. Each user of the system is able to seek information based on any of these techniques, however they were not all utilised as perhaps was originally intended. Company-A was a manufacturer of simple procedures with few raw materials and few steps in the manufacturing processes. Consequently, they perceive ABC/ABM in standard form to be too complicated for their needs. Similarly, so to was BSC and to a degree, JIT. While the system allows for the use of these techniques interdependently of each other, Company-A has generalised their process and utilised some key aspects of each of the systems. This means that they use some activity drivers to allocate overheads, run some scorecards, do occasional systematic benchmarking internally and externally, utilise some supplies and some deliveries just in time and have developed their own iteration of TQM, which incorporates safety.

It appears that the management accounting techniques available to the company from SAP R/3 in its original format is not necessarily suitable to the company's environment. The fact that Company-A has harnessed facets of a number of management accounting techniques and built those into a single system alludes to their concern over the suitability of a single technique. As qualified accountants, the MD and BFM were in sound positions to qualify the system that Company-A utilises. Both the MD and BFM were clear in outlining that only a modified management accounting system would meet the demands of Company-A's business model. The MD stressed the need for a tailored system created by modification:

> "We are clear in our minds that only a modified management accounting system would suit the demands of our business model. Without some modification the system would be too unwieldy and rapidly render itself impractical…"

The MD reinforced this notion with an example:

> "ABC as an example of a contemporary management accounting technique is simply not flexible enough for us. The acquisition and divestment program that we are using would

> simply require a re-establishment of activity drivers so often it would most likely cost itself into irrelevance."

According to the BFM:

> "…the ideas behind them are good [contemporary management accounting techniques], and a lot of academic ideas are really good, but we have to have a practical application of them."

While significant expenditure was incurred by Company-A for this SAP R/3 system, there are plans to remove much of the functionality and return to previous management accounting practice. The use of ABC and BSC has been seen as fundamentally unnecessary owing to the simplicity of the manufacturing process while components of JIT and TQM have both been incorporated and modified to suit the organisation. The expense and time required to fully incorporate such process were considered unjustifiable by the interviewees. Company-A discovered post implementation of SAP R/3 that the increased functionality hasn't resulted in improved information processing or handling. In fact, the new system has gone some way to creating a system that is too complex for many managers to understand.

Discussion

The management accounting function adopted by Company-A revealed some challenging results. Of considerable note was the acquisition of a range of contemporary management accounting techniques. This fundamentally gave users the ability to utilise whichever management accounting technique was believed to be more useful for their needs. However, the expectation of management to utilise information supplied by the system to assist their decision making was not widely accepted. Whilst such systems as ABC, BSC, JIT, TQM, are present, none was utilised as originally prescribed. ABC was rejected as a valid technique, despite academic rhetoric concerning ABC's suitability for manufacturers (Cooper & Kaplan, 1988; Kaplan, 1994). Similarly, BSC was utilised sparingly with some scorecards in use, however the BSC model was also seen as fundamentally impractical. Each management accounting technique appears to have had components selected for use, leaving the majority of the technique unused or not implemented. Elements of ABC and BSC are used, but the entire techniques are considered too cumbersome and impractical owing to the simplicity of the manufacturing processes. The data from the interviews suggest that the models generated by new management systems may function well in an ideal environment, but in the constantly changing environment that Company-A finds itself in, they were simply too theoretical and therefore impractical.

With regard to decision making, not all levels of management rely on the internal information provided by the management accounting system. Management responsible for operational decisions clearly relies on information provided by the management accounting system to aid their decisions. Management in a tactical position relies partly on the information provided by the management accounting system. Other information from external sources, including customers and suppliers, contribute to the information pool considered important to make tactical decisions. Management in a strategic position within the firm scarcely rely on information provided by the management accounting system to make strategic decisions. Macro and micro-economic factors, global trends, international events and the concerns of stakeholders form the pool of information deemed crucial for strategic decisions making in Company-A. The strategic managers of Company-A rarely act on information emanating from the management accounting system. Focusing predominantly on external factors including macro and micro-economic indicators, technological trends and market indicators, strategic managers are irregular users of the management accounting system.

Roll-back installation

Chenhall & Langfield-Smith (1999) contend that once a system is implemented, firms will expand the system as more is learned about it. The evidence in this case suggests that the management accounting system that Company-A has implemented is limited owing to the complexity of the information retrieval and the realisation that much of the functionality is unnecessary. The system appears to be collecting data and producing reports that no one wants or uses. The ultimate verdict of relevance came when Company-A decided to roll-back the installation, rather than make further modifications to the system. Company-A was planning to revert to a technique developed internally, known as “multi-level variance distribution”. This technique is focused on tracking variances from KPIs and budgeted figures then traces and allocates them through to the business at the point of sale. This technique is not overly complicated on a localised scale, however it does become a much more complicated system globally. The findings of this research add support to the notion that standard contemporary management accounting models are not suitable to Company-A’s business model. One must also question whether the major cause of this failure is the lack of a strategic planning.

CONCLUSION

The contemporary management accounting techniques examined in this paper are well regarded by academe and appear to be generally accepted (with some reluctance) by industry (Argyris & Kaplan, 1994; Baird, Harrison et al. 2004; Bromwich, 1999/2000; Bromwich & Bhimani, 1994; Horngren, 1995; Innes, Mitchell et al. 2000; Kaplan, 1994; Kaplan & Norton, 1992). Whilst the list of management accounting options available to a modern firm is extensive, the selection of an inappropriate system may result in a detrimental effect on its strategic or operational functioning and positioning (Burns & Vaivio, 2001; Coad, 1999; Langfield-Smith et al., 2000; Mintzberg, 1990; Mintzberg et al., 1998; MacDonald & Richardson, 2002). Company-A implemented a system that included functionality that encompassed many of the business functions which at the outset may be considered useful, but in real terms may not actually provide the information that users require. Harnessing the technology of SAP R/3 to provide a backbone for the majority of business processes and rationalise disparate systems appeared to be the main trigger. However, the development of a system with components of multiple contemporary management accounting systems appears to challenge Company-A.

As a highly competitive global manufacturer, Company-A would ordinarily be expected to fit neatly into a paradigm that benefited from the implementation of modern management accounting techniques. However, the simplicity of its manufacturing and the strength of its current market, Company-A found itself in a situation that does not necessarily reflect firms which have been the focus of recent management accounting case studies (e.g. Chenhall & Langfield-Smith, 1999; Jazayeri & Hopper, 1999). In spite of the rhetoric extolling the virtues of contemporary management accounting systems in a manufacturing organisation, Company-A provides an alternate representation. The evidence suggests that a comprehensive contemporary management accounting system has not been fully utilised by Company-A. In combination with the levels of management utilisation, the type and scope of the system and the triggers established for implementation, provides an argument to suggest that management accounting information for Company-A holds some relevance, but not at a strategic level.

Significant in the research was the revelation that Company-A is intending to roll-back the installed management accounting system. Though an argument may be put forward for relevance of Company-A's management accounting system, plans were in place at the time of the interview to remove much of the newly implemented functionality of SAP R/3 and revert to existing systems. The determination that the complexity of the newly implemented system was too great for many managers, resulted in a decision to rationalise the system. The lack of user satisfaction appeared to be a significant barrier in the effectiveness implementation of SAP R/3. While previous systems didn't offer the range of information or expanded capabilities, it was considered more easily understood by users giving it a distinct advantage for managers. Removal of much of the functionality is seen as a method to return managers to consistent information. This will then allow a more accurate ability to benchmark and establish the KPIs that Company-A utilises so widely. The precise reasons on why the uptake is not as high as expected are unclear, but the human element should not be overlooked. The perceived usefulness and ability to analyse the processes and the resultant data requires specific skills that were beyond the capabilities of members in Company-A. This paper highlights how the enhancement of management accounting skills through training may assist members in achieving company-based performance excellence. The ineffective use of information could hamper bottom-line results and marginalised individual performance.

While the firm is significant with respect to its size and position in its designated field of business, it is merely a single firm. One limitation of a single case study is that provides only a narrow scope of information and may not be representative of the broader industry's utilisation of management accounting systems or information. In spite of this limitation, the single case-method of research is a particularly useful method in investigating actual practice (Cooper & Morgan, 2008). The implementation and subsequent utilisation of a management accounting system in a multi-national firm provides a practical perspective on how industry perceives the relevance of management accounting. Armed with this data, researchers are better placed to provide inferences as to what and why change occurred and ultimately determine patterns for future change. With this information at hand, researchers are better able to modify models based on further empirical research and solutions to serve the practitioners of management accounting. Whilst modification or the selection of considered components is seen as an appropriate strategy for creating a system that is practical, such strategies or the creation of hybrid system was not a focus of this research, but poses another prospect for further research.

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