

The relations among Changes in management accounting systems and business performance

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Abstract: Management accounting systems (MAS) play a decision-facilitating role through the generation and provision of information for managerial decision-making purposes. It has been suggested that the use of management accounting information is intended to enhance the quality of managerial decisions, resulting in better-informed action choices. This study examines the interactive effects of management accounting systems (MAS) and business performance. In the current study the change in MACS was found to be an important influential factor of business performance, which was evidenced by a significant direct association between the number of changes in MACS and business performance. This result suggests that more changes in MACS mean greater organizational capacity to build accurate and useful information for effective decision making processes, which in turn, will have a positive impact on business performance.

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1. Introduction

Accounting plays an important role in enabling firms to control their various units, also at a physical distance (cf. Kirk and Mouritsen, 1996) and research has shown that large firms do indeed tend to rely on financial controls (see Chenhall, 2003). In today's business environment, companies need to take every advantage they can to remain competitive. Global competition, rapid innovation, entrepreneurial competitors, and increasingly demanding customers have altered the nature of competition in the marketplace. Management accounting theory and practice has moved into new domains and dimensions of management, through a series of inventions in managerial technologies and as a result of new business priorities and agendas (Hartmann and Vaassen, 2003). Accounting is a universal language of business and provides a great deal of necessary and useful information; but, as a tool to meet the demands of time, accounting systems have serious shortcomings such as invalidity, incompleteness, infrequency, inaccuracy, inconsistency for long-term effect, misunderstanding and measurement of wrong variables (Johnson and Kaplan, 1987). According to Horngren and Foster (1991), financial information is inadequate for decision making purposes. Kaydos (1991) argues that it is more than a question of semantics; by no stretch of the imagination can current accounting systems provide managers with all the

information they need to make timely and effective decisions.

A few attempts at creating process, dynamic, non-linear models of change have emerged within the management accounting literature. Burns and Scapens (2000) studied management accounting change as a process and developed a model for three dualities of change – evolutionary versus revolutionary (minor versus fundamental change), formal versus informal (designed versus tacit change) and regressive versus progressive change (the extent to which change increases rationality and calculation). The Burns and Scapens model is multidimensional, but stabilisation and institutionalisation is their main interest, as in the cybernetic system conception. The management accounting literature has only recently started to show empirical concern with the concept of 'organisational culture' (Dent, 1991) though the potential of studying links between organisational culture and systems of control has long been posited (Hopwood, 1987). More recently, Shields (1995) and Birnberg (1998, 2000) have reiterated the desirability of investigating how cost management systems adoptions and effects are conditioned by variables such as organisational culture. A significant strand of management accounting research focuses on the notion that national cultural variables could affect the relationship between management control systems and performance (Awasthi, Chow, & Wu, 1998; Chow, Shields, &

Chan, 1991). It is argued that people from different cultures have different attitudes to similar management control systems and management practices (Chow, Harrison, Lindquist, & Wu, 1997). To provide accounting information for decision-making and control purposes, two fundamental options exist. On the one hand, the financial accounting records can be used as the main database for management accounting techniques (e.g., product costing or budgeting), reporting and performance measurement. We refer to such a design of the management accounting system, which is typically observed in Anglo-American firms, as 'integrated'. Two major advantages can be found with an integrated accounting system design. First, management accounting information is provided at low incremental cost. Second, internal and financial performance measures are easily reconciled on all hierarchy levels, providing management as well as investors with 'one version of the truth'. On the other hand, the management accounting system can be based upon a so-called separate third set of books beside the financial and tax accounting records. Such a 'separate' or 'dual' design (Jones and Luther, 2005) has traditionally been used in continental European and especially in German-speaking countries. Central to the contingency approach in examining the relationships between strategic priorities, organizational configurations, and management accounting systems is the notion of contingent fit. This approach asserts that neither the type of strategy, nor the organizational configuration will directly affect performance. Rather, this approach suggests that the most important determinant of performance is the contingent fit between the chosen strategy and its contextual variables. The accounting literature, in contrast, emphasizes the role of the management accounting system (MAS) as an organizational mechanism that supports strategic change (e.g., Simons, 1995), but empirical studies have not addressed the way in which management uses the MAS to engage in strategic change directly, with a number of interpretative case studies as a notable exception (e.g., Abernethy & Chua, 1996). An important reason for this lack of evidence is that studies on the MASstrategy relationship have typically modelled strategy as an (exogenous) determinant of MAS, rather than as an (endogenous) consequence of the MAS, as they typically conceive strategy as an intention and position, rather than in terms of emergence and change (see, e.g., Henri, 2006).

The issue of accounting systems change has interested management accounting scholars for decades. Dynamic business environments, characterized by unrelenting technological and organizational change from heightened globalization and increasing competition, continue to perpetuate this

focus. A case study conducted by Scapens and Jazayeri (2003) indicates that the management accounting techniques used have not changed significantly. One of the reasons for this is given by a plant manager who says that "we wanted what we had before" (Scapens and Jazayeri, 2003).

2. Literature review and hypotheses

2.1. Management accounting system

The MAS was defined as those parts of the formalized information system used by organizations to influence the behavior of their managers that leads to the attainment of organizational objectives (Horngren, Bhimani, Datar, & Foster, 2002). The design of the MAS was conceptualized in terms of two interrelated dimensions: level of detail, and frequency of reporting. The argument is that managers in some organizational contexts are likely to benefit from accounting information that is detailed and issued frequently, whereas MAS information in other contexts tends to be general rather than detailed, and issued less frequently (Davila, 2000). Management accounting is divided into tasks, techniques, organisation and behaviour as well as use and perceptions. The literature investigates the relationship between ERP systems and different aspects of management accounting. To provide some examples, Booth et al. (2000) investigate tasks, Granlund and Malmi (2002) investigate techniques and Quattrone and Hopper (2005) investigate the organisation of management accounting, while Dechow and Mouritsen (2005) investigate the use, perceptions and enactment of ERP systems. From a functionalistic and normative perspective, the focus on tasks adopted from Mauldin and Ruchala (1999) is natural as tasks should define the techniques and the solution of tasks should be organised in some optimal manner, while the use of techniques and information systems should support the solution of tasks.

The benchmarking and monitoring information provided by the management accounting system can play a significant role in this regard. The provision of benchmarking and monitoring information is one of the ways that the management accounting system can assist an organization in its pursuit of product differentiation and pricing strategies. Manager's use of the information enables them to ascertain whether their Organization, compared to its rivals, is offering a competitive package of product attributes to the customers at a competitive price, thereby assisting the organization in dealing with its market competition effectively. Management accounting and control systems also reflect extant organizational norms and values that legitimate rights and specify responsibilities of participants, prescribe parameters of action and

expectations, and sanction rewards and punishments. For large, decentralized organizations, management accounting and control systems.

Management accounting systems (MASs) can play an important role in this situation. They can be designed to provide more sophisticated information that will not only facilitate decision making within departments but will also facilitate coordination between functional departments. While there is considerable normative support for this role of MAS (Drury, 1997) there is relatively little empirical research examining how or in what circumstances MASs can serve this purpose. This study draws on the theoretical frameworks developed by Galbraith (1973) and others (Earl & Hopwood, 1981) to examine the implications of strategic choice, namely, customization for the design of MASs. It examines not only the relation between customization and use of MASs for decision making, but also explores why this occurs. The theory developed in this study argues that it is the inter-dependencies flowing from customization that primarily influences the relation between customization and MAS design.

2.2. Relationship between Management accounting systems and performance

In recent years researchers have indicated that there are systematic differences in the effective design of management accounting systems (MAS) between business entities pursuing different strategies. However, these studies only considered formal control systems. Another stream of research, conducted by organizational theorists, has established that organic decision and communication processes (hereafter, organic processes) influence the effective development and implementation of strategies. There is little evidence on the joint effect of organic processes and MAS on performance. To date, the accounting literature on MAS design has tended to examine the impact on managerial performance of task characteristics (e.g. task uncertainty) and decision-maker characteristics (e.g. personality traits) independently. Some studies (e.g. Chong, 1996; Mia & Chenhall, 1994) have focused on the importance of task characteristics and MAS design on managerial performance; whilst other studies (e.g. Chong, 1998; Fisher, 1996) have examined the influence of personality traits and MAS design on managerial performance. A theoretical framework linking the interaction between task uncertainty and the extent of use of broad scope MAS information to managerial performance is developed in the next section. Subsequent sections present the research method of the study, the results and the discussion of the results, limitations and conclusions.

Specifying the relationship between Management accounting systems change and performance can be deduced from what single-system⁴ management accounting research has uncovered and, in particular, the reasons given for the abandonment of universalistic theories in this respect. Early studies searched for the direct effects of various management accounting system attributes on the criterion variable (i.e. performance). Merchant (1981) documents the failed attempts of most studies (e.g. Milani, 1975) to find simple, bivariate relationships between performance and uses of budgeting. Other unsuccessful efforts and contradictory findings dealing with budgetary participation and performance are highlighted by Govindarajin (1986).

Based on the literature review and research objectives, the following hypothesis was derived:

H1. Changes in management accounting will be positively associated with business performance.

3. Research Methodology

3.1. Sample

Consistent with prior management accounting research of this kind, and given the research focus, in this study the respondents were typically financial controllers or chief financial officers of firms with over 200 employees. Each company secretary was phoned to collect the name and contact details of the financial controller or chief financial officer (CFO). Each CFO was then invited via telephone to participate in the study. 25 firms expressed interests in participating in the study and requested the details about the study in writing along with a copy of the survey instrument. A comparative analysis of the means on the variables of interest (t-tests) between the early and late respondents indicated no significant differences. Further, no significant differences between the respondents and non-respondents were found on the basis of firm size and industry grouping.

3.2. Changes in management accounting and control systems

Respondents were provided with the following list of 23 management accounting control systems that had been divided into five main components.

Planning systems

1. Budgeting
2. Operations planning (production)
3. Capital budgeting
4. Strategic planning
5. Any other planning systems? Please specify here

Controlling systems

6. Individual or team-based performance measurement

7. Firm performance measurement
8. Measurement of performance in terms of quality
9. Measurement of performance in terms of customer satisfaction
10. Other types of performance measures? Please specify here

Costing systems

11. Direct allocation of manufacturing overheads
12. Direct allocation of other overhead
13. Direct allocation of marketing costs
14. Internal (dept. or divisional) product transfers
15. Other costing systems – please specify here

Directing systems

16. Reward systems - bonuses
17. Reward systems – pay for performance plans based
18. Other reward systems – please specify here

Decision-making systems

19. Information reported more frequently
20. Use of more non-financial measures
21. Information reported more broadly
22. Other changes to reporting systems
23. If there is any other changes to systems that do not appear on this list, Please specify here

4. Analysis and results

Table 1 displays the correlations and regression analysis of all variables. Coefficients of Planning systems, Controlling systems, Costing systems, Directing systems and Decision-making systems are positive and significant for business performance (0.28, 0.32, 0.26, 0.24, and 0.21, respectively). The change in MACS was found to be an important influential factor of business performance, which was evidenced by a significant direct association between the number of changes in MACS and business performance. This result suggests that more changes in MACS mean greater organizational capacity to build accurate and useful information for effective decision making processes, which in turn, will have a positive impact on business performance.

Table 1. Analysis for change in components of MACS.

variable	Coefficient	t
Planning systems	0.28	2.36
Controlling systems	0.32	3.12
Costing systems	0.26	2.14
Directing systems	0.24	2.08
Decision-making systems	0.21	1.98
F	4.36	P=0.001
R ²	0.49	

5. Discussion and conclusions

The aim of this study is investigation relations among Changes in management accounting systems and business performance. In the current study the change in MACS was found to be an important influential factor of business performance, which was evidenced by a significant direct association between the number of changes in MACS and business performance. This result suggests that more changes in MACS mean greater organizational capacity to build accurate and useful information for effective decision making processes, which in turn, will have a positive impact on business performance. This finding does not support prior studies (for example, see Abernethy & Bouwens, 2005; Cavalluzzo & Ittner, 2004; Cooper, Kaplan, Maisel, Morrissey, & Oehm, 1992; Innes & Mitchell, 1991), with the exception of Baines and Langfield-Smith (2003), which suggests that management accounting innovations do not always lead to improve business performance.

MAS have traditionally had fairly simple designs, providing largely narrow scope information focusing on ex post financial information relating primarily to matters internal to the organization. In contrast, modern MAS have more complex designs and may incorporate a plethora of broad scope information in addition to historical financial accounting data. Such information may include, for example, demographic trends, economic indicators, market volume and the organisation's share thereof, competitors' costing and pricing strategies, customers' preferences and satisfaction levels, and a variety of production related efficiency and human resource management performance indicators. Often assemblages of this broad scope information are presented in integrated reporting formats such as balanced scorecards (Kaplan & Norton, 1992).

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