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Management control systems as a package—Opportunities, challenges and research directions

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Abstract

There has been very little explicit theoretical and empirical research on the concept of management control systems (MCS) as a package despite the existence of the idea in management accounting literature for decades. In this editorial we discuss a range of ways researchers have defined MCS and the problems this has created. We provide a new typology for MCS structured around five groups: planning, cybernetic, reward and compensation, administrative and cultural controls. The typology is based on the distinction between decision-making and control and addresses those controls managers use to direct employee behaviour. We discuss the conclusions of the articles included within this special issue and provide ideas for further research.

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Keyword: Management control systems package

1. Why study management control systems as a package?

The idea of management control systems (MCS) operating as a package¹ has existed for over 30 years (Otley, 1980) and there have been regular calls to study the phenomenon (Chenhall, 2003; Dent, 1990; Fisher, 1998; Flamholtz et al., 1985; Otley, 1980). Despite this there has been little explicit theorizing or empirical research on the topic (Abernethy and Chua, 1996; Alvesson and Karreman, 2004; Simons, 1995).

There are a number of reasons why studying the MCS package phenomenon is important. Firstly, MCS do not operate in isolation. While much of the MCS research considers single themes or practices that are seemingly unconnected from each other and the context in which they operate, these invariably sit within a broader control system (Chenhall, 2003). This has several implications. For one, Fisher (1998) argued that if the links between various MCS are not recognized, then the way in which the considered MCS components relate to studied contingent variables will lead to erroneous conclusions. This idea is supported by Chenhall (2003) who warned that studying specific MCS elements in isolation has “the potential for serious model under specification” (p. 131). This may provide the underlying reason

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¹ As a general conception, a management control systems (MCS) package is a collection or set of controls and control systems. The individual control systems may be more traditional accounting controls such as budgets and financial measures, or administrative controls, for example organisation structure and governance systems, along with more socially based controls such as values and culture. Organisations may have numerous controls present, and they all may be used to some extent to align individual's activities with organisational goals (Abernethy and Chua, 1996; Alvesson and Karreman, 2004; Flamholtz et al., 1985; Otley, 1980; Simons, 1995).

for Dent's (1990) assessment of MCS contingency research when he argued that while some relationships have been found between some contingency variables and MCS, on the whole the "relationships are weak and the conclusions are fragmentary" (p. 10). In his more recent examination of contingency research, Chenhall (2003) supported Dent's (1990) point and argued that the variables considered have not provided consistent explanations of the kind of MCS that fit organisation types or drive performance.

A second and related point is one that we argued in our call for papers for this special issue. Accounting researchers have spent much time studying innovations in practice, such as activity-based costing/management (ABC/M), the balanced scorecard (BSC), value-based management (VBM), rolling forecasting, and target costing, with the goal of explaining their development, adoption, use and impact. However, studying these systems individually may influence any conclusions we can draw, if the use and impact of a new MCS element is related to the functioning of the existing broader MCS package.

Thirdly, a major focus of MCS theory is how to design MCS in order to produce the desired outcomes. While much management accounting research has studied accounting-based controls and this is typically focussed on formal systems, there is still limited understanding of the impact of other types of control (such as administrative or cultural) and whether/how they complement or substitute for each other in different contexts. Gaining a broader understanding of MCS as a package may facilitate the development of better theory of how to design a range of controls to support organisational objectives, control activities, and drive organisational performance.

By taking a broader package approach to the study of MCS, researchers will be able to develop better theory of the real impact of innovations such as the BSC, and how to design MCS packages. However, this raises questions about the kinds of challenges which exist in the study of MCS as a package.

2. Challenges in studying MCS as a package

While there are good reasons to study MCS as a package there are a range of challenges in doing so; three of which will be explained in this editorial. The first involves the difficulty of clearly defining the concept of MCS. This includes making a distinction between MCS and information/decision-support systems. Furthermore, if we focus on control rather than decision-support, what is it that MCS is supposed to control; is it human behaviour or artefacts, such as cash or material flows; and at what level, the organisation, business unit, management, or individual?

When the definition parameters of MCS are set, the second issue arises of what conceptually constitutes an MCS package; what is included, what is left out, and why? An analytical conception, which provides a sufficiently broad yet parsimonious approach, is required to study the empirical phenomenon. In addition, while studies have looked at control systems individually and at times in combination, the challenge is to understand how all the systems in an MCS package operate as an inter-related whole. Abernethy and Brownell (1997) captured this issue in stating: "It is clear that organisations rely on combinations of control mechanisms in any given setting, yet virtually nothing is known about how the effects of any one control are governed by the level of simultaneous reliance on other forms" (p. 246).

Thirdly, there are challenges in empirically studying an MCS package as they are often very large and complex systems. This creates difficulties in how field and/or case study researchers gather and make sense of the complexity that exists in each of the elements of the MCS package and then report their findings in journal articles at a sufficient level of abstraction to make the reading comprehensible. Furthermore, there are problems with how survey researchers test the form of these large and complex packages across organisations so that systematic relationships can be established. This includes the difficulty of developing survey instruments to capture the underlying phenomena in a meaningful way as well as gathering adequately large samples.

The purpose of this editorial is to enlighten the abovementioned issues and lay a foundation to enable researchers to continue developing research on MCS. The first issue to be addressed is what control is, and what is meant by MCS? We will then introduce what we consider to be a comprehensive but parsimonious typology of an MCS package which may be used to inform empirical work. Next we will discuss the four papers in this special issue including their overall conclusions. Finally, the implications of these discussions for further research will be outlined.

3. MCS definition

The first challenge in undertaking research on MCS packages is the difficulty of defining what is meant by MCS (Fisher, 1998). A number of definitions and descriptions of MCS exist; some of which contain overlaps, while others are

quite different from each other (Abernethy and Chua, 1996; Alvesson and Karreman, 2004; Anthony, 1965; Chenhall, 2003; Emmanuel et al., 1990; Fisher, 1998; Flamholtz et al., 1985; Green and Welsh, 1988; Langfield-Smith, 1997; Merchant and Van der Stede, 2007; Otley and Berry, 1980; Ouchi, 1979; Simons, 1995).

Some authors have outlined very broad conceptions of what could be considered MCS. For example Chenhall (2003) discussed management accounting (MA) which is a “collection of practices such as budgeting or product costing”, management accounting systems (MAS) which is the “systematic use of MA to achieve some goal” and MCS which “is a broader term that encompasses MAS and also includes other controls such as personal and clan controls”. He also notes that the term organisational control “is sometimes used to refer to controls built into activities and processes such as statistical quality control, just-in-time management” (p. 129). Merchant and Otley (2007) note that broader conceptualizations of control can include factors such as strategic development, strategic control and learning processes, all of which are typically beyond the scope of management accounting. In these conceptualizations “almost everything in the organisation is included as part of the overall control system”² (p. 785).

There are also narrower views of what constitutes MCS. Merchant and Van der Stede (2007) separate management control from strategic control and define management control as dealing with employees’ behaviour. “It is people in the organisation who make things happen. Management controls are necessary to guard against the possibilities that people will do something the organisation does not want them to do or fail to do something they should do. . . If all employees could always be relied on to do what is best for the organisation, there would be no need for MCS” (p. 8). Abernethy and Chua (1996) employ the same line of argument in defining an organisational control system as comprising “a combination of control mechanisms designed and implemented by management to increase the probability that organisational actors will behave in ways consistent with the objectives of the dominant organisational coalition” (p. 573).

Some authors move beyond behavioural control and see controls as the means to achieve goal congruence. Flamholtz et al. (1985) defined organisational controls as: “attempts by the organisation to increase the probability that individuals and groups will behave in ways that lead to the attainment of organisational goals (p. 36). They proceeded to define organisational control systems as “techniques and processes to achieve goal congruence which may be designed for all levels of behavioural influence: individuals, small groups, formal subunits and the organisation as a whole” (p. 36). Note that their definition of organisational control is much broader than their definition for organisational control systems. The former allows many different types of controls (e.g. rules), whereas the latter definition is focused only on those systems that aim for goal congruence.

The lack of clarity, wide variation and inconsistencies in how MCS have been conceptualized has created a number of problems in MCS research in regards to the interpretation of research results and the design of MCS. For example, many commonly studied contingency factors may imply different things for different types of accounting systems and controls. To illustrate, environmental uncertainty may require broad scope information (i.e. more than financial information) to provide a multifaceted picture of reality to enable decision-making. This suggests *more extensive use* of accounting under environmental uncertainty. However, from a behavioural perspective, environmental uncertainty may require agile organisations with considerable employee empowerment and thus, *less extensive use* of accounting controls under these very same circumstances of environmental uncertainty. Therefore, a contingent factor (such as an uncertain environment) can potentially have very different impacts on the accounting systems depending on whether the system is used for decision-making or control. Building a cumulative body of knowledge about the design and use of MCS becomes difficult without well-articulated definitions and purposes of MCS.

Future research needs to be more explicit about the kind of controls it addresses. The definitions of Abernethy and Chua (1996), Flamholtz et al. (1985), Merchant and Van der Stede (2007) and Ouchi (1979) are based on the assumption that someone (senior manager/top management team/dominant coalition) is seeking to control the behaviour of others (middle management, employees).³ However, excluding the Flamholtz et al. (1985) definition of organisational control systems, these remaining definitions can easily accommodate both systems that senior managers use to influence

² This ‘including almost everything’ approach becomes more understandable when we look at the various ways researchers have stated the purpose of MCS, or what organisations aim to achieve with controls. Merchant and Otley (2007) argue that “in broad terms, a management control system is designed to help an organisation to adapt to the environment in which it is set and to deliver the key results desired by stakeholder groups” (p. 785) and “keep organisations reliably on track” (p. 786).

³ This can easily be extended to partners and other actors in networks, value-chains, etc.

the behaviour of junior managers or employees, as well as the systems senior managers create to allow efficient decision-making either by themselves or at more junior levels.

One potentially useful distinction advocated by Zimmerman (1997, 2001) is between decision-making and control. There are some accounting systems in organisations that are focused on providing information to support decision-making and others that direct employee activities or behaviour. Managers may employ systems to support their own decision-making activities, such as trying to influence machine utilization or cash flows. Alternatively, managers may employ these information systems to support decision-making by their sub-ordinates. However, if no mechanisms exist to monitor subordinate managers' goal congruence and behaviour, then the system is a decision-support or information system, rather than a control system. Therefore, managers may make a difference in the organisation by making decisions themselves, or getting their subordinates to make the 'right' decisions. However, unless the support system is used by an individual (manager) to guide another's (subordinate) behaviour, then it is a decision-support system, regardless of whether it is used by senior managers or provided by senior managers for their subordinate managers.

Our suggestion to clarify these issues is to start with the managerial problem of directing employee behaviour. Those systems, rules, practices, values and other activities management put in place in order to direct employee behaviour should be called management controls. If these are complete systems, as opposed to a simple rule (for example not to travel in business class⁴), then they should be called MCSs. Accounting systems that are designed to support decision-making at any organisational level, but leave the use of those systems unmonitored, should not be called MCSs and instead termed management accounting systems.

This definition is broader than those aiming for goal congruence or motivation, as goal congruence excludes a number of ways superiors may attempt to influence the behaviour or subordinates—such as explicit rules.⁵ It is also different and broader than the definition provided by Simons (1995: p. 5), who said: "MCSs are the formal, information-based routines and procedures managers use to maintain or alter patterns in organisational activities". Simons argues that these information-based systems become control systems when they are used to maintain or alter patterns in organisational activities. If not used for this purpose they are not control systems, but information for decision-making. Simons' definition is akin to our suggestion above, except for its narrow focus on information-based routines. Conversely, our suggestion is much narrower than Chenhall's (2003) view, as accounting systems designed and/or used only for decision-support are excluded.

We suggest the use of the concept of management controls/MCS, rather than organisational controls/organisational control system. In this way organisational controls could include controls that are not only directed at employees, such as quality and inventory controls. Note that this idea of management control is also broader than the conceptualization suggested by Anthony (1965), as included strategic and operational controls aimed at directing employees lie outside the scope of Anthony's definition.

These distinctions are often more analytically than empirically separable. Take for example, planning. Most of us would probably argue that planning is done to decide *ex ante* the direction we should take, yet planning also has another role. People involved in planning activities are more likely to buy into those plans and to execute them. Hence, depending on how it is done, planning can accomplish two tasks; the first of these being to support *ex-ante* decision-making. If this is the only purpose of the planning it should not be called a MCS. Alternatively, planning could also be an integral part of the system that creates goal congruence within organisations and therefore, deserves to be labelled as a MCS. Another commonly used concept open to conflicting interpretations is "cost control". This may mean that an entrepreneur controls her/his own expenses, or a large organisation creates a new costing system to support decision-making. Conversely, it may mean that senior managers restrict travelling in the hope of saving money or that a superior requires subordinates to report on costs relative to the budget. This reporting requirement, or accountability, may cause the subordinates to control costs by themselves. So the term cost control can refer to various types of mechanisms and activities within organisations. However, only the last two examples of cost control would classify as management controls or MCS, as managers use them to influence employee behaviour and such use extends beyond providing better information for decision-making.

As such, management controls include all the devices and systems managers use to ensure that the behaviours and decisions of their employees are consistent with the organisation's objectives and strategies, but exclude pure

⁴ A set of rules, however, may be regarded as a system.

⁵ Note that rules may be detrimental to motivation, but may produce desired behaviour.

Cultural Controls						
Clans		Values			Symbols	
Planning		Cybernetic Controls				Reward and Compensation
Long range planning	Action planning	Budgets	Financial Measurement Systems	Non Financial Measurement Systems	Hybrid Measurement Systems	
Administrative Controls						
Governance Structure		Organisation Structure			Policies and Procedures	

Fig. 1. Management control systems package.

decision-support systems. Any system, such as budgeting or a strategy scorecard can be categorised as a MCS. The term ‘package’ is employed because in most contemporary organisations there are a number of MCS. If all those were designed and coordinated intentionally, we might call the whole system a MCS.⁶ However, the concept of a package points to the fact that different systems are often introduced by different interest groups at different times, so the controls in their entirety should not be defined holistically as a single system, but instead as a package of systems.

4. A New MCS package conceptual framework

With this clearer definition of the parameters of MCS, the second issue of what conceptually constitutes an MCS package can now be considered. Based on the work of Brown (2005), Table 1 and Fig. 1 provide a conceptual typology of an MCS package. The typology was developed by analysing and synthesising nearly four decades of MCS research (for examples and reviews see Chenhall, 2003; Fisher, 1995, 1998; Flamholtz et al., 1985; Langfield-Smith, 1997; Otley, 1980; Simons, 1995). This analytical conception of MCS as a package provides a sufficiently broad, yet parsimonious, approach for studying the phenomenon empirically. Its aim is to facilitate and stimulate discussion and research in this area, rather than suggesting a final solution to all related conceptual problems. To illustrate its strengths, in the following discussion we compare our typology with the prominent ‘object of control’ framework proposed by Merchant and Van der Stede (2007). In considering this typology it must always be recognised that it is a broad model of an organisation’s MCS package and many of the individual controls have significant research streams associated with them. The strength of the typology lies in the broad scope of the controls in the MCS as a package, rather than the depth of its discussion of individual systems. There are five types of controls in the typology; planning, cybernetic, reward and compensation, administrative and cultural controls.

4.1. Planning controls

Planning is an ex ante form of control (Flamholtz et al., 1985). Firstly, it sets out the goals of the functional areas of the organisation, thereby directing effort and behaviour. Secondly, it provides the standards to be achieved in relation to the goals, and clarifies the level of effort and behaviour expected from organisation members. Furthermore, planning can enable co-ordination through aligning a set of goals across the functional areas of an organisation, thereby controlling the activities of groups and individuals to ensure they are in line with desired organisational outcomes. In relation to planning, there are two broad approaches. The first is action planning, in which the goals and actions for the immediate future, usually a 12-month period or less, are established. This has a tactical focus. The second broad approach is long-range planning, in which the goals and actions for the medium and long run are established. This has a more strategic focus.

Merchant and Van der Stede (2007) present planning and budgeting together as the financial results control systems. However, planning can be done with little reference to finance. In strategic planning, management can create strategic projects and other initiatives, all of which may be effective in directing what people do. Similarly, operational planning

⁶ Merchant and Van der Stede (2007: p. 15) suggest that the collection of control mechanisms should be called an MCS.

Table 1
Description of MCS package.

Elements	Description	Components
Planning	Ex-ante form of control (Flamholtz et al., 1985); first it sets out the goals of the functional areas of the organisation thereby directing effort and behaviour; second, it provides the standards to be achieved in relation to the goal, making clear the level of effort and behaviour expected; third, it enables congruence by aligning goals across the functional areas of an organisation, thereby controlling the activities of groups and individuals.	Action planning—goals and actions for the immediate future, usually a 12-month period, are established; has a tactical focus. Long-range planning—the goals and actions for the medium and long run are established; has a more strategic focus
Cybernetic	There are five characteristics of cybernetic control (Green and Welsh, 1988). First, there are measures that enable quantification of an underlying phenomenon, activity or system. Second, there are standards of performance or targets to be met. Third, there is a feedback process that enables comparison of the outcome of the activities with the standard. This variance analysis arising from the feedback is the fourth aspect of cybernetic control systems. Fifth is the ability to modify the system's behaviour or underlying activities.	<i>Budgets</i> (Bunce et al., 1995; Hansen et al., 2003), <i>Financial measures</i> (Ittner and Larcker, 1998), <i>Non-financial measures</i> (Ittner and Larcker, 1998), <i>Hybrids</i> that contain both financial and non-financial measures such as the Balanced Scorecard (BSC) (Greenwood, 1981; Kondrasuk, 1981; Ittner and Larcker, 1998; Kaplan and Norton, 1992, 1996a,b, 2001a,b; Malina and Selto, 2001)
Reward/compensation	Motivating and increasing the performance of individuals and groups through attaching rewards to control effort direction, effort duration, and effort intensity.	Attaching rewards and or compensation to achievement of goals (Flamholtz et al., 1985; Bonner and Sprinkle, 2002)
Administrative	Administrative control systems are those that direct employee behaviour through the organizing of individuals (organisation design and structure), the monitoring of behaviour and who employees are made accountable to for their behaviour (governance); and through the process of specifying how tasks or behaviours are to be performed or not performed (policies and procedures), (Simons, 1987).	<i>Organisational design and structure</i> (Otley and Berry, 1980; Emmanuel et al., 1990; Abernethy and Chua, 1996; Alvesson and Karreman, 2004), <i>Governance structures</i> within the firm (Abernethy and Chua, 1996), <i>Procedures and policies</i> (Macintosh and Daft, 1987; Simons, 1987)
Culture	The values, beliefs and social norms which are established influence employees behaviour. (Birnberg and Snodgrass, 1988; Dent, 1991; Pratt and Beaulieu, 1992).	<i>Value-based controls</i> (Simons, 1995), <i>Clan controls</i> (Ouchi, 1979), <i>Symbols</i> (Schein, 1997)

often comprises task lists, which provide guidance on what to do, perhaps without clear link to finance and accounting. As planning may have a major role in directing employee behaviour, we treat it as a separate system in our MCS typology. It is important for researchers to understand whether planning is done simply to decide on future activities or whether the process involves building employees' commitment to these plans.

4.2. Cybernetic controls

Cybernetic principles have had a long association with the concept of control (Arrow, 1964; Daft, 1983; Koontz and O'Donnel, 1968; Mintzberg, 1979; Strank, 1983). Green and Welsh (1988) defined cybernetic control as "a process in which a feedback loop is represented by using standards of performance, measuring system performance, comparing that performance to standards, feeding back information about unwanted variances in the systems, and modifying the system's comportment" (p. 289). In organisations a cybernetic system can either be an information system or control system contingent upon how it is used. A cybernetic system would be an information and decision-support system if managers themselves detected unwanted variances and modified their underlying behaviour or activity that influenced the variance (for example in a production process) without anyone else's involvement. However, the linking of behaviour to targets, and the establishing of accountability for variations in performance takes a cybernetic system from being an information system to support decisions, to a MCS.

There are four basic cybernetic systems that have been identified in MCS research that will be considered in this typology: budgets (Bunce et al., 1995; Hansen et al., 2003); financial measures (Ittner and Larcker, 1998); non-financial measures; and finally hybrids that contain both financial and non-financial measures—e.g., the Balanced Scorecard

(BSC) (Greenwood, 1981; Ittner and Larcker, 1998; Kaplan and Norton, 1992, 1996a,b, 2001a,b; Kondrasuk, 1981; Malina and Selto, 2001).

Budgeting is central to, and the foundation of, MCS in most organisations and its use is almost universal (Bunce et al., 1995). This is due to its “ability to weave together all the disparate threads of an organisation into a comprehensive plan that serves many different purposes, particularly performance planning and *ex post* evaluation of actual performance *vis a vis* the plan” (Hansen et al., 2003; p. 96). While budgeting may have a number of uses, including integration of processes and resource allocation decisions, as a control mechanism its focus is on the planning acceptable levels of behaviour and evaluating performance against those plans.

A common form of control is holding employees accountable for specific financial measures. Some of these financial measures may be related to the budgeting process through using information contained in the budget. However, the budget is not the same as a financial performance measurement system—the budget is a broad, complete technique, whereas financial performance measures can be used in a narrow simple fashion in target-setting. Examples of financial performance measures would include return on investment and economic value added (EVA).

Non-financial measures are becoming an increasingly important part of MCS within contemporary organisations and they may be used to overcome some of the perceived limitations in financial measures and to identify the drivers of performance. They may also be the result of using other management initiatives, such as TQM (Ittner and Larcker, 1998). Finally, hybrid performance measurement systems contain both financial and non-financial measures. Hybrid forms of performance measurement have been in use for some time, with the earlier approaches including such systems of management by objectives (MBO) (Greenwood, 1981; Kondrasuk, 1981). In more recent times the BSC, which is a comprehensive MCS with both financial and non-financial performance measures, has become quite dominant (Ittner and Larcker, 1998; Kaplan and Norton, 1992, 1996a,b, 2001a,b; Malina and Selto, 2001).

4.3. *Reward and compensation controls*

Reward and compensation systems focus on motivating and increasing the performance of individuals and groups within organisations by achieving congruence between their goals and activities and those of the organisation (Bonner and Sprinkle, 2002). The basic argument is that the presence of rewards and compensation lead to increased effort, as compared to an absence of explicit rewards and compensation (Bonner and Sprinkle, 2002).

While reward systems can range from extrinsic to intrinsic (Flamholtz et al., 1985), management accounting research has largely focused on extrinsic rewards (Ittner and Larcker, 2001). Bonner and Sprinkle (2002) reviewed the research literature on incentives and performance, and they argued that monetary incentives increase effort and performance through focusing individuals efforts on the task. The linking of effort to the task can impact on performance in three ways: effort direction, i.e. the tasks individuals focus on; effort duration, i.e. how long individuals devote themselves to the task; and effort intensity, i.e. the amount of attention individuals devote to the task.

Reward and compensation systems are a separate element in our typology. Although rewards are often linked to cybernetic controls, organisations also provide rewards and compensation for other reasons. These include retaining employees and encouraging cultural control, via group rewards. Therefore, there is a need for research to consider alternative reward and compensation schemes, their intended purposes, and their links to various controls.

4.4. *Administrative controls*

Administrative control systems direct employee behaviour through the organizing of individuals and groups, the monitoring of behaviour and who you make employees accountable to for their behaviour, and the process of specifying how tasks or behaviours are to be performed or not performed. We consider three groups of administrative controls; organisation design and structure (Abernethy and Chua, 1996; Alvesson and Karreman, 2004; Emmanuel et al., 1990; Otley and Berry, 1980), governance structures within the firm (Abernethy and Chua, 1996), and the procedures and policies (Macintosh and Daft, 1987; Simons, 1987).

Organisational design can be an important control device, as by using a particular structural type an organisation can encourage certain types of contact and relationships (Abernethy and Chua, 1996; Alvesson and Karreman, 2004; Emmanuel et al., 1990). Flamholtz (1983) argued that organisational structure is a form of control which works through functional specialization, and contributes to control through “reducing the variability of behaviour and, in turn,

increasing its predictability” (p. 158). Although many researchers consider organisational design to be a contextual variable, and not part of organisational controls, we include it as it is something managers can change, as opposed to something that is imposed on them.

The governance structure relates to the company’s board structure and composition, as well as its various management and project teams. Governance includes the formal lines of authority and accountability (Abernethy and Chua, 1996), as well as the systems which are in place to ensure that representatives of the various functions and organisational units meet to co-ordinate their activities both vertically and horizontally. Meetings and meeting schedules, for example, create agendas and dead-lines which direct the behaviour of organisation members. As the governance structure can be designed in many ways in any given organisation, researchers should not group them together, but instead study how they link to each other and to other controls.

The use of policies and procedures is the bureaucratic approach to specifying the processes and behaviour within an organisation. Policies and procedures include such approaches as standard operating procedures and practices (Macintosh and Daft, 1987) and rules and policies (Simons, 1987). Policies and procedures include what Merchant and Van der Stede (2007) call action controls, i.e. behavioural constraints, pre-action reviews, and action accountability. As Merchant and Van der Stede’s (2007) action controls constitute only part of what we have labelled administrative controls, our typology provides a more complete conception of the administrative tools managers use to control behaviour, as compared to their object of control framework.

4.5. Cultural controls

Flamholtz et al. (1985) defined organisational culture as “the set of values, beliefs and social norms which tend to be shared by its members and, in turn, influence their thoughts and actions” (p. 158). This view of culture is supported by a range of accounting-related research (Birnberg and Snodgrass, 1988; Dent, 1991; Pratt and Beaulieu, 1992). While culture may exist as a context for an organisation and may at times be beyond the control of managers (Clegg et al., 2005), culture is nonetheless a control system when it is used to regulate behaviour. We consider three aspects of cultural control; value-based controls (Simons, 1995), symbol-based controls (Schein, 1997), and clan controls (Ouchi, 1979).

Simons (1995) developed the concept of value controls through what he described as belief systems. These are defined as “the explicit set of organisational definitions that senior managers communicate formally and reinforce systematically to provide basic values, purpose, and direction for the organisation”. These organisational definitions espouse the “values and direction that senior managers want subordinates to adopt” (p. 34), while mission statements, vision statements, credos and statements of purpose, are examples of belief systems which convey values (Simons, 1994).

The impact of values on behaviour, institutionalized through belief systems, works on three levels. The first is when organisations deliberately recruit individuals that have particular types of values which match with those of the organisation.⁷ The second is when individuals are socialized and have their values changed to fit the organisational values (see Alvesson and Karreman, 2004). The third is when values are explicated and employees behave in accord with them, even if they do not adhere to them personally. For example, Johnson and Johnson have a CREDO,⁸ or value statement, that outlines their organisational values. This includes issues such as their community responsibilities. Employees may behave in accord with this value statement because it has been personalized by them, or because it is expected by the organisation. In either case, the value is designed to impact employee behaviour.

Symbol-based controls are when organisations create visible expressions, such as building/workspace design and dress codes, to develop a particular type of culture (Schein, 1997). For example, an organisation may create an open plan office to create a culture of communication and collaboration in an attempt to control behaviour. Similarly, an organisation may require staff to wear a uniform (such as a flight steward) in order to create a culture of professionalism.

Drawing on a history of cultural research, Dent (1991) argues that there are distinct subcultures within organisations and this claim is supported by Clegg et al. (2005). These subcultures or micro-cultures or individual groups can be labelled as clans. Ouchi (1979) developed the concept of a clan in control research. His concept rests upon the idea

⁷ This is sometimes done using psychometric testing in the interview process.

⁸ <http://www.jnj.com/connect/about-jnj/jnj-credo/?flash=true>.

that individuals are exposed to a socialization process that instils in them a set of skills and values. This socialization process may relate to groups, such as professions (i.e. doctors or accountants), or groups within organisations which form some other kind of boundary, such as an organisational unit or division. Clan controls work by establishing values and beliefs through the ceremonies and rituals of the clan.

Merchant and Van der Stede (2007) discuss personnel controls. These include selection and placement, training and job design, as well as provision of the necessary resources. We include selection (and known selection criteria) under cultural controls. Conversely, placement can be associated with organisational, and occasionally with governance structure. Training can be included in administrative controls, as this typically involves teaching individuals to follow the specified policies and procedures. Training can also be included in cultural controls as training can be seen as a way of managing organisational culture. Job design can be considered an administrative control, whereas the provision of the necessary resources is not really a control mechanism; it is merely a prerequisite for proper work and does not provide direction as such. The provision of resources can be linked back to providing sufficient information to allow proper decision-making.

4.6. *Why this typology?*

Returning to the typology represented in Fig. 1. Cultural controls are pictured at the top to indicate that they are broad, yet subtle controls. They are assumed to be slow to change, thus, providing a contextual frame for other controls. In the middle of the figure are the planning, cybernetic, and reward and compensation controls. These are assumed to be tightly linked in many contemporary organisations, and are presented in temporal order from left to right. At the bottom are administrative controls which create the structure in which planning, cybernetic, and rewards and compensation control are exercised.

While a number of conceptions of an MCS package have appeared in accounting research over the last three decades (for example, Fisher, 1995; Flamholtz et al., 1985; Otley, 1980; Simons, 1995), they either omit key MCSs that managers have available to them, or do not make a sufficiently clear distinction between decision-support systems and MCS. Our proposed typology starts from the idea that control is about managers ensuring that the behaviour of employees (or some other relevant party, such as a collaborating organisation) is consistent with the organisation's objectives and strategy. It is structured around how control is exercised and, as such, it broadly maps the tools, systems and practices managers have available to formally and informally direct employee behaviour. In establishing the tools and systems managers have available to direct behaviour, our typology contains more recent developments in MCS design (such as hybrids like the BSC), and includes forms of control that have received less attention in empirical research, such as cultural control.

Some MCS typologies start from a principle that all MCS operate under the cybernetic principle. While we recognise that cybernetic control is important in an MCS package (and we are specific about the types of cybernetic controls available), we include other forms of control available to managers, such as administrative controls. Furthermore, our typology includes organisational structure. Many accounting researchers have treated this as a contingent variable, but we consider it to be a control mechanism; as it is something managers can use and alter in the process of control.

A number of MCS typologies are not clear about the difference between information systems for decision-making and MCS. We exclude pure decision-support systems. While information systems may have an influence on behaviour, they are not specifically designed to hold organisation members accountable for their behaviour, nor do they relate behaviour to targets.

An MCS typology, such as the one presented in this paper, cannot be too narrow as there is a risk that some controls may go unnoticed and existing links to other controls may obscure the research findings. Conversely, a typology needs to be parsimonious enough to create boundaries for an empirical inquiry. We hope that the typology set out in Fig. 1 will help researchers to question the potential linkages between systems and will stimulate discussion and research in this area. Over time, further research should reveal the missing and unnecessary elements in it.

5. Paper reflections

When we first decided to send out the call for papers for this special issue we were motivated by the fact that little empirical research has addressed the issue of MCS as a package of controls, and this contrasted with the research experiences of ourselves and others, which suggested that organisations use large and complex combinations of MCS.

We believe that the three papers we have selected after the review process, together with the Kennedy and Widener⁹ paper which was submitted to *Management Accounting Research* as a regular submission, provide a good start for considering this issue in more depth, and demonstrate that we need to do a lot more empirical and conceptual work on the phenomenon.

Kennedy and Widener provide a case study of the control package used in a lean manufacturing environment. They find that accounting practices mediate the relation between the lean manufacturing initiative and the rest of the MCS package, which includes performance measurement systems, operating rules and procedures, as well as social controls. A key outcome from their research was that the organisation had a large and complex control package that resembled a configuration fit of controls. Furthermore, they found that the elements of the MCS package were related in a system of multiple unidirectional and bi-directional relations. Through these findings Kennedy and Widener add to the body of MCS package research. They also contribute by considering the relationship between a more operational level of strategy (lean manufacturing) and the MCS package; an issue which has received little attention in MCS literature.

Sandelin undertakes a case study on the MCS package in a growth firm and examines two different MCS packages in the face similar contingent factors. He has a number of interesting findings, including support for Kennedy and Widener's conclusion that the MCS package forms a configuration. Furthermore, in Sandelin's case the form of the MCS package is influenced by functional issues rather than contingent factors. He finds that the two control package configurations possess the characteristics of equifinality, which means that the while the MCS packages may look quite different, they both produce an equally good outcome. However, while two MCS packages may possess this equifinality, their functionality seems to depend on internal consistency between elements. Therefore, two packages may have contrasting elements, yet do the same job, as a result of internal consistency between the chosen elements in each of the packages.

The next two studies both consider a context outside of the traditional organisational structure. Langfield-Smith studies the start-up and interim phases of a collaborative alliance with five partners in the construction industry, examining how the partners' perceptions of trust impact control package design and use. The setting was characterized by high levels of risk, high levels of both environmental and behavioural uncertainty, and a high number of transactions. Langfield-Smith finds that governance structures and the array of MCS were complemented by trust in order to manage this highly uncertain setting. Furthermore, the managers' perceptions of goodwill and competence trust impacted the choice of alliance structure and the control systems. It is clear from this paper that cultural controls are an important aspect of an MCS package in a collaborative setting.

Van der Meer-Kooistra and Scapens examine the idea of lateral relations between and within organisations in order to develop a framework for designing control mechanisms in such contexts. A key distinction between traditional approaches and newer organisational forms, such as collaborations, is the need for cooperation and coordination, rather than the traditional hierarchical command and control approach. Van der Meer-Kooistra and Scapens argue that there is a need to balance the flexibility needed to deal with environmental uncertainty with firmness needed to ensure the efficiency and standardization of operations. They argue that this need to balance firmness and flexibility requires *minimal structures* to enable activities to take place. They extend the work of Kamoche and Cunha (2001) who discuss the *social* and *technical* structure, by adding the *institutional* and *economic* structure. These underlying structures, which are dynamic over time, provide the basis upon which to design the governance (or control) systems for the lateral relations.¹⁰ They group governance practices into hierarchical, relationship and market practices, and they study two types of relations; *between* organisations and *within* organisations. They found that the package of governance practices, underpinned by the social, technical, institutional and economic structures, provided 'firmness' in the relationship, while still allowing 'flexibility' in facing the changing and uncertain context.

Considering this set of papers holistically raises a number of potential research opportunities. Firstly, the way in which each of the authors conceptualized the MCS package in their studies was quite different, which meant that trying to establish a coherent set of findings is challenging. For example, while there is some evidence that configurations

⁹ The Kennedy and Widener paper was not originally submitted as a response to the call for papers for this special issue. However, the paper was so well fitted to the theme of the special issue that the editor and authors decided to include it.

¹⁰ Van der Meer-Kooistra and Scapens prefer the word governance, rather than control, as it is broader than the idea of control and recognizes that power may be balanced among a number of interest groups when relations between these groups are lateral rather than hierarchical; consequently control is not exercised in a traditional sense.

of control may exist and may possess the characteristic of equifinality, there is no consistent typology of the MCS package which would enable us to compare these configurations across the four papers and compare the influences on these configurations so that we can begin building a more coherent theory.

Kennedy and Widener provide some initial evidence of the relationship between systems in a package. However, this could be extended by explicating how the systems in an MCS package actually relate to each other. While they talk about systems being coupled, what does this actually mean, and what time period does this coupling operate over? We discuss this issue in more detail below.

While Van der Meer-Kooistra and Scapens begin developing the idea of structures, more work is required to investigate the aspects of this model which function as structuring mechanisms; which of the four structures provide a background for governance or control, and in what contexts; which structures actually operate as control systems used by managers; which operate as information systems; and which are the operational processes of the organisation and/or relationship.

In the following section we will extend these issues along several themes and provide more direction on what requires further study and how this may be achieved.

6. Research opportunities

While the five groups of controls in our MCS package individually perform the function of controlling the behaviour of employees, it is important that they are understood as a package. We will outline some of the major opportunities for research along two main themes. The first is the configuration of an MCS package, and the second is how the systems within the package relate to each other. Both configurations and linkages between systems need to be addressed against the outcomes and/or performance they produce.

The first theme relates to what is actually contained in MCS packages within organisations. MCS research has provided much information about the operation of many of these systems individually; however, at this time we know very little about how these systems are actually configured as a package across organisations. Are there particular configurations, either broad or narrow, that systemically exist in specific settings? For example, do specific types of cybernetic controls generally exist with specific types of administrative or cultural controls? Are there different kinds of functional demands, settings and/or contingency factors that impact the form of the control package configuration and its effectiveness? If we broaden the concept of performance from maximizing shareholder wealth, and begin thinking about satisfying a broader set of stakeholders (such as environmental and social stakeholders), is there a particular configuration that enables these broader notions of performance to be managed? As the environments within which organisations exist are in a state of constant change, which of all the elements in the MCS package are the ones which have to fit best, and which are less essential for maintaining control and gaining superior performance? Moreover, are there equally effective configurations? This important question of equifinality is discussed in the paper by Sandelin in this special issue. Furthermore, as the papers by Van der Meer-Kooistra and Scapens and Langfield-Smith (also in this special issue) indicate, relationships with external actors also need to be controlled. Thus, the package of controls which is likely to be the most effective in the different types of relationships and settings is an important and pressing issue for the business community.

As suggested in the introduction, accounting researchers spend much of their time studying innovations in practice, such as the BSC or VBM. When these new management techniques are added to a package of controls, how do they impact on the package as a whole, and does the configuration of the control package impact the development, adoption, effectiveness and use of new techniques?

As research progresses in this area there is a need to refine and develop both conceptual typologies and the constructs contained in those typologies. Empirical researchers may find that some controls are unnecessary for understanding organisational behaviour, and other research may uncover new controls which can then be added to the theory of MCS.

A second and related theme is how the elements within a control package relate to each other. Currently we have very little theory that enables researchers to establish the relationships between the systems in a control package. An obvious question is whether the effectiveness of each control system is dependant on the existing configuration of the package? For example, misalignments between performance measures and the organisational structure used to group activities and tasks, or between the incentive systems and the performance measures, may result in ineffective control. When researchers study the impact of particular performance measures they might conclude that they are ineffective per se, when it is the misfit with other elements of the control package that is the problem. Furthermore, suppose two

forms of cybernetic control, such as a budget and a BSC, are coupled with a particular organisational structure. A researcher may study the effectiveness of the BSC and conclude that it is successful. However, it may be the budget that is actually driving performance. By examining all the elements in the package, and the relationships between them, we are more likely to get a better understanding of the effectiveness of the individual elements.

A long standing question, relating to how systems relate to each other, is whether specific types of control systems operate as substitutes and complements (e.g. Abernethy and Chua, 1996; Chenhall, 2003). We believe that by looking at the MCS as a package and considering the characteristics of particular elements in the various control systems (such as whether cybernetic systems substitute for each other and complement the administrative systems), and examining the way systems are used, we may find clues about how the different control systems act as substitutes and complements in practice.

Large organisations, such as multinational corporations, typically have a multi-layered organisational hierarchy. One ambiguous issue is how the elements of a control package relate to each other down the organisational levels? It would seem likely that at the various organisational levels emphasis would be given to different control systems. At the very senior management level in large organisations there are seldom many procedure-based controls. Conversely, policies and procedures may dominate at the shop-floor level. Not only is it unclear how the control package is configured at the different organisational levels, but we also do not know whether these different configurations have an impact on each other. A related issue is how systems in a control package relate to each other across organisational units. Contingency research has provided some clues about the types of control systems that fit with underlying task characteristics. However, large organisations often have numerous task-types with quite different characteristics (e.g. marketing tasks compared to production tasks). Are the same systems used across all organisational subunits or are different control systems used in different subunits? If the latter, then how do these different systems impact each other? Furthermore, do these different systems relate to each other in a consistent way, or are there lagged or intermittent effects? And finally, do different configurations produce different outcomes?

One way to begin addressing these questions would be to develop an analytical approach for studying the way in which the elements are interrelated. Orton and Weick (1990) have raised some interesting ideas about the different types of coupling and the underlying characteristics that produce these different types. It might be fruitful to try to follow a similar approach in developing new ways of analyzing and describing the linkages between the elements in the MCS package. With more refined conceptual and analytical approaches, case studies could be conducted in a range of theoretically different contexts, and this could provide inductively developed theory as a basis for larger cross-sectional studies. Furthermore, longitudinal studies could also be conducted to uncover lagged and more intermittent effects.

Finally, as MCSs operating as packages are large and complex phenomena, larger research teams and research programs are likely to be needed to study these issues. As well as the conceptual development of frameworks and constructs, we see longitudinal case studies and large-sample empirical studies as necessary. However, it may be necessary to use interviews to collect large datasets, rather than questionnaire surveys, in order to guarantee data quality. It is also important that we do not assume that the existing configurations and linkages are somehow optimal, as this is something which requires careful study.

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