Department of Accounting

On the Interface between Strategy and Management Accounting: Four Essays

Katja Kolehmainen

Aalto University

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Abstract

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Abstract

This dissertation focuses on four management practices that lie on the interface between strategy and management accounting. These include management practices related to strategic investment decisions (SIDs), the use of management control systems (MCS) in the strategy formation process, and the use of strategic performance measurement systems (SPMS) and values-based control systems for aligning organisational members' behaviour with an organisation's objectives. All four essays included in the dissertation adopt a case study approach. Depending on the particular theoretical objectives of the essays, their more specific case study designs range from a hypothesis testing-oriented multiple case study design, to an inductive, theory discovery-oriented single case study design.

The primary objective of this dissertation is to contribute to the SID, SPMS, MCS and values-based control literatures by addressing the research gaps specified in the study. These more focused contributions include, inter alia, proposing a new corporate typology that is developed specifically to explain differences in SID making practices (Essay 1); extending Simons' (1990) process model of the relationship between strategy and MCS and presenting further clarification to the concept of interactive control system (Essay 2); empirically demonstrating that building and using dynamic SPMSs may require companies to use a combination of management practices that differ considerably from those prevalent for more stable SPMSs (Essay 3); and proposing a new, broader conceptualisation of values-based control that acknowledges that organisational members can engage in desirable values-related behaviour by not only relying on their intrinsic motivation, but also by relying on their perceptions of the benefits related to assuming such behaviour (Essay 4).

While making more focused contributions to these literatures, this study also provides a basis for making general observations about the strategic role of management accounting in contemporary settings. All four essays included in this dissertation provide evidence that the inclusion of qualitative and subjective elements in management accounting could strengthen its strategic role – i.e. help make it more relevant to strategic decision-making and control. The introduction of qualitative and subjective elements can, first of all, facilitate the inclusion of not easily quantifiable factors such as synergies in the analyses of strategic investments. It can also facilitate that subjective, experience-based managerial insights can be drawn upon when making strategic investments or formulating strategies. The inclusion of such elements can also facilitate extending the formal evaluation and incentivisation of organisational members' behaviour to include strategically critical elements - such as organizational members' tendency to exhibit desirable values-related behaviours - that would simply not be measurable through purely quantitative means.

Keywords strategy, investment, performance measurement, management control system, interactive control system, values

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Helsinki, March 20, 2012

Katja Kolehmainen

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PART I

RESEARCH OVERVIEW

1. Introduction

The field of management accounting has become more strategic (Bromwich and Bhimani, 1989, 1994; Bhimani and Bromwich, 2010; Otley, 2001). This development has been enhanced by the fact that many traditional management accounting systems, such as performance measurement systems and cost accounting systems, have been transformed into new applications that allow for the inclusion of strategically critical information that can also take a non-financial form (Bhimani and Bromwich, 2010; Otley, 2001; see e.g. Kaplan and Norton, 1992, 1996; Shank, 1996; Shank and Govindarajan, 1993). In tandem with these developments, management accountants have started to take a more strategic role in organisations. Instead of being traditional 'bean counters', they now play a more business-orientated value-adding role. (Granlund and Lukka, 1998; Granlund and Taipaleenmäki, 2005; Järvenpää, 2007; Vaivio and Kokko, 2006; for recent practitioner reports see e.g. IBM, 2010; McKinsey, 2009)

The strategic role of management accounting is in practice mobilised through management practices that integrate management accounting more firmly with the core of strategic decision-making and control.[1] This dissertation focuses on four management practices that lie on the interface between strategy and management accounting.[2] Some of these management practices lie on the boundaries of traditional conceptions of management accounting.[3]

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[1] The term 'strategic role of management accounting' refers in this dissertation to the role management accounting has in supporting strategy formation and implementation; i.e. in enhancing strategic decision-making and the attainment of an organisation's strategic objectives. The term 'practice' refers here, on the other hand, to the shared routines of behaviour, including traditions, norms and procedures of thinking, acting and using 'things' (this last in a broad sense, including for example the use of management accounting systems). Such practices can be informal or formal. They can also be organisation-specific, or extra-organisational in which case they derive from larger social fields. (Whittington, 2006)

[2] The term 'strategy' refers in this dissertation to a pattern of important decisions, implemented over time and affecting the long-term direction and scope of the organisation (based on Thomson and Baden-Füller, 2010, p. 22). These decisions may result from a deliberate calculation and analysis or they may emerge more informally as part of managerial work (see e.g. Mintzberg and Waters, 1985; Whittington, 2006).

[3] This dissertation adopts a broad definition of management accounting. It responds to Otley's (1994, 1999, 2001) repeated calls for extending the boundaries of management accounting in order to "put the management back to management accounting", and to make management accounting research more relevant to managers in contemporary organisations. The term 'management accounting' refers in this dissertation to processes and systems that managers use for managing and controlling organisational performance. These processes and systems relate, for example, to target-setting,

The first essay of this dissertation focuses on the practices used in making strategic investment decisions (SIDs).[4] SIDs represent a management accounting practice in which management accountants have traditionally had a significant role in strategic decision-making (see e.g. Bromwich and Bhimani, 1994; Carr and Tomkins, 1996, 1998). SID literature has documented significant differences in practice – both in regard to the choice of capital budgeting techniques (see e.g. Alkaraan and Northcott, 2006; Carr and Tomkins, 1996, 1998; Sandahl and Sjögren, 2003; Verbeeten, 2006) and in regard to broader tendencies to emphasise strategic versus financial analysis in decision-making (see e.g. Carr and Tomkins, 1996, 1998; Sandahl and Sjögren, 2003). The SID literature has, however, paid little attention to which contextual variables, apart from the country context, could be associated with these differences (Chen, 2008; Verbeeten, 2006). Essay 1 seeks to shed light on the contextual nature of these differences. It develops a new corporate typology that aims specifically at explaining differences in SID making practices. It also explores this typology's potential for explaining differences in practice.

The second essay of this dissertation addresses the role of management control systems (MCSs) in shaping strategy formation. Early MCS research tended to view their role as being constrained to the enhancement of strategy implementation (Otley, 1994). Contemporary literature on MCSs widely acknowledges that they are not only important for strategy implementation, but also for strategy formation (see e.g. Chapman, 2005; Langfield-Smith, 1997; Simons, 1990). MCS literature has tended to describe the role of MCSs in shaping strategy formation as one of triggering strategic debate and organisational learning (see e.g. Bruining et al., 2004; Simons, 1990, 1991, 1995b; Tuomela, 2005; Vaivio, 2004). Essay 2 seeks to shed new light on the role of MCSs in shaping strategy formation by examining the use of knowledge-integrating corporate-level MCSs.[5]

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decision-making, measurement, control and rewarding. These processes and systems may or may not be based on financial information. (Otley, 1999; 2001; see also Ferreira and Otley (2010) for a recent discussion about the nature of performance management systems)

[4] The definition of SID will be clarified in Section 2. That section will also discuss the definitions of the other three management practices addressed in this dissertation: MCS, SPMS and values-based control.

[5] Knowledge integration and organisational learning are, inevitably, interrelated concepts (see e.g. Bell et al., 2002; Crossan et al., 1999; Huber, 1991, Thomas et al., 2001). The effective use of knowledge is often considered to constitute a key element of the organisational learning process (Crossan et al., 1999; Crossan and Berdrow, 2003; Huber, 1991). Knowledge integration and organisational learning differ, however, in their scope and time orientation. Organisational learning has a broader scope and a longer time orientation. It is generally viewed as a rather open-ended process, which

The third essay of this dissertation focuses on strategic performance measurement systems (SPMS), which have become an integral part of contemporary corporate practice (see e.g. Kald and Nilsson, 2000; Malmi, 2001; Rigby, 2001; Silk, 1998, Speckbacher et al., 2003). Essay 3 examines how substantial dynamism can be built into SPMSs and how such dynamic SPMSs can be used for strategic alignment. Essay 3 is motivated by the practical significance of building dynamism into SPMSs (see e.g. Bititci et al., 2000; Eccles, 1991) and the shortage of prior empirical evidence showing how companies seek to achieve this in practice (see e.g. Kennerley and Neely, 2002, 2003; Neely, 2005; Waggoner et al., 1999).

Finally, the fourth essay of this dissertation focuses on the concept of values-based control - a concept which has remained ambiguous despite wide acknowledgement by the contemporary MCS literature that such systems constitute an essential part of a broader control package (e.g. Malmi and Brown, 2008; Merchant and Van der Stede, 2007; Mundy, 2010; Simons, 1995a; Widener, 2007). Essay 4 seeks to specify the key approaches through which values-based control is mobilised and to illustrate how these approaches can be applied in practice.

The primary objective of this dissertation is to contribute to the SID, SPMS, MCS and values-based control literatures by addressing the research gaps specified in the study. While making more focused contributions to these literatures, this dissertation also makes general observations about the strategic role of management accounting in contemporary organisations. These general observations will be addressed in the concluding section of Part I.

This dissertation is strongly motivated by the objective of developing theoretical insights that are useful for accounting practice (see Baldvisndottir et al., 2010; Malmi and Granlund, 2009; Merchant and Van der Stede, 2006; Otley, 2001). In line with this objective, it examines management accounting practices in their natural settings (see e.g. Cooper and Morgan, 2008; Ferreira and Merchant, 1992; Kaplan, 1986; Kasanen et al., 1993; Malmi and Granlund,

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aims at fairly abstract outcomes such as the enhancement of an organisation's long-term performance (Garvin, 1993; Senge, 1990; Thomas et al., 2001), strategic renewal (Crossan and Berdrow, 2003), adaptation (Edmonson and Moingeon, 1998), and, ultimately, survival (Nelson and Winter, 1982). Knowledge integration, on the other hand, has a narrower scope and more concrete objectives. It aims at integrating dispersed, specialised knowledge in organisational routines, procedures, processes, structures, documents or other repositories (Grant, 1996a, 1996b; Nelson and Winter, 1982; Teece, 2000). The focus is more on the effective application of existing knowledge, rather than on the acquisition or creation of new knowledge that would enhance strategic renewal and adaptation over time (Grant, 1996a, 1996b). The concept of 'knowledge' will be addressed in Subsection 2.2.2.

2009; Merchant and Van der Stede, 2006; Otley, 2001). All four essays included in this dissertation adopt a case study approach. Depending on the particular theoretical objectives of the essays, their more specific case study designs range from a hypotheses testing-oriented multiple case study design, to an inductive, theory discovery-oriented single case study design (see e.g. Keating, 1995; Scapens, 1990).

This dissertation comprises two parts. Part I provides an overview of the dissertation. It starts by defining the key concepts of the study, by presenting an overview of relevant work within the SID, MCS, SPMS and values-based control literatures, and by highlighting the particular research gaps in these literatures that are addressed by this dissertation. The subsequent third section specifies the research objectives of the four essays. It also describes the key theoretical underpinnings of each essay. The fourth section clarifies the methodological position of the study. It also discusses the research approach in regard to the method, data sources and data analysis and deals with reliability and validity issues. The fifth section presents summaries of the four essays and their contribution. The sixth and final section concludes Part I by discussing this dissertation's broader implications. Finally, Part II includes the four original papers.

2. Literature review

2.1. Strategic investment decisions (SIDs)

2.1.1. Definition of SID

The capital budgeting literature has not always distinguished more strategic types of investment (e.g. Arnold and Hatzopoulos, 2000; Graham and Harvey, 2001; Klammer and Wa1ker, 1984; Pike, 1983). A substantial body of research, however, attests to the importance of this distinction, arguing that the complexity and uncertainty surrounding SIDs may present particular challenges to management (Alkaraan and Northcott, 2006; Butler et al. 1993; Marsh et al., 1988; Oldcorn and Parker, 1996; Phelan, 1997; Van Cauwenbergh et al., 1996).

Most available definitions of SID highlight its influence on long-term corporate performance (Alkaraan and Northcott, 2006; Carr and Tomkins, 1996; Van Cauwenbergh et al., 1996). For example, Van Cauwenbergh et al. (1996, pp. 169) define SID simply as "*a decision on an investment which has a significant potential for improving corporate performance*". Carr and Tomkins (1996) agree on SID's performance implications and add that SIDs also tend to have broad organisation-wide ramifications. Alkaraan and Northcott (2006) add, on the other hand, that substantial size is also a defining characteristic of an SID.[6]

The definition of SID adopted in this study combines elements of previous definitions: it defines SID as *a decision on a substantial investment that has broad organisation-wide ramifications and a significant effect on an organisation's long-term performance*.

2.1.2. Research on SIDs

Much of the literature on SID making practices has focused on examining the general use of capital budgeting techniques such as DCF (e.g. Alkaraan and Northcott, 2006; Arnold and Hatzopoulos, 2000; Farragher et al., 1999; Graham and Harvey, 2001; Pike, 1996). Most research in the field has focused

[6]Alkaraan and Northcott (2006) also note that SIDs involve high levels of risk and produce hard-to-quantify outcomes. This specification is excluded from the definition of SID applied in this study. Whether an investment can be regarded as 'strategic' is not considered to be directly linked to the level of risk involved, nor to the extent to which potential investment outcomes are quantifiable.

on particular country contexts, addressing the use of techniques for example in the U.S. (e.g. Farragher et al., 1999; Graham and Harvey, 2001; Klammer et al., 1991), the U.K. (e.g. Alkaraan and Northcott, 2006; Arnold and Hatzopoulos, 2000; Pike, 1996), Japan (e.g. Carr, 2005; Carr and Tomkins, 1998; Jones et al., 1993; Kim and Song, 1990; Shields et al., 1991; Yoshikawa et al., 1989), Continental Europe (e.g. Carr and Tomkins, 1996; 1998; Carr et al., 1994) and Nordic countries (Honko and Virtanen, 1975; Keloharju and Puttonen, 1995; Liljeblom and Vaihekoski, 2004; Sandahl and Sjögren, 2003; Virtanen, 1984). Another, more limited research stream has examined SID making practices from a field study perspective. This research stream has sought to shed light on the way in which capital budgeting techniques are used in companies. (See e.g. Butler et al., 1991; Carr, 2005; Carr and Tomkins, 1996, 1998; Carr et al., 1994; Jones et al., 1993) A large part of this type of research is cross-national and it also seeks to provide evidence of potential cross-country differences in SID making practices. (See e.g. Carr, 2005; Carr and Tomkins, 1996, 1998; Jones et al, 1993)

Research findings suggest that there are considerable differences in SID making practices among companies. These differences relate not only to the choice of capital budgeting techniques, but also to the way in which these techniques are used to inform decision making. (See e.g. Carr and Tomkins, 1996, 1998; Sandahl and Sjögren, 2003) Available evidence indicates that some of these differences can be attributable to the country context. It suggests that the use of DCF techniques is more extensive and influential among Anglo-Saxon companies (e.g. Arnold and Hatzopoulos, 2000; Pike, 1996; Graham and Harvey, 2001) as compared to Japanese, Continental European and Nordic companies, which may also base their decisions on less sophisticated techniques such as payback period. (Carr and Tomkins, 1996, 1998; Keloharju and Puttonen, 1995; Liljeblom and Vaihekoski, 2004; Sandahl and Sjögren, 2003; Shields et al., 1991; Yoshikawa et al., 1989) The research evidence also suggests that Japanese and German companies tend to pay more attention to strategic considerations than their Anglo-Saxon counterparts. U.K. companies, in particular, have been found to tend to overlook strategic considerations and to focus strongly on financial analyses. (Carr, 2005; Carr and Harris, 2002; Carr and Tomkins, 1996, 1998; Jones et al., 1993)

Available evidence indicates that there are also differences in the SID making practices among companies in the same country context (see e.g. Alkaraan and Northcott, 2006; Sandahl and Sjögren, 2002; Verbeeten, 2006). For example, Sandahl and Sjögren's (2003) Swedish study indicates considerable differences among companies both in regard to the use of capital budgeting techniques and the tendency to emphasise strategic versus financial considerations in analysis.

In addition to the association with country context, SID literature has hitherto provided only limited evidence of a link between contextual variables and these differences, (Chen, 2008; Slagmulder et al., 1995; Verbeeten, 2006). Available contextual evidence relates to the use of capital-budgeting techniques, suggesting that the use of sophisticated techniques is more common among large companies (Farragher et al., 1999; Graham and Harvey, 2001; Pike, 1996), among companies that operate in predictable as opposed to unpredictable business environments (Chen, 1995; Ho and Pike, 1998), among highly leveraged companies (Graham and Harvey, 2001; Klammer et al., 1991), and among companies that face financial uncertainty (Verbeeten, 2006).[7] On the other hand, the question of which contextual factors may be associated with differences in the ways in which capital-budgeting techniques are put to use when making decisions on strategic investments has remained largely unexplored (Slagmulder et al., 1995).

2.1.3. Research gap in the SID literature addressed in this study

The first essay of this dissertation, "Strategic investment decision making practices: A contextual approach", responds to repeated calls for more contextually based research designed to explain differences in SID making practices (Haka, 1987; Ho and Pike, 1998; Slagmulder et al., 1995; Verbeeten, 2006). It introduces a new corporate typology that has been developed specifically to explain differences in SID making practices. It also presents some exploratory evidence of this typology's potential for explaining differences in practice.

2.2. Management control systems (MCSs)

2.2.1. Definition of MCS

[7] We draw on Haka et al. (1985) to use the term 'sophisticated techniques' to refer to capital budgeting techniques such as Net Present Value (NPV) and Internal Rate of Return (IRR) that consider the risk-adjusted discounted net cash flows expected from a project.

The definition of MCS has evolved considerably over the years. Much of the early research on MCSs was influenced by Anthony's (1965, pp. 17) classic definition of management control as "the process by which managers assure that resources are obtained and used effectively and efficiently in the accomplishment of the organisation's goals" (see Otley, 1994; Otley and Berry, 1980). Anthony's classic definition has subsequently come under considerable criticism. It has been criticised for providing only a partial view of management control by deliberately excluding the challenges of defining organisational goals and of ensuring that needed actions are taken in practice (Langfield-Smith, 1997; Otley 1994; 1999; Otley and Berry, 1980). It has also been criticised for excluding the role of MCSs in strategy formation (Simons, 1990) and for failing to account of the possible emergence and evolvement of strategies in the course of business (Specklé, 2001).

Despite this criticism, many of the more recent definitions of MCS similarly emphasise the role of MCS in assuring the achievement of an organisation's goals (e.g. Abernethy and Chua, 1996; Bisbe and Otley, 2004; Flamholtz et al., 1985; Otley and Berry, 1994). Many MCS definitions also highlight the role of MCS in influencing human behaviour (e.g. Abernethy and Chua, 1996; Flamholtz et al., 1985; Malmi and Brown, 2008; Marginson, 2002, Merchant and Van der Stede, 2007; Otley, 1987). Another widely acknowledged role of MCS is that of informing decision-making (Chapman, 1997; Merchant and Otley, 2007; Widener, 2007; cf. Malmi and Brown, 2008).

This study draws on the recent definition of MCS put forward by Malmi and Brown (2008) as it provides one of the most elaborate conceptualisations of MCS available to date. It is consistent with the widely shared view that MCSs work through their influence on organisational members' behaviour (see e.g. Abernethy and Chua, 1996; Flamholtz et al., 1985; Merchant and Van der Stede, 2007; Otley, 1987). It also suggests that MCSs work not only by influencing the behaviour of organisational members, but also by influencing their decisions. Further, it echoes many MCS definitions in emphasising a linkage between MCSs and organisational objectives (see e.g. Anthony, 1965, Bisbe and Otley, 2004; Flamholtz et al., 1985). It diverges from many other definitions, however, in that it explicitly acknowledges that objectives can change before they are achieved. Rather than suggesting that MCSs help to ensure the attainment of an organisation's objectives, their definition maintains that MCSs seek to ensure that employees' behaviours and decisions are *consistent* with the organisation's objectives. Finally, their definition is consistent with the widely shared understanding that MCSs include not only accounting-based systems, but also many other types of controls such as administrative and values-based controls (see e.g. Chenhall, 2003; Emmanuel et al., 1990; Fisher, 1998; Flamholtz et al., 1985; Langfield-Smith, 1997; Merchant and Van der Stede, 2007; Otley, 1980; Simons, 1995a).

The definition of MCS applied in this paper diverges from the original definition of Malmi and Brown (2008) in that it does not attempt to exclude mere decision-support systems from the concept of MCS. This is because such a distinction may often be artificial and difficult to establish in practice Although some systems may at first seem to be mere decision-support systems in that their influence on subordinate behaviour and goal congruence is not monitored (see Malmi and Brown, 2008), these systems may be in place in order to shape the understandings of organisational members and to influence their decisions and behaviour. Finally, the definition applied in this study also acknowledges that some existing control devices may not be actively and intentionally used for control purposes. As a consequence, only those devices that managers actively and intentionally use to influence the behaviours and/or decisions of organisational members are regarded as MCSs in this study. Consequently, the term MCS refers in this study to *any systems that managers actively and intentionally use to ensure that the behaviours and/or decisions of organisational members are consistent with the organisation's objectives*.

2.2.2. Research on MCSs

MCSs are one of the most extensively studied areas of management accounting research (Chapman et al., 2007; Luft and Shields, 2003).[8] Hence, my purpose here is not to provide an exhaustive review of the literature. Instead, it is to address three specific streams in MCS literature that are relevant to this dissertation. These include the examination of interconnections between MCSs in a control package; the examination of the strategy formation shaping role of MCSs; and the examination of the knowledge-integrating role of MCSs.

[8] The field of MCS research is also very diverse. This diversity relates to research methods, research questions, variables, measures, definitions, theories, research sites and organisational levels in which MCSs are studied (Stringer, 2007). Comprehensive reviews of the MCS literature have been presented, for example by Baxter and Chua (2003), Berry et al. (2009), Chenhall (2003, 2005, 2007), Covalevski et al. (1996), Ferreira and Merchant (1992), Fisher (1995), Harrison and McKinnon (1999), Langfield-Smith (1997, 2007), Macintosh (1994), Merchant and Otley (2007) and Stringer (2007).

2.2.2.1 Interconnections between MCSs in a control package

Early research on MCSs tended to focus on accounting-based controls such as budgets and costing systems (Otley, 1994, 1999; Puxty, 1989). Much of this research adopted a contingency approach which is based on the premise that there is no universally appropriate MCS that would apply to all organisations in all circumstances (Dent, 1990; Otley, 1980). The results of the contingency-based research have been fragmented and less than definitive (Chenhall, 2003, 2007; Dent, 1990; Fisher, 1995). One reason for this is that variation in the dimensions of variables has inhibited coherent accumulation of findings (Chenhall, 2003). Another reason is that the tendency to focus on only a few contingency and MCS variables has resulted in very fragmented findings (Fisher, 1995).

Not surprisingly, there have been repeated calls for a more comprehensive examination of control packages - whereby accounting-based controls would be studied in combination with other types of MCSs (e.g. Abernethy and Chua, 1996; Broadbent and Laughlin, 2009; Ferreira and Otley, 2009; Fisher, 1995, 1998; Flamholtz et al., 1985; Malmi and Brown, 2008; Otley, 1980, 1994; 1999; 2001). What in actuality constitutes a 'control package' has, however, remained ambiguous (Malmi and Brown, 2008). Most scholars agree that a control package comprises a combination of accounting-based and other controls (Abernethy and Chua, 1996; Emmanuel et al., 1990; Fisher, 1998; Flamholtz et al, 1985; Malmi and Brown, 2008; Simons, 1995a). The central role of cybernetic control systems is also emphasised by many researchers (Fisher, 1998; Flamholtz, 1983; Flamholtz et al., 1985; Malmi and Brown, 2008; Simons, 1995a). Many scholars also agree that organisational structure should be included as one of the control package variables (Otley, 1980; Otley and Berry, 1980; Fisher, 1998; Flamholtz et al., 1985; Malmi and Brown, 2008; Sandelin, 2008). Academics appear to disagree on the extent to which MCSs need to be integrated for their combination to be referred to as a 'control package'. For example, Abernethy and Chua (1996) argue that control systems operate as a package when they are internally consistent. Emmanuel et al. (1990), Otley (1999) and Malmi and Brown (2008) are more pragmatic. For them the term 'control package' implies that different elements of the package may be introduced by different people and/or at different points in time. Their view of the nature of a control package is hence less integrated.

The accumulation of available evidence on the interconnections between MCSs in a control package has only begun (see e.g. Chenhall and Langfield-Smith, 1998; Chenhall and Morris, 1995; Mundy, 2010; Sandelin, 2008;

Widener, 2007). It indicates that MCSs are interdependent and that this interdependence is often complementary in nature (Bruining et al., 2004; Chenhall and Langfield-Smith, 1998; Macintosh and Daft, 1987; Milgrom and Roberts, 1995; Sandelin, 2008; Widener, 2007; Widener et al., 2008). It suggests that managers may in practice choose to use one MCS as the primary mode of control, which shapes the design and use of other, complementary, MCSs (Sandelin, 2008). Research findings also indicate that the interdependence can be substitutional in nature. For example, a strong emphasis on informal controls may substitute for the need to apply formal accounting-based controls. (See e.g. Collier, 2005; Marginson, 1999) Finally, there is also first, tentative evidence that MCSs may represent configurational equifinality - meaning that an equally good final state could be achieved through several control package configurations in the face of similar contingencies (Huikku, 2007; Sandelin, 2008). It is the internal consistency of the configuration that seems essential here (Abernethy and Chua, 1996; Norris and O'Dwyer, 2004; Sandelin, 2008).

Despite these advancements, the literature on control packages remains significantly undeveloped. For example, available evidence on how MCSs are configured as packages, how the elements in a control package relate to each other, and which outcomes control packages and interrelationships between MCSs in a control package produce remains limited. (Malmi and Brown, 2008)

This study does not seek to contribute directly to the literature on control packages. Some of the essays do, however, examine several control package elements. This provides a basis for making general observations about the interconnections between control package constituents. These observations will be addressed in the concluding section of Part I.

2.2.2.2. The role of MCSs in shaping strategy formation

Robert Simons' (1990, 1991, 1995a) research has been instrumental in broadening our understanding of the relationship between strategy and MCSs. His field studies in large U.S. companies suggested that MCSs are not only important for strategy implementation, but also for strategy formation. His findings indicated that top managers trigger strategic debate and foster organisational learning about strategic uncertainties by using some MCSs in a more interactive way.[9] Simons (1990) integrated his findings into a process

[9] Simons (1990, 1991, p. 49-50) referred to this type of MCS as an interactive control system (ICS). It tended to reflect four conditions: i) information generated by the MCS is an important and recurring agenda addressed by the highest levels of management, ii) the process demands frequent and regular attention from operating managers at all

model of the relationship between business strategy and MCSs. It proposes a two-way relationship between strategy and MCSs. While strategy influences MCSs by determining key strategic uncertainties and by influencing top managers in their choice of MCSs for interactive use, the use of such interactive control systems (ICSs) does, on the other hand, direct and foster organisational learning. This influences business strategy formation by triggering new strategic initiatives.

Simons' (1990) conceptualisation of the role of MCSs in shaping strategy formation is strongly influenced by the notion that strategies emerge through a process of incremental learning (see e.g. Mintzberg, 1994; Quinn, 1980). Shaping strategy by guiding strategic debate and incremental learning is, however, likely to be slow and ambiguous (Ansoff, 1991; Goold, 1996; Pascale, 1984). The use of organisation-wide ICSs may also be costly. It may lead to positive performance outcomes only in situations in which the organisation is going through a major strategic redirection. (Abernethy and Brownell, 1999; Kober et al., 2007) Corporate-level managers may have an incentive to develop more immediate ways of shaping business strategy formation (Goold and Campbell, 1987; Goold et al., 1994; Grant, 2003). Their ability to call business strategies into question is, however, likely to be hindered by the fact that strategic knowledge, for example of technology and markets, is scattered throughout the organisation (Buckley and Carter, 2004; Grant, 1996b; Teece, 2000; Tsoukas, 1996).[10] Thus, corporate-level managers may have an incentive to develop processes and systems that facilitate the integration and sharing of strategically critical knowledge (see e.g. Buckley and Carter, 2004; Grant,

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levels of the organisation, iii) data are interpreted and discussed in face-to-face meetings of superiors, subordinates and peers, and iv) the process relies on the continual challenge and debate of underlying data, assumptions, and action plans. Bisbe et al. (2007) have subsequently provided further specification to the construct of ICS.

10 The term 'knowledge' refers in this dissertation to a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers (Davenport and Prusak, 1998, p.5). This definition acknowledges that data, information and knowledge are related but not interchangeable concepts that are often conceptualised as representing a hierarchy of meaning, depth and relevance to action (e.g. Ackoff, 1989; Buckley and Carter, 2004; Davenport and Prusak, 1998; Rowley, 2007). The term 'data' refers to unprocessed discrete facts and figures, which bear little relevance or purpose by themselves. The term ´'information' refers to interpreted and structured data. (Davenport and Prusak, 1998; Elearn, 2007; Zeleny, 2005) It does not exhibit the personal, subjective and experience-based qualities that characterise 'knowledge' (Davenport and Prusak, 1998; Kogut and Zander, 1992; Nonaka et al., 2001). Finally, the term 'knowledge integration' refers here to a combination of complementary knowledge which may be value-adding and result in the production of new knowledge (Buckley and Carter , 2004).

1996a, 1996b, Kogut and Zander, 1992). This may enable corporate-level managers not only to ensure that they are in a better position to review business level strategic plans themselves, but also that business level managers possess more complete knowledge when making strategic decisions.[11] How formal organisational means may be used to enhance knowledge integration and sharing has, however, remained a somewhat obscure phenomenon (Buckley and Carter, 2004; Foss et al., 2010; Foss and Pedersen, 2004), because the knowledge management literature has tended to focus on cognitional issues, knowledge flows and informal aspects of the organisation (Foss, 2007; Foss and Pedersen, 2004).

2.2.2.3. The role of MCSs in enhancing knowledge integration

Recent advancements in the MCS literature suggest that MCSs may possess knowledge management properties (Grandori, 1997; Roberts, 2006; Turner and Makhija, 2006), serving also as instruments for knowledge integration (Ditillo, 2004). Available evidence suggests that the design of knowledge-integrating MCSs is context-specific, being influenced by the codifiability and complexity of the knowledge which is to be integrated (Ditillo, 2004). The evidence indicates that when knowledge is characterised by cognitional complexity and a low level of codifiability – which is likely to be the case when strategically critical knowledge is being integrated for strategy formation purposes – formal management accounting systems may not provide adequate means for knowledge integration. In such situations effective knowledge integration is more likely to become mobilised through verbal face-to-face interaction, which facilitates the transformation of private, largely uncodifiable knowledge into shared knowledge which can be expressed in more explicit terms. (Ditillo, 2004; Grant, 1996b; Nonaka, 1991, 1994)

Prior evidence of the knowledge-integrating role of MCSs has focused on the project team level, where verbal, face-to-face communication can occur naturally, as part of the regular interaction between project participants (Ditillo, 2004). At higher organisational levels such face-to-face interaction may, however, not occur without intervention by managers. Formal processes and platforms can be needed to enable specialists from different locations, functions and cultures to interact and thereby integrate their specialised knowledge (Buckley and Carter, 2004; Grant, 1996b; Kulkki and Kosonen,

[11] The notion of ‘completeness’ refers to the degree to which the critical knowledge for decision-making is entirely sufficient and available for the decision maker’s use (Turner and Makhija, 2006).

2001). How MCSs may serve as levers for knowledge integration at higher organisational levels, including business and corporate levels, remains unclear.

2.2.3. Research gap in the MCS literature addressed in this study

The second essay of this dissertation, 'Shaping strategy formation with knowledge-integrating corporate-level management control systems' seeks to provide new insight into the roles MCSs play in shaping strategy formation. Prior research has tended to conceptualise the strategy formation shaping role of MCSs as that of triggering strategic debate and organisational learning (see e.g. Bruining et al., 2004; Simons, 1990, 1991, 1995b; Tuomela, 2005). This study examines the knowledge-integrating, strategy formation shaping role of MCSs. The examination focuses on corporate-level MCSs.[12]

2.3. Strategic performance measurement systems (SPMSs)

2.3.1. Definition of SPMS

Research on strategic performance measurement systems (SPMS) has rarely provided any explicit definitions for SPMS. Much of the research has focused on the concept of Balanced Scorecard (BSC) (Kaplan and Norton, 1992, 1996a, 1996b; 2001) without seeking to specify the defining characteristics of the BSC - or those of SPMSs in general (see e.g. Ahn, 2001; Butler et al., 1997; Davis and Albright, 2004; Kasurinen, 2002; Malina and Selto, 2001; Papalexandris et al., 2004; cf. Speckbacher et al., 2003; see Neely (2005) for a review of SPMS literature).

Chenhall (2005), Tuomela (2005) and Gimbert et al. (2010) are among the few who have sought to specify the concept of SPMS. They all agree that the inclusion of financial and non-financial strategically aligned measures is a defining characteristic of SPMS. Chenhall (2005) and Gimbert et al. (2010) also place emphasis on the integrative features of SPMS, highlighting that

[12] The term 'corporate-level MCS' refers to MCSs that address issues common to the whole organisation – such as corporate-level strategic issues – and that are used principally at a corporate rather than business level. Organisation-wide systems such as budget planning systems are thus not considered corporate-level MCS in this study. Further, we use the term 'corporate-level managers' to refer to those parties who are in the position to exert control over business managers. Such parties include the CEO, the Board members and, depending on the company in question, managers responsible for key corporate functions such as finance & control and strategic planning.

SPMS enable translating strategy into a coherent set of performance measures. Gimbert et al. (2010) also pay attention to several specific features, such as the provision of a sequence of goals/metrics/targets/action plans for each performance measurement perspective and the presence of explicit causal linkage relationships between goals and or/between performance measures. Tuomela's (2005) definition of SPMS is more general. It also includes PMSs where the set of measures is less coherent and integrative.

This study adopts a broad definition of SPMS. It draws on Tuomela (2005) to acknowledge that many strategically oriented performance measurement systems (PMSs) are less integrative and coherent than suggested by Chenhall (2005) and Gimbert et al. (2010) (see e.g. Malmi, 2001; Speckbacher et al., 2003). It also acknowledges that SPMSs may be oriented towards measuring performance at an individual level (Tuomela, 2005). The definition adopted in this study also draws on the extensive review of PMS literature by Franco-Santos et al (2007), which identifies 'performance measurement' and 'supporting infrastructure' as the necessary features of PMSs.

The term SPMS refers in this study to *formal performance measurement systems used to measure strategic outcomes and/or strategic actions*. The term 'formal' refers here to the existence of supporting infrastructure. On the other hand, the notion 'measure strategic outcomes and/or strategic actions' emphasises that SPMSs measure performance on dimensions of strategic importance.

2.3.2. Research on SPMSs

Research on SPMSs has evolved progressively over the years (Franco and Bourne, 2003). Initially, research interest in SPMSs stemmed in the early 1990s from dissatisfaction with traditional, financially oriented PMSs, which were criticised for promoting short-termism in organisations (Eccles, 1991; Goold and Quinn, 1990; Kaplan and Norton, 1992; McNair et al., 1990). Much of the early research on SPMSs focused on presenting frameworks and models for enabling a better strategic alignment of performance measures (Franco and Bourne, 2003; see e.g. Dixon et al., 1990; Epstein and Manzoni, 1998; Kaplan and Norton, 1992; Kanji, 1998; Lynch and Cross, 1991; McNair et al., 1990; Neely et al., 2002). Over time, the research focus shifted from the design of SPMSs to the processes and challenges related to their implementation (Franco and Bourne, 2003; see e.g. Ahn, 2001; Bukh and Malmi, 2005; Kasurinen, 2002; Malina and Selto, 2004; Nørreklit, 2000; Papalexandris et al., 2004;

Vaivio, 1999a). More recently, scholars have started to pay attention to the ways in which SPMSs are used to manage organisations. Attention is also paid to how managers seek to extract value from the data they collect. (Franco and Bourne, 2003; see e.g. Banker et al., 2000; Davis and Albright, 2004; Dossi and Patelli, 2010; Gimbert et al., 2010; Ittner et al., 1997; Lipe and Salterio, 2002; Malmi, 2001; Melnyk et al., 2010; Micheli and Manzoni, 2010; Vaivio, 2004; Wiersma, 2009)

The literature on SPMSs has tended to portray them as effective mechanisms for strategic alignment. It has been argued that SPMSs enable the translation of strategy into a coherent set of financial and non-financial measures that may be cascaded throughout the organisation. (see e.g. Chenhall, 2005; Epstein and Manzoni, 1998; Kaplan and Norton, 1996, 2001; Papalexandris et al., 2004).

SPMS researchers have, however, cautioned against a potential organisational rigidity introduced by SPMSs, and underlined a need to build dynamism into them (see e.g. Eccles, 1991; Bititci et al, 2000; Kennerley and Neely, 2002, 2003; Neely et al., 2000). Most writers on dynamic SPMSs have argued that the overall development of an SPMS should include a periodic review process enabling managers to ensure that measures remain relevant in the light of external and internal development (Wisner and Fawcett, 1991; Medori and Steeple, 2000). Specific audit tools that provide detailed guidance for the review have also been proposed (Bititci et al., 2000; Dixon et al., 1990; Neely et al., 1997).

Much of the research on dynamic SPMSs has, however, tended to be conceptual in nature (see e.g. Neely, 1999; Kennerley and Neely, 2002, 2003). Those studies providing empirical evidence have tended to focus on manufacturing companies, examining how the evolution of SPMSs may be managed over time (see e.g. Bititci et al., 2000; Bourne et al., 2000). Much less attention has been paid to the ways through which substantial dynamism can be built into SPMSs in order make frequent modifications to the measures possible. Nevertheless, capability of this kind is likely to be vital in turbulent industries where companies must be able to alter strategies and business models rapidly (Doz and Kosonen, 2007, 2008). As a consequence, an examination of the ways through which companies seek to build substantial dynamism into their SPMSs has been highlighted as one of the key areas for future research on SPMSs (see e.g. Kennerley and Neely, 2003; Neely, 2005; Waggoner et al., 1999).

2.3.3. Research gap in the SPMS literature addressed in this study

The third paper of this dissertation, "Dynamic strategic performance measurement systems: Balancing empowerment and alignment", responds to the calls for an empirical examination of dynamic SPMSs (Kennerley and Neely, 2003; Neely, 2005; Waggoner et al., 1999). It seeks to present empirically grounded theoretical insights about how substantial dynamism can be built into SPMSs and how such dynamic SPMSs can be used for strategic alignment.[13]

2.4. Values-based control

2.4.1. Definition of values-based control

This dissertation uses a generic term 'values-based control'[14] to refer to *any attempts by managers to utilise organisational values as a means of influencing the behaviour of organisational members*. The choice to adopt such a generic definition is motivated by the fact that the concept of values-based control remains ambiguous. MCS researchers have addressed values-based control through a variety of concepts including clan control (Ouchi, 1979, 1980; see e.g. Langfield-Smith, 1995, 1997), cultural control (e.g. Merchant and Van der Stede, 2007; Sandelin, 2008), belief system (Simons, 1995a, 1995b; see e.g. Marginson, 2002; Mundy, 2010; Widener, 2007) and value-based control (Malmi and Brown, 2008) without providing much specification about

[13] The term 'dynamic SPMS' refers to those SPMSs that enable frequent modifications to the measures and targets; i.e. SPMSs that allow the modification of measures and targets at intervals that are considerably shorter than an annual planning cycle. Similarly, the term substantial dynamism refers to the capability to modify measures and targets at such short intervals. To avoid tautology, the terms flexible, adaptable and fluid SPMS are also used in this dissertation for these dynamic SPMSs.

[14] The term 'value**s**-based control' applied in this paper is similar to the term 'value-based control' recently put forward by Malmi and Brown (2008). I have used the first term because it better enables me to distinguish the control approach discussed in this dissertation from the term 'value-based management' that is commonly used within management accounting literature to refer to a management approach that emphasizes the maximisation of shareholder value creation (See e.g. Ittner and Larcker, 2001; Malmi and Ikäheimo, 2003). Within the general management literature the terms 'value-based management' (see e.g. Brytting and Trollestad, 2000) and 'values-based management" (see e.g. Andersson, 1997) and 'values-driven management" (see e.g. Driscoll and Hoffman, 1999) have all been used to refer to a management approach whereby organisational values are mobilised to influence the mind-sets and/or behaviour of organisational members.

the defining characteristics of these concepts or their linkages with other related concepts.

This broad definition acknowledges that organisational members can be motivated to engage in values-related behaviour through different mechanisms. Some organisational members may engage in values-related behaviour based on their intrinsic motivation to do so (see e.g. Meglino and Ravlin, 1998; Ouchi, 1979). Some other organisational members may, on the other hand, engage in such behaviour based on their perceptions of the benefits available from it (Ogbonna and Harris, 1998; Wiener, 1982; Willmott, 1993). It also acknowledges that values-based control may not always take a purely socio-ideological form whereby managers seek to influence the behaviour of organisational members by influencing their mind-sets. It can also take a more technocratic form, and seek to exert more direct influence on their behaviour (see e.g. Doz and Kosonen, 2008; Lenzioni, 2002).[15]

2.4.2. Research on values-based control

The notion that managers utilise organisational values to influence the behaviour of organisational members is well established in MCS (e.g. Langfield-Smith, 1995; Malmi and Brown, 2008; Merchant and Van der Stede, 2007, Ouchi, 1979; Simons, 1995a) and organisational behaviour literatures (e.g. Harris and Ogbonna, 2011; Meglino and Ravlin, 1998; Wiener, 1982). A control approach of this kind – discussed as *values-based control* in this dissertation – is often contrasted with formal, bureaucratic forms of control (e.g. Eisenhardt, 1985; Langfield-Smith, 1997; Norris and O'Dwyer, 2004; Ouchi, 1979).[16] Early contributions on values-based control tend to position values-based control as an alternative control approach, suitable for complex and uncertain situations in which formal, bureaucratic forms of control may not enable effective control (e.g. Eisenhardt, 1985; Jaeger, 1983; Ouchi, 1979). More recent contributions have tended to refrain from such mutually exclusive positions, highlighting the complementary nature of values-based and other controls. Contemporary literature on MCSs widely acknowledges that values-

[15] I draw on Alvesson and Kärreman (2004) to distinguish between 'socio-ideological control' that seeks to influence the behaviour of organisational members by influencing their mind-sets and 'technocratic control' that seeks to exert direct influence on their behaviour.

[16] The term 'bureaucratic control' refers here to a control approach that is based on the definition of formal rules and procedures, mechanisms for monitoring compliance, and explicit standardised systems of reward and sanction to ensure conformity (based on Ferner, 2000).

based control systems constitute an essential part of a control package (e.g. Malmi and Brown, 2008; Merchant and Van der Stede, 2007; Mundy, 2010; Simons, 1995a; Widener, 2007). They exert a powerful influence on other MCSs (Mundy, 2010; Sandelin, 2008; Widener, 2007) and act as complements (Bruining et al., 2004; Mundy, 2010; Simons, 1995a; Widener, 2007) or substitutes for other MCSs in the control package (Sandelin, 2008).

Despite the widespread recognition of the significance of values-based control, the concept of values-based control remains ambiguous. MCS researchers have addressed values-based control through a variety of concepts including clan control (Ouchi, 1979, 1980; see e.g. Langfield-Smith, 1995, 1997), cultural control (e.g. Merchant and Van der Stede, 2007; Sandelin, 2008), belief system (Simons, 1995a, 1995b; see e.g. Marginson, 2002; Mundy, 2010; Widener, 2007) and value-based control (Malmi and Brown, 2008). Although these concepts share the assumption that managers can seek to utilise organisational values as a means of influencing organisational members' behaviour, these concepts only partially overlap. They are based on different interpretations of the key mechanisms and approaches through which this influence is mobilised. Hitherto, MCS literature has made little progress in specifying the concept of values-based control or in identifying linkages between the applied values-based control concepts. MCS literature has also been relatively silent about the potential limitations of influencing the behaviour of organisational members through values-based control approaches.

2.4.3. Research gap in the values-based control literature addressed in this study

The fourth essay of this dissertation, 'Elaborating on the concept of values-based control' seeks to contribute to the MCS and values-based control literatures by elaborating on the concept of values-based control - a concept which has remained ambiguous despite the fact that MCS researchers widely acknowledge that such systems constitute an essential part of a control package (see e.g. Malmi and Brown, 2008; Merchant and Van der Stede, 2007; Mundy, 2010; Simons, 1995a; Widener, 2007). The essay seeks to specify the key approaches through which values-based control is mobilised and to illustrate empirically how these approaches can be applied in practice.

3. Research objectives

This section summarises the research objectives of the dissertation. The primary objective of this dissertation is to contribute to the SID, SPMS, MCS and values-based control literatures by addressing the research gaps that were specified in the previous section. While making more focused contributions to these literatures, this dissertation will also provide a basis for making general observations about the strategic role of management accounting in contemporary organisations. These general observations will be addressed in the concluding section of Part I.

The research objectives of each of the four essays constituting this dissertation will be summarised in the following. The key theoretical underpinnings of each essay will also be addressed. Here the term 'theoretical underpinnings' is used to refer to the key literature streams and theoretical concepts that form the basis for the theoretical discussion in each paper. Table 1 summarizes the research objectives and theoretical underpinnings of the essays.

Essay 1 seeks to advance our knowledge of the contextual nature of SID making practices. The paper develops a contextual framework for explaining differences in SID making practices, and explores this framework's potential for explaining differences in practice. Differences in practice are examined both in regard to the use of capital budgeting techniques, as well as in regard to companies overall approaches to SIDs – encompassing tendencies to emphasise strategic versus financial analysis in the decision-making.

Since SID literature has provided only limited empirical evidence on the contextual factors that may be associated with differences in SID making practices (Slagmulder et al., 1995; Verbeeten, 2006), the paper draws on the broader strategic management (e.g. Eisenhardt and Sull, 2001; Miles and Snow, 1978; Mintzberg, 1994; Porter, 1980) and strategic management accounting (SMA) literatures (e.g. Cadez and Guilding, 2008; Govindarajan and Gupta, 1985; Guilding, 1999; Gupta and Govindarajan, 1984; Simons, 1987) to derive contextual variables that are assumed to be associated with differences in SID making practices. Oldman and Tomkins' (1999) four-state cost management model is used as a starting point for developing the framework, since it provides one the most developed approaches for explaining differences in SMA practice available to date.

Essay 2 seeks to provide new insight into the roles MCSs play in shaping strategy formation by examining the use of knowledge-integrating corporate-level MCSs. Given limited prior knowledge of the knowledge-integrating, strategy formation shaping role of corporate-level MCSs, the paper adopts a rather explorative, open-ended research design (Keating, 1995; Otley and Berry, 1994). The paper is, however, informed by prior theoretical concepts; in particular Simons' (1990) process model of the relationship between strategy and MCSs, and the concept of ICS (Simons, 1990, 1991, 1995b; Bisbe et al., 2007). The paper also draws on the emerging literature on the knowledge-integrating role of MCSs and on the broader literature on knowledge management (e.g. Davenport and Prusak, 1998; Grant, 1996a; Kogut and Zander, 1992; Nonaka, 1991, 1994; Teece, 2000). The research findings of the paper are also related to a recent discussion within the strategic management literature which suggests a reconciliation between the 'planning' and 'learning' schools of strategy formation (e.g. Brews and Hunt, 1999; Brown and Eisenhardt, 1997, 1998: Grant, 2003; Lovas and Ghoshal, 2000).

Essay 3 seeks to contribute to the literature on SPMSs thorough an empirical examination of dynamic SPMSs. The paper examines how substantial dynamism can be built into them and how such dynamic SPMSs can be used for strategic alignment. Diverging from much of the research on SPMSs, which has tended to focus on systems such as the Balanced Scorecard – which measure performance at an organisational level – Essay 3 responds to recent calls for a broad examination of SPMSs, and extends the examination to include systems that measure contribution to strategic performance at an individual level (Chenhall and Langfield-Smith, 2007; Franco and Bourne, 2003; Marr and Schiuma, 2003).

Given the limited available evidence of how substantial dynamism can be built into SPMSs (see e.g. Kennerley and Neely, 2002, 2003; Neely, 2005; Waggoner et al., 1999), Essay 3 adopts an inductive approach, and draws on very limited *a priori* theoretical discussion (see e.g. Siggelkow, 2007). The empirically grounded theoretical insights of the paper are, on the other hand, linked to the pertinent management accounting and strategic management literatures; in particular those related to the general design and use of SPMSs (e.g. Epstein and Manzoni, 1998; Kaplan and Norton, 1996, 2001; Neely, 1999, 2005; Simons, 2000), the development and use of dynamic SPMSs (e.g. Bititci et al., 2000; Kennerley and Neely, 2002, 2003; Medori and Steeple, 2000; Neely et al., 1997), subjectivity in PMSs (e.g. Gibbs et al., 2004; Manzoni, 2002; Moers, 2005; Prendergast and Topel, 1996; Simons, 2005), and finally, the practices of strategic planning and decision-making (Grant, 2003; Miller et al., 2008; Ocasio and Joseph, 2008; Woiceshyn, 2009).

Finally, **Essay 4** seeks to contribute to MCS and values-based control literatures by elaborating on the concept of values-based control. It seeks to specify the key approaches through which values-based control is mobilised and to illustrate how these approaches can be applied in practice. The paper reviews literature on values-based control by placing particular emphasis on the key values-based control concepts applied within MCS literature. These include the concepts of clan control (Ouchi, 1979, 1980), cultural control (e.g. Harris and Ogbonna, 2010; Merchant and Van der Stede, 2007; Sandelin, 2008), belief system (Simons, 1995a, 1995b) and value-based control (Malmi and Brown, 2008). The paper also draws on the literatures on human values (e.g. Meglino, 1997; Meglino and Ravlin, 1998; Ravlin, 1995; Rokeach, 1978), and corporate culture (e.g. Pettigrew, 1979; Pratt and Beaulieu, 1992; Schein, 1985; Sørensen, 2002; Wiener, 1988) in order to address the nature of individual and organisational values.

Essay 1	
Research objective	• To develop a contextual framework for explaining differences in SID making practices. • To explore this framework's potential for explaining differences in practice.
Theoretical underpinnings	• SID literature (e.g. Alkaraan and Northcott, 2006; Carr and Tomkins, 1996, 1998; Graham and Harvey, 2001; Van Cauwenbergh et al., 1996) • Strategic management literature (e.g. Eisenhardt and Sull, 2001; Miles and Snow, 1978; Mintzberg, 1994; Porter, 1980) • SMA literature (e.g. Cadez and Guilding, 2008; Govindarajan and Gupta, 1985; Guilding, 1999; Gupta and Govindarajan, 1984; Simons, 1987) • the four-state cost management model (Oldman and Tomkins, 1999)
Essay 2	
Research objective	• To provide new insight into the roles MCSs play in shaping strategy formation by examining the use of knowledge-integrating corporate-level MCSs.
Theoretical underpinnings	• a process model of the relationship between strategy and MCSs (Simons, 1990) • the concept of ICS (Bisbe et al., 2007; Simons, 1990, 1991, 1995a) • literature on the knowledge-integrating role of MCSs (e.g. Ditillo, 2004) • literature on knowledge management (e.g. Davenport and Prusak, 1998; Grant, 1996a; Kogut and Zander, 1992; Nonaka, 1991, 1994; Teece, 2000) • literature on strategy formation (e.g. Brews and Hunt, 1999; Brown and Eisenhardt, 1997, 1998: Grant, 2003; Lovas and Ghoshal, 2000)
Essay 3	
Research objective	• To present empirically grounded theoretical insights about how substantial dynamism can be built into SPMSs and how such dynamic SPMSs can be used for strategic alignment.
Theoretical underpinnings	• generic literature on SPMSs (e.g. Epstein and Manzoni, 1998; Kaplan and Norton, 1996, 2001; Neely, 1999, 2005; Simons, 2000) • literature on dynamic SPMSs (e.g. Bititci et al, 2000; Kennerley and Neely, 2002, 2003; Medori and Steeple, 2000; Neely et al., 1997) • literature on subjectivity in PMSs (e.g. Gibbs et al., 2004, Ittner et al., 2003; Manzoni, 2002; Moers, 2005; Prendergast and Topel, 1996; Simons, 2005) • literature on strategic planning and decision-making (Grant, 2003; Miller et al., 2008; Ocasio and Joseph, 2008; Woiceshyn, 2009)
Essay 4	
Research objective	• To elaborate on the concept of values-based control by specifying the key approaches through which values-based control is mobilised and by illustrating how these approaches can be applied in practice.
Theoretical underpinnings	• literature on values-based control (e.g., Harris and Ogbonna, 2010; Langfield-Smith, 1995; Malmi and Brown, 2008; Merchant and Van der Stede, 2007; Ouchi, 1979, Simons, 1995a, Wiener, 1982; Willmott, 1993) • literature on human values (e.g. Meglino and Ravlin, 1998; Rokeach, 1978) • literature on corporate culture (e.g. Pettigrew, 1979; Schein, 1985)

Table 1. Research objectives and theoretical underpinnings of the four essays

4. Research approach

4.1. Methodology[17]

This study locates within the positivistic research tradition[18], which is based on the ontological position that reality is objective and external to the subject (see e.g. Ahrens and Chapman, 2006).[19] Diverging from the ontological position of 'naive realism', which assumes that reality is real and apprehendable, this study adopts the ontology of 'critical realism', which acknowledges that reality is real, but only imperfectly and probabilistically apprehendable. As a consequence, the epistemological position of this study can be classified as 'post-positivism', which diverges from 'positivism' in that it does not consider findings absolute truth – rather it takes a more sceptical stance and assumes that findings are only 'probably true'. (Lincoln and Gupta, 2000)

The methodological orientation of this study can also be classified as functionalism. In alignment with the objectives of the functionalist paradigm, this study seeks to provide essentially rational explanations and to produce theoretical insights of practical relevance. In line with the functionalist paradigm, this study assumes that the social world is composed of relatively concrete empirical artefacts and relationships which can be *sufficiently well* identified, studied, and measured through approaches derived from the natural

[17]The term 'methodology' refers to the epistemological foundation of research (Bryman, 1984; Llwellyn, 1992), which determines the general approach to the study of research topics (Ahrens and Chapman, 2006; Silverman, 1993).

[18] Positivist epistemology seeks to explain and predict what happens in the social world by searching for regularities and causal relationships between its constituent elements. According to positivism, the growth of knowledge is essentially a cumulative process in which new insights are added to the existing stock of knowledge and false hypotheses eliminated. (Burrell and Morgan, 1979, p. 5)

[19] 'Alternative' management accounting traditions - such as the interpretive and critical tradition - reject this realist ontology and assume reality as emergent, subjectively created, and objectified through human interaction (see e.g. Ahrens and Chapman, 2006; Chua, 1986; Humphrey and Scapens, 1996). The recent methodological debate within the management accounting community suggests, however, that earlier claims of the incommensurability of paradigms may not hold. Interpretive research, in particular, has been suggested to 'straddle between paradigms'- i.e. to combine 'subjectivism' and 'objectivism' in order to produce research findings of theoretical significance. (Ahrens, 2008; Kaakkuri-Knuuttila et al., 2008a, 2008b; Lukka, 2010; Modell, 2010; Vaivio and Sirén, 2010)

sciences.[20] (See Burrell and Morgan, 1979, pp. 25-28, for a discussion on functionalism)

4.2. Method[21]

This study applies the case study research method.[22] Although some scholars consider the case study method more suitable to the interpretive paradigm (see e.g. Ahrens and Dent, 1998; Humphrey and Scapens, 1996; Scapens, 1990), most management accounting scholars agree that the case study method can also be applied within positivistic methodology (see e.g. Ahrens and Chapman, 2006; Humphrey and Scapens, 1996; Otley and Berry, 1994; Scapens, 1990). Within the interpretative tradition, the case study method is often used to demonstrate the complexity of accounting in organisations. Within the positivist tradition its purpose is often to contribute to theory development (Otley and Berry, 1994): case studies are often seen as a necessary precursor for more elaborate testing of large sample hypotheses (Humphrey and Scapens, 1996). Case studies can be used to develop hypotheses, construct models, and in some instances even provide limited empirical tests (Scapens, 1990).

What characterises a case study has been the subject of some scholarly debate. According to Kaplan (1986), case studies are characterised by an intense examination of a single entity. For him, a cross-examination of several entities would, on the other hand, be characteristic of a field study. Kaplan's characterisation of the case study method on the basis of sample size has subsequently been criticised (Ferreira and Merchant, 1992). Most management accounting scholars seem to agree today that the case study method can also be applied to cross-examination of several entities. Some positivist-orientated scholars even argue that such an approach - referred to as a multiple-case study design - would be preferable in order to strengthen the external validity of findings (see e.g. Eisenhardt, 1989; Eisenhardt and Graebner, 2007; Yin, 2003). In this study, the term 'case study' is defined in accordance with Cooper and Morgan's (2008) recent definition as *an in-depth and contextually*

[20] In contrast, the interpretive paradigm is concerned with understanding the fundamental nature of the social world at the level of subjective experience (Burrell and Morgan, 1979, p. 28).
[21] The term 'method' refers to the technique for doing research within the chosen research methodology (Bryman, 1984; Llwellyn, 1992).
[22] Although the case study is sometimes referred to as a research methodology, several management accounting scholars have noted that it is essentially a research method, which can be applied within several research methodologies (see e.g. Ahrens and Chapman, 2006; Humphrey and Scapens, 1996; Llwellyn, 1992; Otley and Berry, 1994; Scapens, 1990).

informed examination of specific organisations or events that explicitly addresses theory.

Management accounting and management scholars have attempted to categorise case studies in several ways. Several scholars have categorised case studies according to their research design. For example, Eisenhardt (1989) categorises case studies as single and multiple case studies, Yin (2003) as single, multiple, holistic and embedded case studies, and Cooper and Morgan (2008) as extreme or deviant, maximum variation, critical and paradigmatic. On the other hand, another group of scholars have categorised case studies according to their purpose. For example, Scapens (1990) categorises case studies as descriptive, illustrative, experimental, exploratory and explanatory; Ferreira and Merchant (1992) as descriptive, theory building and hypotheses testing; and Otley and Berry (1994) as exploratory, critical and illustrative. Siggelkow (2007) adds that case studies can be used to motivate a research question, refine existing theory, or to illustrate a conceptual argument put forward.

Perhaps the most elaborate categorisation of case studies has been that proposed by Keating (1995), which classifies case studies according to their intended contribution to theory. *Theory discovery* case studies seek to map novel, dynamic and/or complex phenomena which have been ignored or inadequately explained by existing theories. Since such case studies do not have well-defined theories to guide them, they have an emergent, open-ended character. The major strength of theory discovery cases is their capacity to surprise; they may result in novel, even unexpected findings of theoretical importance. Theory discovery case studies rarely result in fully specified theories. Typically, they contribute to theory development by producing theoretical insights that serve as theoretical building blocks for further investigations. *Theory refinement* case studies, on the other hand, seek to either illustrate a theory's capacity to illuminate a phenomenon in new or better ways, or specify the theory by adding greater precision to theoretical constructs or propositions. Since theory refinement case studies have a more definitive theoretical starting point, they are typically more focused in their research design. In order to ascertain the capacity to produce new theoretical insights, theory refinement case studies must, however, remain open to the discovery of constructs that supplement or replace prior theoretical constructs. Finally, *theory refutation* case studies seek to falsify or otherwise refute a well-specified theory. Their research design is tightly focused on *a priori* defined theoretical constructs.

The four essays constituting this dissertation can be classified as applying the case study method in somewhat different ways; depending on the particular theoretical objectives of the essays (see Table 2). **Essay 1** has characteristics of both a hypotheses testing and an explorative case study (see e.g. Ferreira and Merchant, 1992; Otley and Berry, 1994). It resembles a hypotheses testing case study in that it develops a systematic contextual framework for explaining differences in SID making practices, and it examines, on a general level, whether a company's SID orientation can be explained by this framework. Essay 1 also has characteristics of an explorative case study in that the actual differences in the SID-making practices across the four contextual categories constituting the framework are explored by analysing qualitative interview data. Rather than suggesting *a priori* what these differences may be (except on a general level suggesting that a tendency to emphasise strategic versus financial considerations is likely to increase as we move from the most financially orientated *restructurer* category towards the most strategically orientated *market creator* category), these differences are allowed to *emerge* through the data analysis. Our choice to combine hypotheses testing and explorative case study approach is justified by the limited empirical evidence of the contextual nature of SID making practices (see e.g. Haka, 1987; Verbeeten, 2006). While the broader strategic management and SMA literatures enable us to suggest four general contextual situations that can be assumed to influence SID making practices, they do not enable us to specify, in detail, what these differences could be. As a consequence, an open-ended, emergent approach is needed to explore the more specific nature of these differences.

Essay 1 adopts a multiple-case study design and draws on an exploratory set of 14 matched field case studies from the U.K., U.S. and Japan. It provides coverage of vehicle components and telecommunications sectors. The case selection resembles maximum variation replication logic (Cooper and Morgan, 2008; Eisenhardt, 1989; Yin, 2003), as the set of case studies represents differences in two dimensions (industry, country of origin), which have been found to be associated with differences in SID making practices (see e.g. Carr, 2005; Carr and Tomkins, 1998; Cheung, 1993; Haka, 1987). This selection logic is also assumed to result in a variation in the contextual positioning of case companies across the four contextual categories constituting the contextual framework - thus allowing the exploration of whether the contextual framework has the capacity to explain differences in SID-making practices. All case companies are large, multinational companies (MNC), operating in several countries, and among the global or regional leaders in their industries.

Essay 2, **Essay 3** and **Essay 4** all have characteristics of a theory discovery case in that they have an emergent, open-ended character. Essay 2 and Essay 4 can also be classified as theory refinement case studies since they result in a further specification of prior theoretical concepts. (See Keating, 1995) Essay 3 and Essay 4 draw on a case study in a large global organisation, which provides a particularly revelatory case for studying the phenomena in question. Essay 2 also draws on this case study, but it also utilises data from another case study, conducted in a global organisation with theoretically divergent characteristics. The research design of these three essays is discussed in more detail in the following.

Essay 2 has characteristics of both the theory refinement and the theory discovery case study approach (Keating, 1995). It resembles a theory refinement case study design in that it is informed by prior theoretical concepts - in particular the concept of interactive control system (ICS) (Simons, 1990, 1991, 1995a; Bisbe et al., 2007) and the process model of the relationship between strategy and MCSs (Simons, 1990) - and in that it results in a further specification of these concepts. The paper is, however, more explorative and broadly scoped than a typical theory refinement study. The above-mentioned theoretical concepts serve mainly as theoretical frames of reference that guide the empirical analysis (Ahrens and Dent, 2006). The empirical analysis is empirically sensitive and allows for the emergence of new theoretical insights (see Ahrens and Dent, 1998, Vaivio, 2008).

The case selection logic follows Eisenhardt and Graebner's (2007) theoretical sampling approach, which uses 'polar type' cases. According to the polar type approach, case organisations are chosen on the basis of theoretical characteristics that are presumably associated with differences in the observed phenomenon. As available evidence indicates that the way MCSs are used to shape strategy formation may be influenced by the business environment and the strategic orientation of the company (Chenhall, 2003; Simons, 1987; 1990), two case organisations with contrasting characteristics on these two dimensions were selected. The case company 'Saturn' competes largely through product innovation and marketing. The company is widely acknowledged for its innovation capability, and it also invests heavily in brand building. Saturn operates in a very dynamic business environment characterised, for example, by short product cycles. The case company 'Titan' builds its competitive advantage largely on cost advantages driven from i.e. setting up production in low-cost locations. Titan operates in a relatively stable, mature business environment. Both companies are large multi-business companies, and among the global leaders in their respective industries.

Essay 3 is a typical example of a theory discovery case. Given the limited available evidence of the subject matter (how substantial dynamism can be built into SPMS, and how such dynamic SPMS can be used for strategic alignment), the paper adopts an inductive, open-ended research approach (Ferreira and Merchant, 1992; Keating, 1995; Vaivio, 2008). The empirical examination focuses on a single organisational setting in order to enable an in-depth analysis of the phenomenon studied (Ahrens and Dent, 1998). The case organisation provides a particularly revelatory case for studying the phenomenon in question (see Yin, 2003): as a successful global leader in a turbulent industry, it is conceivable that the case organisation has adopted novel management practices in regard to building and using dynamic SPMS.[23] The case selection logic also follows the advice by Kaplan (1986), Cooper and Morgan (2008) and Malmi and Granlund (2009) in that it enables an examination of management accounting practices in the context of a successful organisation.

Similarly to Essay 2, **Essay 4** also has characteristics of both a theory refinement and a theory discovery case: although it results in a further specification of prior theoretical concepts, it is considerably more explorative than atypical theory refinement study. This facilitates the drawing of novel theoretical insights from the empirical analysis (Keating, 1995). The way the case study is in actuality used in Essay 4 could also be categorised as illustrative. Rather than showing how the case study facilitated the emergence of new theoretical insights, it is used here to illustrate and highlight the conceptual argument put forward in the paper (see Siggelkow, 2007). Similarly to Essay 3, the case study can be classified as particularly revelatory (Siggelkow, 2007): it examines values-based control practices in an organisation with a strong administrative heritage in values-based control. Finally, it provides an empirical platform for examining the phenomenon in question in the context of a successful organisation (see Cooper and Morgan 2008; Kaplan, 1986; and Malmi and Granlund, 2009). Table 2 summarises the research design of the four essays.

[23] The term 'turbulent industry' refers here to industries characterised by rapid and unpredictable change, short product life-cycles and temporary advantages (see Cooper, 1996; Grant, 2003).

	Case Study Type	Case Study Design	Case Selection Logic	Selected Cases
Essay 1	Hypotheses testing (general working hypothesis)/ Explorative (specific SID making practices)	Multiple-case study	Maximum variation replication logic (Industry/ country of origin)	14 case studies of U.K., U.S. and Japanese MNCs operating in the vehicle component (10) and telecommunicatio ns (4) sectors
Essay 2	Theory discovery/ refinement	Two-case case study	Polar cases (in terms of industry/ business strategy)	Two large MNCs representing divergent strategic orientations and business environments
Essay 3	Theory discovery	Single case study	Revelatory case/ successful organisation	A global leader in a turbulent industry
Essay 4	Theory discovery/ theory refinement/ illustrative case	Single case study	Revelatory case/ successful organisation	A large global MNC with a strong administrative heritage in values-based control

Table 2. Research design of the four essays

4.3. Data sources and analysis

The particular data sources and data analysis approaches applied in the four essays are addressed in the following. A more elaborate discussion about the data sources and analysis are presented in the original papers included in Part II of this dissertation.

Essay 1 draws on interview data from an international study on SID making practices conducted by one of the authors between 1994 and 1997. Although over a decade old, the data remain appropriate for an initial assessment of the corporate typologies developed in the paper: These typologies are expected to be enduring in nature, similar to those of Miles and Snow (1978) which have been used in research for over thirty years. In three of the companies (one from each country), further data, gathered in 2001-2003, were also available and were used to confirm the longitudinal durability of the typologies. The case data principally comprise theme interviews with senior executives who had been personally involved with SIDs. In 7 out of the 14 cases, interviews were conducted with several company representatives. The interviews averaged approximately 2.5 hours and all were taped and transcribed.

Data analysis involved several phases. To enable positioning of the companies in the context of the proposed explanatory framework, the companies investigated were first scored for all contextual variables on a scale between 1 and 9. This involved reviewing the qualitative interview data and searching for quotations that would provide an indication of, for example, a *prospector*-type strategic configuration. All of the interview transcripts were then reviewed to identify potential differences in SID making practices. The transcripts were first examined for any potential differences in the use of capital budgeting techniques, hurdle rates, and other specifics related to the use of financial techniques.[24] Thereafter, the transcripts were reviewed and analysed again. This time an attempt was made to identify emergent themes that would characterise the overall SID approaches of the four corporate types.

[24] In addition to analysing differences across the four contextually based categories, a systematic cross-check was made for differences against every composite contextual variable on a one-by-one basis. These analyses addressed the counter-hypothesis of whether our framework does have further explanatory power than that possessed by any individual variable. Checks were also made for differences in the SID practices of Anglo-Saxon and Japanese companies. This analysis addressed the other counter-hypothesis that country-context, rather than contextual category, might afford a more convincing explanation of the differences observed. Since our analyses included only 14 cases, these analyses were inevitably very tentative, but nonetheless provided some indication of the individual variable and country influences.

Finally, the transcripts of the three follow-up interviews were analysed and compared with initial interview transcripts to assess any changes in SID practices subsequent to the initial interviews.

Essay 3 and **Essay 4** draw on the same data set – gathered during an in-depth case study in a successful, large global organisation. Theme interviews with corporate, business area and business unit level managers serve as the principal source of evidence. The corporate-level managers who were interviewed represented key corporate functions such as corporate strategy, finance & control and HR, while the business area and business unit managers represented key business areas and horizontal organisations. Altogether, 22 interviews with an average length of over 70 minutes were conducted. Interview data were complemented with relevant internal documents such as planning process descriptions, performance appraisal schemes, operational mode specifications and documents relating to the use of performance measures. A variety of public documents, for example, analyst presentations, press releases and press articles, were also drawn upon. The case data were gathered during a period of three years between May 2006 and June 2009.

The data analysis proceeded in parallel with data gathering, enabling the researcher to pose more specific questions and to probe deeper into initial ideas as the project and the data collection progressed (Vaivio, 2008). The data analysis involved searching for emerging themes of significance, reorganising data according to themes, and using these themes as input for further interviews (Ahrens and Dent, 1998). An on-going research relationship with the case company provided the researcher with the opportunity to test initial theoretical understandings with key informants during the data gathering and analysis phase. The overall analysis was also verified by multiple key informants at the case company.

Essay 2 draws partially on the same data set as Essay 3 and Essay 4. In addition to the case data applied in Essay 3 and Essay 4, it also draws on another, more limited case study in a global organisation with theoretically divergent characteristics. Again, theme interviews with corporate and business-level managers serve as the principal source of evidence - this time gathered from two case organisations referred to as 'Titan' and 'Saturn' in the paper. Altogether, 32 interviews lasting from 30 to 150 minutes were conducted. Similarly to Essay 3 and Essay 4, salient internal and public documents, such as planning process descriptions, documents related to the performance measures used at corporate and business levels as well as broker presentations, were also drawn upon. The case data were gathered during a period of over four years from May 2006 to September 2010. The procedures for data analysis were very similar to those applied within the Essay 3 and Essay 4, with the exception that they also included making cross-case analysis between the two cases (Eisenhardt, 1989).

	Number of Cases	Interviewees	Number of interviews	Other data sources
Essay 1	14 cases[25]	Senior executives, who had been personally involved with SIDs	23 theme interviews	Public documents, Thompson database
Essay 2	2 cases	Corporate, business area and business unit level managers	32 theme interviews	Internal and public documents, informal discussions with key informants
Essay 3	1 case	Corporate, business area and business unit level managers	22 theme interviews	Internal and public documents, informal discussions with key informants
Essay 4	1 case	Corporate, business area and business unit level managers	22 theme interviews	Internal and public documents, informal discussions with key informants

Table 3. Data sources of the four essays

[25] Although some management accounting authors would argue that this type of research design, in which only limited time is spent on each research site, could not be referred to as a case study approach (Spicer, 1992; Vaivio, 2008), this research design portrays the characteristics of multiple-case study design specified by Lillis and Mundy (2005). According to Lillis and Mundy (ibid.) multiple case-studies differ from cross-sectional field studies in their tendency to focus on a unit of analysis that constitutes a case, while in cross-sectional field studies the unit of analysis is defined more flexibly as an observable occurrence of the phenomenon under study. In multiple-case studies the number of cases examined is generally small in order to avoid significantly compromising the depth of analysis, while cross-sectional field studies generally involve a large number of units of study. (Lillis and Mundy, 2005) Essay 1 also uses several data sources (interviews, public documents, Thompson database), which is typical of a case study design (Yin, 2003).

4.4. Reliability and validity

The extent to which the concepts of reliability and validity apply to qualitative management accounting research has been the subject of some scholarly debate (see e.g. Abernethy et al., 1999; Ahrens and Chapman, 2006; Atkinson and Shaffir, 1998; McKinnon, 1988; Lukka and Modell, 2010; Vaivio, 2008).[26] Interpretatively orientated management accounting scholars have, rightly, argued that the notions of validity and reliability that reflect positivist stances of objective reality are unsuitable for qualitative field studies which assume that social reality is emergent, subjectively created and objectified through human interaction (Ahrens and Chapman, 2006; Chua, 1986). More positivist-oriented management accounting scholars have, on the other hand, noted that the issues of reliability and validity cannot be avoided or compromised in either the conduct or reporting of case studies (Abernethy et al., 1999; Atkinson and Shaffir, 1998; McKinnon, 1988). According to their view, the concepts of validity and reliability can be described at a broader level in respect of their applicability to research generally. Broadly defined, reliability is concerned with the question of whether the researcher is collecting data on which she/he can rely. Validity, on the other hand, is concerned with the question of whether the researcher is studying the phenomenon she or he purports to be studying. (McKinnon, 1988) Validity can be further divided into construct validity (whether the research is really measuring what it intends to measure), internal validity (establishing a causal relationship whereby certain conditions are shown to lead to other conditions) and external validity (establishing the domain in which a study's findings can be generalised to wider populations, settings or times) (Abernethy et al., 1999; Atkinson and Shaffir, 1998; Yin, 2003).

Management accounting and management scholars have suggested several strategies and tactics for increasing the reliability and validity of qualitative management accounting research. These include spending substantial length of time in the field (McKinnon, 1988, Vaivio, 2008), triangulation between different empirical materials (McKinnon, 1988; Scapens, 1990; Vaivio, 2008), using numerous and highly knowledgeable informants that view the

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[26] The term 'qualitative management accounting research' is used here to refer to management accounting studies that use qualitative data as the principal source of evidence. The term 'qualitative research' is thus used to refer to the type of evidence (see e.g. Ferreira and Merchant, 1992; Vaivio, 2008; Yin, 2003), rather than the type of research design, reflecting a particular type of methodological stance (see e.g. Ahrens and Chapman, 2006; Eisenhardt and Graebner, 2007).

phenomenon from different perspectives (Eisenhardt and Graebner, 2007), trust building and non-biasing social behaviour by the researcher in the field (McKinnon, 1988; Vaivio, 2008), making notes and asking probing questions (McKinnon, 1988), interaction between theory and evidence; overlap between data analysis and data gathering (Ahrens and Dent, 1998; Ahrens and Chapman, 2006; Vaivio, 2008), referencing empirical material to allow readers to judge the validity of the case description (Ahrens and Dent, 1998; Lukka and Kasanen, 1995), feeding back evidence to the subjects (Scapens, 1990), and being careful not to overgeneralise the findings (Vaivio, 2008).

In this research, several procedures were taken to increase the validity and reliability of the findings. Essay 3 and Essay 4 benefited from all of the above-mentioned procedures for increasing the validity and reliability of findings. 22 theme interviews over a period of three years provided the researcher with substantial time in the field. The interviewees represented several key corporate functions (finance and control, HR, strategy) and several layers of management and represented, thus, a group of highly knowledgeable informants that could view the phenomenon from different perspectives (Eisenhardt and Graebner, 2007). Interview data were complemented with several other data sources (McKinnon, 1988; Scapens, 1990, Vaivio, 2008), and data analysis proceeded in parallel with data gathering, enabling the researcher to probe deeper into initial ideas as the project and the data collection progressed (Ahrens and Dent, 1998; Ahrens and Chapman, 2006; McKinnon, 1988, Vaivio, 2008). While in the field, the researcher was aware of the background of each interviewee and addressed topics relevant to that person, was careful not to lead the discussion along preconceived paths and not to express her opinions during the interviews (Vaivio, 2008). The overall analysis was also verified by key informants at the case company (Scapens, 1990). When reporting the findings, rather heavy referencing was made to the empirical material, enabling the readers to assess the validity of the field evidence (Ahrens and Dent, 1998). Finally, care was taken not to overgeneralise the findings: both studies commented, for example, on the situations in which the management practices found may not be pertinent (Vaivio, 2008).[27] The procedures for strengthening the reliability and validity were almost identical in Essay 2 except that the first case study at the case company Titan involved a limited number of interviews (7) and a considerably shorter period of time in the field. As this initial investigation yielded

[27] When generalising the findings of all of the essays, 'theoretical' rather than 'statistical' generalisation was applied (Eisenhardt, 1989; Lukka and Kasanen, 1995; Scapens, 1990; Spicer, 1992; Yin, 2003).

interesting preliminary findings, we examined the phenomenon further, and in more organisational depth, in a contrasting contextual setting at the case company Saturn. The second case study at Saturn was conducted over a period of four years and involved 25 interviews with managers from several management layers.

The procedures for increasing the validity and reliability of findings were slightly different for Essay 1, which was based on a multiple case study of 14 companies. As the data were gathered from 14 companies, the field time spent in each case company was inevitably rather short (see e.g. Vaivio, 2008). Since each interview focused on a major SID incident, an average interview time of 2.5 hours facilitated discussion in considerable depth on the SID-making practices related to the SID in question. Other empirical materials, such as annual reports and books and articles related to the case companies were also used to complement the data gathered in the theme interviews (McKinnon, 1988). Specific procedures to increase the validity of the findings were also conducted. First, the scoring was based on a phased procedure in which the scores were first assessed by two researchers working independently through all transcripts. After joint analysis and comparison, the two researchers agreed on their final scores (See McKinnon, 1988, pp. 49-50). Second, to provide further evidence of the validity and reliability of the scoring, we asked for independent reviews from experienced academics in the field from two different universities, working independently of each other. This independent analysis did not result in any material differences in the scores or changes in the categorisation of companies.

5. Summaries of the essays and their contribution

5.1. SID making practices: A contextual approach

The first essay of this dissertation seeks to shed light on the contextual nature of SID making practices. SID literature has documented significant differences in practice – both in regard to the choice of particular capital budgeting techniques (see e.g. Alkaraan and Northcott, 2006; Carr and Tomkins, 1996, 1998; Sandahl and Sjögren, 2003; Verbeeten, 2006) and in regard to the broader tendencies to emphasise strategic versus financial analysis in the decision-making (see e.g. Carr and Tomkins, 1996, 1998; Sandahl and Sjögren, 2003). The SID literature has, however, paid very little attention to which contextual variables, besides the country context, could be associated with these differences (Chen, 2008; Verbeeten, 2006). As a consequence, several scholars have called for more contextually based research studies designed to explain differences in SID making practices (Haka, 1987; Ho and Pike, 1998; Slagmulder et al., 1995; Verbeeten, 2006).

Essay 1 develops a new contextual framework for explaining differences in SID making practices. The framework developed encompasses important, but neglected contingencies that are derived from the broader strategic management and strategic management accounting (SMA) literatures. These contingencies are integrated to construct a general contextual framework that explains SID making practices in terms of a company's '*market orientation*' and its '*performance in relation to shareholder expectations*'. The framework developed gives rise to a fourfold categorisation of companies comprising *market creators*, *value creators*, *refocusers* and *restructurers*. This framework's potential for explaining differences in SID making practices is subsequently explored through an exploratory set of 14 matched field case studies from the U.K., U.S. and Japan, providing coverage of the vehicle components and telecommunications sectors.

Essay 1 contributes to the SID literature by proposing a new corporate typology that is developed specifically to explain differences in SID making practices. Given limited prior focus on contextual SID making practices (Slagmulder et al., 1995; Verbeeten, 2006), no such SID-specific typology has been presented before. The evidence presented in the paper suggests, however, that general SMA typologies, such as Miles and Snow's (1978) prospector-defender-analyser-reactor-typology (see e.g. Cadez and Guilding, Guilding, 1999; Simons, 1987), would provide a less comprehensive explanation for the differences in SID making practices. Although tentative and descriptive at this stage, the new typology developed in the paper provides a theoretical categorisation against which further research on contextual differences in SID making practices can be examined. Over time, the findings of such examinations could accumulate and provide a more thorough understanding of contextual SID making practices.

Essay 1 also adds to the SID literature by presenting qualitative field-based evidence of how decisions on strategic investments are in actuality made in organisations. The evidence reveals substantial differences in practice: these differences are not revealed simply in regard to the *choice* of capital budgeting techniques, but are also particularly apparent in the *way* the techniques are used, and in how they *influence* decision-making on strategic investments. The differences found in practice vary in accordance with the contextual framework proposed in the paper. Correspondingly, *market creators* exhibit the most strategically orientated approach to SIDs. Financial analyses have a more supportive role and they are likely to be over-ridden or even manipulated by decision-makers. At the other extreme, *restructurers* emphasise financial considerations and are more rigid and conservative when handling targets and non-quantifiables. *Value creators* and *refocusers* demonstrate a more balanced emphasis on both strategic and financial considerations, but exhibit other marked differences in their overall SID approaches.

5.2. Shaping strategy formation with knowledge-integrating corporate-level management control systems

The second essay of this dissertation seeks to provide new insight into the roles MCS play in shaping strategy formation. Prior MCS research has tended to conceptualise the strategy formation shaping role of MCS as that of triggering strategic debate and organisational learning (see e.g. Bruining et al., 2004; Simons, 1990, 1991, 1995b; Tuomela, 2005). Essay 2 examines the knowledge-integrating, strategy formation shaping role of corporate-level MCSs. The empirical examination of the paper draws on an exploratory case study in two global multi-business companies which represent different business strategies and environmental contexts.

Essay 2 contributes to the literature on MCSs by empirically demonstrating that their role in shaping strategy formation may be more multifaceted than what is suggested by prior MCS literature. Essay 2 suggests that MCSs do not influence strategy formation solely through triggering strategic debate and organisational learning (Simons, 1990). They can also have a more immediate influence over strategy formation: they can facilitate the integration of strategically critical knowledge and contribute to business managers possessing more complete knowledge when they formulate their business strategies. This represents a non-invasive, enabling approach to exerting influence over business strategy formation. It seeks to mobilise business managers' knowledge, and it enables them to deal more effectively with their inevitable contingencies. (see Ahrens and Chapman, 2004; Wouters and Wilderom, 2008). The approach presented in the paper shares characteristics with recent advancements in the strategic management literature, which suggest reconciliation between the 'planning' and 'learning' schools of strategy formation by indicating that strategy formation may be guided with only limited structure (Brews and Hunt, 1999; Brown and Eisenhardt, 1997, 1998; Eisenhardt and Sull, 2001; Grant, 2001; Lovas and Ghoshal, 2000; Ocasio and Joseph, 2005, 2008). It corresponds particularly closely to Grant's (2003) concept of 'planned emergence' according to which business managers exhibit substantial autonomy and flexibility in strategy making, but corporate management seeks to shape the strategy making by providing the structure and context for the planning. Similarly to the 'planned emergence' approach, the approach presented in the paper also involves providing channels and forums for communication and knowledge sharing. How the approach presented in the paper differs from the approach illustrated by Grant is that a strong emphasis is placed on integrating knowledge in an explicit and readily digestible form. This facilitates that the knowledge sharing is not limited to those participating in the process, but can be shared more extensively throughout the organisation (Grant, 1996b; Teece, 2000).

Essay 2 also adds to the MCS literature by providing further specification to the concept of ICS: it presents a comparison of the purpose and properties of learning-oriented business-level ICSs (Bisbe et al., 2007; Simons, 1990, 1991, 1995a) and knowledge integration-oriented corporate-level ICSs. The paper also integrates its key findings to propose an extension to Simons' (1990) influential process model of the relationship between business strategy and MCSs by adding a corporate-level perspective to it.

5.3. Dynamic SPMS: Balancing empowerment and alignment

The third paper of this dissertation seeks to contribute to the literature on SPMSs thorough presenting empirically grounded theoretical insights about dynamic SPMSs. The paper examines how substantial dynamism can be built into SPMSs, and how such dynamic SPMSs can be used for strategic alignment. The paper is motivated by the practical significance of building dynamism into SPMSs[28], and the shortage of prior empirical evidence showing how companies seek to achieve this in practice (see e.g. Kennerley and Neely, 2002, 2003; Neely, 2005; Waggoner et al., 1999). The paper draws on an inductive, in-depth case study of a global leader operating in the dynamic telecommunications industry.

Essay 3 contributes to the SPMS literature by empirically demonstrating that building and using dynamic SPMSs may require companies to use a combination of management practices that differ considerably from those prevalent for more stable SPMSs. These differences relate to the number and type of performance measures, the number and type of alignment processes, and the level of subjectivity in the performance evaluation. Essay 3 also contributes to the SPMS literature by shedding light on individual level SPMSs. Prior SPMS literature has tended to focus on SPMSs, such as the BSC, which measures performance at an organisational level (see e.g. Franco and Bourne, 2003; Neely, 2005). Essay 3 suggests that SPMS measuring contribution to strategic performance at an individual level may be central for building dynamism into SPMSs. They allow for the incorporation of a variety of types of measures - including action-oriented targets that can be derived directly from strategic action plans - and facilitate placing primary responsibility for the measures at the level of an individual manager. This enhances the mobilisation of local knowledge in relation to the most significant and timely issues and facilitates the identification of more valid, reliable and understandable measures (Wouters and Wilderom, 2008). It also allows for that modifications

[28] Empirical reports from different parts of the world indicate that SPMSs have become an integral part of contemporary corporate practice (see e.g. Kald and Nilsson, 2000; Rigby, 2001; Silk, 1998, Speckbacher et al., 2003). Although they may provide managers with potentially effective mechanisms for strategic alignment (see e.g. Epstein and Manzoni, 1998; Kaplan and Norton, 1996, 2001), they may also introduce organisational rigidity and slow down an organisation's ability to adapt to changing circumstances unless frequent modifications to the measures are feasible (Bititci et al., 2000). Such a capability is likely to be particularly vital in turbulent industries where companies seek strategic agility – the capability to change strategies and business models rapidly (Doz and Kosonen, 2007).

to the measures and target setting can be made swiftly. This can provide a more effective means for building dynamism into SPMSs than formal audit tools and review processes suggested by prior research on dynamic SPMSs (see e.g. Bititci et al., 2000; Bourne et al., 2000; Medori and Steeple, 2000).

Finally, Essay 3 adds to the literatures on SPMSs and PMSs in general by suggesting that subjectivity may reintroduce itself into strategic evaluation. For over a decade, quantitative strategic measurements have been advanced as critical elements for successful strategic alignment (see e.g. Kaplan and Norton, 1992, 1996, 2001; Simons, 2000). Essay 3 suggests that subjectivity may be a central feature in a dynamic SPMS. It could be essential both to empower managers more effectively to take primary responsibility for measures and to provide them with sufficient leverage to account for changes in the external and internal contexts.

5.4. Elaborating on the concept of values-based control

The fourth paper of the dissertation seeks to elaborate on the concept of values-based control – a control approach whereby managers seek to utilise organisational values as a means of influencing organisational members' behaviour. The concept of values-based control has remained ambiguous despite wide acknowledgement by contemporary literature on MCSs that such systems constitute an essential part of a broader control package (e.g. Malmi and Brown, 2008; Merchant and Van der Stede, 2007; Mundy, 2010; Simons, 1995a; Widener, 2007). This ambiguity results from the fact that MCS researchers have addressed values-based control through a variety of partially overlapping concepts without seeking to provide much specification for the potential linkages between the concepts.

Essay 4 seeks to specify the key approaches through which values-based control is mobilised and to illustrate how these approaches can be applied in practice. It also sheds light on the challenges that surface when organisational members' behaviour is influenced through these approaches, and highlights similarities and differences between the key values-based control concepts applied within MCS literature. The examination is based on two pillars: first, it relies on a review of extant literature. Second, it draws from an empirical examination of values-based control practices in a large, global organisation with a strong administrative heritage in values-based control.

Essay 4 contributes to the literatures on values-based control and MCSs in two ways. First, it contributes *conceptually* by proposing a new conceptualisation of values-based control. The proposed conceptualisation is broader than the traditional values-based control concepts - clan control (Ouchi, 1979), cultural control (e.g. Merchant and Van der Stede, 2007; Sandelin, 2008), belief system (Simons, 199a, 1995b) and value-based control (Malmi and Brown, 2008) - applied within the MCS literature. This new conceptualisation acknowledges that organisational members can engage in desirable values-related behaviour by not only relying on their intrinsic motivation (e.g. Meglino and Ravlin, 1998; Ouchi, 1979), but also by relying on their perceptions of the benefits related to assuming such behaviour (e.g. Ogbonna and Harris, 1998; Wiener, 1982; Willmott, 1993). It portrays values-based control as comprising an array of complementary values-based control approaches - selection, acculturation, communication and incentivisation. These differ in the extent to which they seek to exert direct influence on organisational members' behaviour.

The new conceptualisation of values-based control put forward in the paper has implications for the research on values-based control. First, it argues that the general conception to view values-based control as socio-ideological control that operates through influencing organisational members' internal beliefs about what types of behaviour are desirable (e.g. Langfield-Smith, 1995; Norris and O'Dwyer, 2004; Ouchi, 1979; Simons, 1995a) may represent only a partial view of the nature of values-based control. Second, it suggests that a common juxtaposition between values-based control and formal, bureaucratic forms of control (see e.g. Eisenhardt, 1985; Langfield-Smith, 1997; Norris and O'Dwyer, 2005; Ouchi, 1979) may not be justifiable. The MCS and values-based control literatures often portray values-based control as an informal and subtle control form, which operates largely outside formal control processes (see e.g. Langfield-Smith, 1997; Merchant and Van der Stede, 2007; Norris and O'Dwyer, 2004; Ouchi, 1979; cf. Alvesson and Kärreman, 2004; Simons, 1995a). The conceptualisation put forward in Essay 4 highlights that many of the processes through which values-based control is mobilised are in fact quite formal organisational processes. Finally, the conceptualisation put forward in the paper also highlights the complementary nature of values-based control approaches. It contends that all the identified values-based control approaches have inherent limitations. It argues that an effective mobilisation of values-based control can necessitate a complementary use of these approaches.

Further, Essay 4 also adds to the literature on values-based control by an *empirical illustration* of how values-based control can be mobilised through the formal incentivisation of organisational members' values-related behaviour. Although some recent studies have reported observations of attempts to incentivise desirable values-related behaviour (Doz and Kosonen, 2007, p. 110; Lenzioni, 2002, Mundy, 2010), these studies have provided very little visibility into how such formal incentivisation can be implemented in practice. The evidence presented in the paper demonstrates that the formal evaluation and incentivisation of organisational members' values-related behaviour is subjective and sensitive in character. It also illustrates that particular procedural features - such as an attempt to strengthen the transparency of the evaluation process - can be used to enhance organisational members' approval for such evaluation.

6. Conclusions

The primary objective of this dissertation has been to contribute to SID, MCS, SPMS and values-based control literatures by addressing the research gaps specified in these literatures. Each of the four essays included in this dissertation makes several contributions to their specific research areas, as specified in the previous section. The dissertation provides both more focused contributions to these literatures and also a basis for general observations about the strategic role of management accounting. These general observations will be addressed in the following.

All four essays included in this dissertation provide evidence that inclusion of qualitative and subjective elements in management accounting could strengthen its strategic role – i.e. help make it more relevant to strategic decision-making and control. The introduction of qualitative and subjective elements can, first of all, facilitate the inclusion of not easily quantifiable factors such as synergies in the analyses of strategic investments (Essay 1). It can also facilitate that subjective, experience-based managerial insights can be drawn upon when formulating strategies (Essay 2) or when making decisions on strategic investments (Essay 1). It can also contribute to making strategic performance measures more relevant, timely and understandable by enabling the inclusion of qualitatively defined strategic targets that can be derived directly from strategic action plans and by providing individual managers with sufficient leverage to account for changes in external and internal contexts in target setting and performance evaluation (Essay 3). Finally, inclusion of such elements can also facilitate extending the formal evaluation and incentivisation of organisational members' behaviour to include strategically critical elements - such as organizational members' tendency to exhibit desirable values-related behaviours - that would simply not be measurable through purely quantitative means (Essay 4).

Similar observations about the potential benefits related to inclusion of qualitative and subjective elements in management accounting have been presented by several prominent management accounting scholars. Manzoni (2002, 2008, 2010) and Simons (1995; p. 118-119) have noted that allowing for subjective, qualitative judgement in performance evaluation and reward can increase flexibility, stimulate entrepreneurship and organisational learning, and help motivate organisational members engage in desirable behaviours. Bhimani and Bromwich (2010; see also Bromwich and Bhimani, 1991) have, on the other hand, commented that a strict focus on quantitative analysis can restrict the strategic role of management accounting by forcing managers to leave significant but not easily quantifiable factors outside analysis and decision-making. Otley (1999) and Ferreira and Otley (2010) have similarly emphasised that inclusion of qualitative, more subjective elements in management accounting could enhance its strategic role.

Despite these commentaries, available evidence of the ways through which business managers seek to draw benefits from blending quantitative and qualitative, more subjective analysis remains insufficient (Bhimani and Bromwich, 2010). The academic management accounting community has tended to draw attention to the negative implications of subjectivity (Manzoni, 2002, 2008, 2010). Attention has been paid, for example, to the discretion, bias and favouritism caused by inclusion of subjective elements (see e.g. Prendergeist and Topel, 1993, 1996; Simons, 2000). The above-mentioned observations and the evidence presented in this dissertation suggest that the role of subjectivity may need to be re-evaluated. The academic management accounting community may need to pay more attention to the contextual situations in which allowance for subjective judgement can be beneficial to organisations. Further empirical studies are also needed to cast more light on the ways through which managers seek to blend quantitative and qualitative analysis across key management accounting practices, such as those related to investment decision-making and performance measurement and evaluation.

This dissertation also provides further empirical evidence of significant discrepancies between practical management accounting applications and those generally proposed by management accounting literature (see e.g. Arnold and Hatzopoulos, 2000; Carr and Tomkins, 1998; Malina and Selto, 2004; Malmi, 2001; Malmi and Ikäheimo, 2003; Manzoni, 2002; Merchant, 1987; Simons, 2005). The differences found relate not only to the ways through which particular management accounting techniques such as discounted cash flow (DCF) techniques and Balanced Scorecard (BSC) are used (Essay 1, Essay 3; for prior evidence of such discrepancies see e.g. Carr and Tomkins, 1998; Malina and Selto, 2004; Malmi, 2001), but also to some of the most central management accounting principles such as the 'accountability' and 'objectivity' principles (Essay 3, Essay 4; for earlier evidence of such discrepancies see e.g. Manzoni, 2002; Merchant, 1989). The fact that empirical management accounting studies repeatedly report significant discrepancies between practical management accounting applications and those proposed by the management accounting literature highlights the need for continuing such empirical endeavours. Field-based studies are likely to be particularly effective in telling us more about the multiple, potentially unexpected ways through which management accounting techniques are applied in organisations (see e.g. Ahrens and Chapman, 1998; Kaplan, 1986; Yin, 2003). Over time such studies may accumulate evidence that enables specification of the of types of applications that are effective in particular contextual settings. Such investigations can also tell us more about the plurality of purposes for which management accounting techniques are utilised.[29] (see also Malmi and Granlund, 2009) Finally, further empirical investigations could also tell us more about the contextual situations in which managers may be willing to relax some of the central management accounting principles, such as the 'accountability' and 'objectivity' principle, in order to draw more benefits from the use of management accounting systems. This dissertation presents tentative evidence that a turbulent business environment may be one of the key contextual drivers forcing managers to allow for considerable subjectivity in the target setting and performance evaluation (Essay 3).

Finally, the research evidence presented in this dissertation provides a basis for drawing tentative insights about the nature of complementaries between control package constituents (see e.g. Malmi and Brown, 2008; Sandelin, 2008 for calls for such specifications). It suggests, firstly, that control package constituents can be complementary in regard to their time orientation. Managers may seek to utilise some parts of the overall control package as a means of enhancing continuity, while other parts can be used to build dynamism and a sense of urgency into operations. The evidence presented in Essay 3 suggests that these types of complementaries may occur, for example, between overall SPMS constituents, or between SPMSs and values-based controls. Managers may seek to utilise individual level SPMSs as a means of building dynamism by facilitating - and to some extent enforcing - frequent modifications to the measures. Organisational level SPMSs may, on the other hand, be kept relatively stable in order to enhance continuity in operations. Values-based control systems may, on another hand, be used to build a sense of even stronger continuity in the operations. The recent study by Chakhovich (2010) has presented related evidence that socio-ideological and technocratic

[29] This dissertation presents also new, tentative evidence of the purposes for which managers may seek to utilise a BSC. Prior studies have positioned BSC as a mechanism for enhancing strategy formation, strategy implementation and organisational learning (see e.g. Kaplan and Norton, 1996, 2001; Tuomela, 2005). The evidence presented in Essay 3 suggests that managers may also seek to utilise a BSC as a mechanism for building continuity into organisational life: when a BSC is used for this purpose, other parts of the overall SPMS can be used specifically to enhance strategy implementation.

controls trigger varying time models among practitioners. Her study suggests that a potential balance between socio-ideological and technocratic controls can be beneficial in combating myopia, which she defines as a disproportionate concern for business matters related to the past, present or future which does not contribute to the long-term success of the focal company. Her findings and the findings presented in this dissertation are among the first to point to the time orientation-related complementaries between control package constituents. Much further research is needed to shed more light on how managers seek to apply - and how their subordinates make sense of - such potential complementaries.

Further, the evidence presented in this dissertation suggests that control package constituents can also be complementary in that they seek to account for the inherent weaknesses in other control package constituents. A combination of such complementary MCSs may enable managers to exert influence on a larger part of organisational members than what would be feasible through any single MCS alone. The evidence presented in Essay 4 suggests that managers may, for example, seek to apply a combination of values-based control approaches in order to motivate desirable values-related behaviour among organisational members. This can enable managers to motivate desirable values-related behaviour both among those organisational members who are likely to have an intrinsic motivation to engage in such behaviours and among those who are better motivated through the formal incentivisation of desirable values-related behaviours. Finally, this dissertation provides further evidence for claims that control package constituents can be complementary in that they seek to mitigate dysfunctional consequences caused by other control package constituents (see e.g. Simons, 1995, 2000, 2005). This study presents evidence to support the contention that managers may seek to utilise values-based control systems as a means of increasing cooperation between organisational members in a context in which there is a strong emphasis on linking individual rewards to performance measurement (Essay 3; for prior evidence see e.g. Simons, 2005).[30]

A single doctoral dissertation can only seek to scratch the surface of some of the complexities of management accounting practice. This study has sought to shed light on four management practices that lie on the interface between strategy and management accounting. It provides further empirical evidence

[30] Previous studies have indicated that linking individual rewards to performance measurement may result in dysfunctional consequences such as not prioritising the organisation's primary goals, competition between individuals and manipulation of data (see e.g. Hopwood, 1972; Otley, 1987; Ridgway, 1956).

for discussion about the strategic role of management accounting (see e.g. Bromwich and Bhimani, 1989, 1994; Bhimani and Bromwich, 2010; Otley, 2001). It argues that the strategic role of management accounting can be strengthened by allowing qualitative and subjective elements to enter into the realm of management accounting. It also draws attention to the multi-faceted - and at times unexpected - forms that management accounting takes in organisations. Much further research is needed to uncover the complexities and contextualities of management accounting practice. We can hope that such efforts may, over time, provide more profound understanding of management accounting practice – and a theoretical knowledge which we may refer to as the theory of management accounting (Malmi and Granlund, 2009).

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PART II

ORIGINAL PAPERS

Essay 1

Carr, C., Kolehmainen, K. and Mitchell, F. 2010. Strategic investment decision making practices: A contextual approach. *Management Accounting Research*, Vol. 21, Issue 3, pp. 167-184.

Essay 2

Kolehmainen, K. and Malmi, T. Shaping strategy formation with knowledge-integrating corporate-level management control systems. Unpublished working paper.

Essay 3

Kolehmainen, K., 2010. Dynamic strategic performance measurement systems: Balancing empowerment and alignment. *Long Range Planning*, Vol. 43, Issue 4, pp. 527-554.

Essay 4

Kolehmainen, K. Elaborating on the concept of values-based control. Unpublished working paper.

Strategic investment decision making practices: A contextual approach

Chris Carr, Katja Kolehmainen and Falconer Mitchell

Abstract

This paper proposes a contextual approach to explaining differences in strategic investment decision (SID) making practices. First, a systematic contextual framework is developed from the existing research literature. Then this framework's potential for explaining differences in SID making practices is explored through 14 case studies of U.K., US and Japanese companies from both stable and dynamic business sectors. Our findings suggest substantial SID differences across our four contextual categories of *market creators*, *value creators*, *refocusers* and *restructurers*. The differences relate to the emphasis on strategic versus financial considerations, the thoroughness and rigidity of financial analysis, the attitudes towards incorporating less easily quantifiable factors and the level of hurdle rates.

Key words: strategic investment decisions, strategic management accounting, contingency approach, vehicle components, telecommunications.

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1. Introduction

The literature on strategic investment decision (SID) making practices[31] has provided ample evidence of the general use of capital budgeting techniques, such as DCF (e.g. Alkaraan and Northcott, 2006; Arnold and Hatzopoulos, 2000; Farragher et al., 1999; Graham and Harvey, 2001; Pike, 1996). Indeed, most research in the field has aimed at presenting an overview of prevailing corporate practice with regard to *which* techniques are being used (e.g. Arnold and Hatzopoulos, 2000; Farragher et al., 1999; Pike, 1983; 1996; Sandahl and Sjögren, 2003). However, there is still a need to know more about *how* these techniques are being used (Alkaraan and Northcott, 2006; Butler et al., 1991) and *how these practices may vary* across various contextual settings (Haka, 1987; Slagmulder et al., 1995; Verbeeten, 2006). Furthermore, sociologists would argue for yet deeper investigation of the organisational processes entailed (Miller and O'Leary, 2005, 2007).Field study evidence also further indicates that SIDs are not always primarily based on financial considerations and there may be considerable differences in the extent to which strategic versus financial considerations are emphasised in their evaluation (Butler et al., 1991; Carr and Tomkins, 1996, 1998; Jones and Dugdale, 1994). Cross-country research suggests that these differences may be associated with the national context (Carr and Harris, 2004; Carr and Tomkins, 1996, 1998; Jones et al., 1993; Shields et al., 1991). Additionally, documented differences in the emphasis on strategic versus financial considerations among companies from the same country contexts suggest that these differences may be associated with other contextual variables, as well (e.g. Alkaraan and Northcott, 2006 cf. Butler et al. 1991; Sandahl and Sjögren, 2003). Hitherto, SID literature has provided only scant evidence of which contextual variables, besides the country context, could be associated with these differences (Chen, 2008; Verbeeten, 2006).

This paper aims to address this void by proposing a systematic contextual framework for explaining differences in SID making practices. The framework developed encompasses important, but neglected contingencies that are

[31] The term strategic investment decision (SID) refers to a decision on a substantial investment which has a significant effect on long-term performance and the organisation as a whole (Carr and Tomkins, 1996, 1998)
Capital budgeting literature has not always distinguished more strategic types of investment (e.g. Graham and Harvey, 2001; King, 1975; Klammer, 1972; Klammer and Walker, 1984; Pike, 1983; Sihler, 1964); but a substantial body of research now attests to the importance of this distinction (Alkaraan and Northcott, 2006; Butler et al. 1993; Marsh et al., 1988; Oldcorn and Parker, 1996).

derived from the broader strategic management and strategic management accounting (SMA) literatures. These contingencies are integrated to construct a general contextual framework that explains SID making practices in terms of a company's *'market orientation'* and its *'performance in relation to shareholder expectations'*.[32] The framework developed gives rise to a fourfold categorisation of companies comprising *market creators*, *value creators*, *refocusers* and *restructurers*. The framework's potential for explaining differences in SID making practices is subsequently tested on an exploratory basis through 14 case studies of U.K., U.S. and Japanese companies operating in vehicle component (10) and telecommunications (4) sectors. Potential differences in SID making practices are explored initially, in regard to the use of capital budgeting techniques, and then in regard to companies' overall SID approaches.[33]

The results of the 14 case studies indicate substantial differences in SID approaches across the 4 contextual categories. These are evident from the extent to which decisions are made based on strategic versus financial considerations, the thoroughness and rigidity of financial analysis, and attitudes towards incorporating less easily quantifiable factors such as synergies into calculations. An expected tendency for hurdle rates to rise as we move from the most strategically orientated *market creator* category towards the most financially orientated *restructurer* category is also clearly observed.

The remainder of the paper is organised as follows. An overview of research related to SID making practices is presented. Then the explanatory contextual framework for SID making practices is constructed and followed by a description of the research method. The research findings are presented, first in respect of potential contextual differences in the use of capital budgeting techniques, and second in respect of the companies' overall approaches to SIDs. The conclusion comprises a summary of the findings, a discussion of their broader implications, and a suggestion of areas for further research.

2. Literature overview on SID making practices

2.1. Capital budgeting techniques

[32] The terms in italics will be explained in more detail when we build our framework in Section 3.3.

[33] The term approach refers to broader attitudes and orientations, and encompasses tendencies to emphasise strategic versus financial considerations in the evaluation.

The corporate use of capital budgeting techniques has been examined extensively (e.g. Alkaraan and Northcott, 2006; Arnold and Hatzopoulos, 2000; Carr and Tomkins, 1996, 1998; Farragher et al., 1999; Graham and Harvey, 2001; Haka, 1987; King, 1975; Klammer and Walker, 1984; Klammer et al., 1991; Pike, 1983, 1988; 1996; Sandahl and Sjögren, 2003; Sangster, 1993; see Haka, 2007 for a review). Most research, in the field, has focused on the use of capital budgeting techniques in particular country contexts, addressing the use of techniques for example in the U.K. (e.g. Alkaraan and Northcott, 2006; Arnold and Hatzopoulos, 2000; Pike, 1996), the U.S. (e.g. Farragher, 1991; Graham and Harvey, 2001; Klammer et al., 1991), Continental Europe (e.g. Carr and Tomkins, 1996; 1998; Carr et al., 1994), and Japan (e.g. Carr, 2005; Carr and Tomkins, 1998; Jones et al., 1993; Kim and Song, 1990; Shields et al., 1991; Yoshikawa et al., 1989). Research findings demonstrate cross-country differences in the use of capital budgeting techniques. For example, the use of DCF techniques is more extensive among Anglo-Saxon companies (e.g. Arnold and Hatzopoulos, 2000; Graham and Harvey, 2001; Pike, 1996). Japanese, Continental European and Nordic companies may, on the other hand, sometimes rely more on less sophisticated techniques, such as the payback period when making decisions on SIDs (Carr and Tomkins, 1996, 1998; Sandahl and Sjögren, 2003; Shields et al., 1991; Yoshikawa et al., 1989).

A limited amount of research has been conducted on the potential association between the use of capital budgeting techniques and contextual variables, other than the country context (Chen, 1995, 2008; Haka, 1987; Verbeeten, 2006). The relationship between corporate size and the use of techniques has been the most extensively covered topic. There is consistent evidence that large companies are more likely to use sophisticated techniques, such as DCF (Farragher et al., 1999; Graham and Harvey, 2001; Pike, 1996).[34] Available empirical evidence also suggests that the use of sophisticated techniques is more common among companies that operate in predictable as opposed to unpredictable business environments (Chen, 1995; Ho and Pike, 1998), among highly leveraged companies (Graham and Harvey, 2001; Klammer et al., 1991) and among companies that face financial uncertainty (Verbeeten, 2006). Companies facing a challenging financial situation have also been found to set tighter financial targets (Van Cauwenbergh et al., 1996).

[34] We draw on Haka et al. (1985) to use the term 'sophisticated techniques' to refer to capital budgeting techniques such as Net Present Value (NPV) and Internal Rate of Return (IRR) that consider the risk-adjusted discounted net cash flows expected from a project.

2.2. Broader approaches to SIDs

Field study based research on SID making practices indicates that there are cross-country differences also in the extent to which SIDs are based on strategic versus financial considerations. Research findings suggest that U.K. companies may have a tendency to overlook strategic considerations and focus strongly on financial analyses, while Japanese and German companies may downplay financial evaluation and emphasise strategic considerations. U.S. companies may, on the other hand, have a more balanced approach, paying attention to both strategic and financial considerations (e.g. Carr, 2005; Carr and Tomkins, 1996, 1998; Jones et al., 1993). Corresponding evidence of differences in the extent to which SIDs are based on strategic versus financial considerations have also been documented among companies in the same country. For example, Sandahl and Sjögren (2003) found that some large Swedish companies base their decisions solely on sophisticated financial analysis while many of the companies promoting the traditional payback period technique tend to emphasise strategic considerations. Research evidence from the U.K. points to variation in the financial and strategic emphasis, as well (Alkaraan and Northcott, 2006 cf. Butler et al., 1991).

These documented differences in the balance of strategic versus financial considerations within the same country context indicate that contextual variables other than the country context are important influences on practice. However, available empirical evidence indicating an association with other contextual variables is very limited. There is some evidence to suggest that the higher levels of integration in manufacturing investment do attract a greater strategic emphasis (Abdel-Kader and Dugdale, 1998; Meredith and Hill, 1987).

Consequently, researchers have advocated the need for more contextually based research studies designed to explain differences in SID making practices (Haka, 1987; Ho and Pike, 1998; Slagmulder et al., 1995; Verbeeten, 2006). This study aims to address this gap by developing an explanatory contextual framework for SID making practices. The development of this framework is outlined in the following section.

3. Towards a contextual approach for SID making practices

3.1. Oldman and Tomkins' contextual framework: the contexts of market orientation and need for turnaround

The development of the framework takes Oldman and Tomkins' (1999) four-state Cost Management Model as a starting point as it provides one of the most developed approaches to explaining differences in SMA practice. Their framework focuses on a sub-set of SMA, i.e. strategic cost management (SCM) and proposes a theoretical framework that encompasses important contextual variables. Their study is also one of the few SMA studies that are supported by several substantial and detailed case studies.[35] It provides evidence that companies' SCM practice variation can be explained by a four-state Cost Management Model that categorises companies into four categories based on the extent of their *market orientation* and their *need for turnaround* (Figure 1).[36]Although they do not explicitly address SID making practices, they find differences in the type of investment favoured across their four contextual categories. This suggests that their framework may also have some relevance for explaining differences in SID making practices (Chen, 1995; Klammer et al., 1991).

Strong market orientation	**Radical innovation** Focused investment	**Continuous market innovation** Growth investment
Weak market orientation	**Product pruning** Minimum investment/ Divestment	**Continuous process improvement** Process/maintenance investment
	Strong turnaround need	No turnaround need

Figure 1. Oldman and Tomkins' (1999) Four-State Cost Management Model

[35] Although some researchers on SMA exclude SIDs from the field of SMA (e.g. Guilding et al, 2000; Roslender, 1995), Bromwich and Bhimani (1994) and Tomkins and Carr (1996) position SIDs as a central field within SMA. The significance of SIDs is also reflected in that the MAR 1996 Special Issue on Strategic Management Accounting included several articles on SIDs (Carr and Tomkins, 1996; Cauwenbergh et al., 1996; Shank, 1996).

[36] For the purposes of further discussion related to the development of our own contextual framework, we have transposed Oldman and Tomkins' (1999) original axes here so that *need for turnaround* appears on the horizontal axis, and the *market orientation* on the vertical axis.

The strategic management, SMA and SID literatures give direct support for the pertinence of Oldman and Tomkins' (1999) *market orientation* and *need for turnaround* contextual variables for explaining differences in SID making practices. These literatures suggest that financial turnaround shifts companies towards a greater financial orientation (Bibeault, 1981; Carr et al. 1994; Slatter, 1984), and that financial uncertainty and high leverage are associated with the use of more sophisticated capital budgeting techniques (Graham and Harvey, 2001; Verbeeten, 2006). Companies facing a difficult financial situation are also likely to operate a more formal investment decision making process and will set tighter financial targets (Van Cauwenbergh et al., 1996). In addition, substantial literature arguing for a distinction between market and financial orientations (Barwise et al., 1989) suggests that companies with a weak market orientation are likely to put more emphasis on financial considerations, while strongly market orientated companies will emphasise strategic considerations.

3.2. Modifying Oldman and Tomkins' contextual framework

Although *market orientation* and *need for turnaround* are pertinent in explaining differences in SID making practices (see e.g. Bibeault, 1981; Doyle, 1992; Graham and Harvey, 2001; Verbeeten, 2006), the strategic management, SMA, and SID literatures suggest that Oldman and Tomkins' (1999) framework may need to be modified to explain adequately differences in SID making practices. These modifications are discussed below by focusing on the two axes of their framework (see Figure 1 above).

Modifying the need for turnaround axis

SIDs involve long-term decisions, while turnaround is likely to be an inherently transitory circumstance. Companies may not be willing to change their SID making practices frequently as this would destroy any consistency in their approach to these decisions. Companies may thus be more likely to adjust their SID making practices in response to a more long-lasting decline in performance. For the analysis of SIDs, performance might, therefore, be better conceived in terms of some longer term, more multi-dimensional concept of performance.

This, in turn, requires recognition that goals and objectives will primarily reflect shareholder influence. However, it is possible that in some cases this may be extended to encompass other stakeholders (Johnson et al., 2008, pp. 153-163) and so could modify the pure shareholder value pursuit implied by Rappaport (1996), particularly in stakeholder-driven societies such as Japan. Indeed, no theory exists to explain performance in absolute terms. In classical, formal strategic planning processes it is the *gap* between performance and shareholder goals and expectations which triggers any top-level strategic reviews or controls (Argenti, 1974). Empirical evidence suggests that SID practices reflect *perceptions* of shareholder or other stakeholder demands, which in turn vary widely across and even within different country contexts. Frequently, it is these somewhat subjective *perceptions*, rather than considerations of finance theory alone, which motivate any differences in practices, such as those relating to the tightness of financial targets. (Carr et al., 1994)

We would expect weak-performing companies to be highly constrained by tough financial targets, as compared to strong-performers who may have more discretion to emphasise strategic considerations (Bibeault, 1981; Slatter, 1984; Van Cauwenbergh et al., 1996). Any perception of high shareholder demands would add further to such financial constraints.

Modifying the market orientation axis

Although *market orientation* is likely to be relevant for explaining differences in the extent to which strategic versus financial considerations are being emphasised (Barwise et al., 1989; Doyle, 1992), the strategic management and SMA literatures suggest that *market orientation*'s influence on SID making practices may be moderated or reinforced by a company's strategic orientation (Gupta and Govindarajan, 1984; Miles and Snow, 1978; Porter, 1980), management style (Goold and Campbell, 1987), and the attractiveness (Brownlie, 1985; Robinson et al., 1978) and dynamism of the market in which they operate (Cheung, 1993).

Association between a company's strategic orientation and SMA practices has been well documented in the SMA literature (e.g. Cadez and Guilding, 2008; Chenhall and Langfield-Smith, 1998; Govindarajan and Gupta, 1985; Guilding, 1999; Simons, 1987). However, the research findings in this area are rather fragmented (Fisher, 1995; Langfield-Smith, 1997) as SMA scholars have made use of several different strategy typologies, most notably generic strategies (Porter, 1980), strategic configurations (Miles and Snow, 1978) and strategic missions (Gupta and Govindarajan, 1984). Research findings do indicate that there may be general differences in the SMA practices between the more entrepreneurial strategy archetypes of *prospector* (Miles and Snow, 1978), *differentiator* (Porter, 1980) and *builder* (Gupta and Govindarajan, 1984), as compared to the more conservative strategy archetypes of *defender* (Miles and Snow, 1978), *cost leader* (Porter, 1980) and *harvester* (Gupta and Govindarajan, 1984; see Chenhall, 2003 and Langfield-Smith, 1997 for reviews on SMA literature).

Though popular in the SMA literature, in practice, only two of Miles and Snow's (1978) four categories have often been applied, *prospectors* and *defenders*; the remaining two, *analysers* and *reactors* have often been omitted in the analysis (see e.g. Cadez and Guilding, 2008; Chen, 2008; Haka, 1987; Simons, 1987). This may be because *analysers* are defined as a hybrid under which companies operate in silos, utilising *prospector* configurations for some types of business and *defender* configurations for other types as they act in different environmental contexts. This compromises the coherence of the categories given that their concepts are predicated upon integrated, consistent approaches to strategy, structure and organisational processes. The *reactor* category is also problematic. Such companies are typically failing in terms of performance, having not adapted in any consistent manner to environments perceived as highly uncertain. Whilst Oldman and Tomkins (1999) also emphasise poor performance as an additional dimension, it is not clear why this should only arise in relation to uncertain environments.

Available evidence of the association between a company's strategic orientation and SMA practices suggests that the more entrepreneurial business strategy archetypes may be associated with stronger strategic orientation (Govindarajan and Gupta, 1985) and a broader use of planning information (Guilding, 1999; Simons, 1987) as compared to the more conservative business strategy types. Although the SID literature has not yet presented any direct evidence for an association between a company's strategic orientation and SID making practices (Chen, 1995, 2008; Haka, 1987), the broader strategic management and SMA literatures suggest that a company's tendency to emphasize strategic versus financial considerations may be moderated or reinforced by its strategic orientation.

The strategic management literature indicates, further, that a tendency to emphasise strategic versus financial considerations in SID making practices may be moderated or reinforced by a company's management style, which can be categorised as *strategic planning*, *strategic control,* and *financial control* styles (Goold and Campbell, 1987). Although a management style principally depicts the way a corporate centre attempts to control other parts of the organisation (for example by intervening in strategic planning and monitoring strategic performance, as in the *strategic planning* style, or by engaging in tight financial monitoring, as in the *financial control* style), such styles are also likely to be reflected in the way SIDs are approached. It would be expected that *strategic planning* styles will drive companies to put more emphasis on strategic considerations and on setting less challenging financial targets while *financial control* styles generate a stronger financial emphasis and tighter financial targets.

Finally, prior strategic management and SID research suggests that the business sector in which the company operates is likely to be associated with companies' SID making approaches. Available evidence indicates that companies operating in stable business sectors may be more likely to use sophisticated capital budgeting techniques (Chen, 1995) and that they may also gain higher benefits from using such techniques as compared to companies operating in dynamic business sectors (Haka, 1987). Volatile business sectors may drive companies towards a greater emphasis on strategic considerations (Cheung, 1993), although the formality of their strategic analysis may be influenced by business sector dynamism (Eisenhardt and Sull, 2001; Mintzberg, 1994). A tendency to emphasise strategic considerations is likely to be further moderated or reinforced by market attractiveness. Companies operating in attractive business sectors that provide favourable prospects for growth and profitability are likely to put more emphasis on strategic considerations and to set less challenging financial targets as compared to companies operating in less attractive markets (Brownlie, 1985; Robinson et al., 1978).[37] We view such variables as likely to contribute further to market orientation[38], and a tendency to emphasise strategic considerations.

3.3. A contextual approach to SID making practices

The previous discussion indicates that Oldman and Tomkins' (1999) framework provides a useful starting position for explaining differences in SID making practices. However, their original *market orientation* and *need for turnaround* dimensions do require modification to take account of key

[37] Building on Robinson et al. (1978) and Brownlie (1985) we use the term market attractiveness to refer to the extent to which a business sector exhibits high profit and growth potential.
[38] Strictly speaking this may imply a broader concept of market orientation than is sometimes used in the marketing literature (e.g. Doyle, 1992).

contextual variables pertinent to SIDs. Figure 2 integrates all these key contingencies into an overall contextual framework that explains differences in SID making practices in terms of a company's '*market orientation* (which, as explained above, is an extension of the definition for this term used by Oldman and Tomkins, 1999)' and its '*performance in relation to shareholder expectations*'.[39]

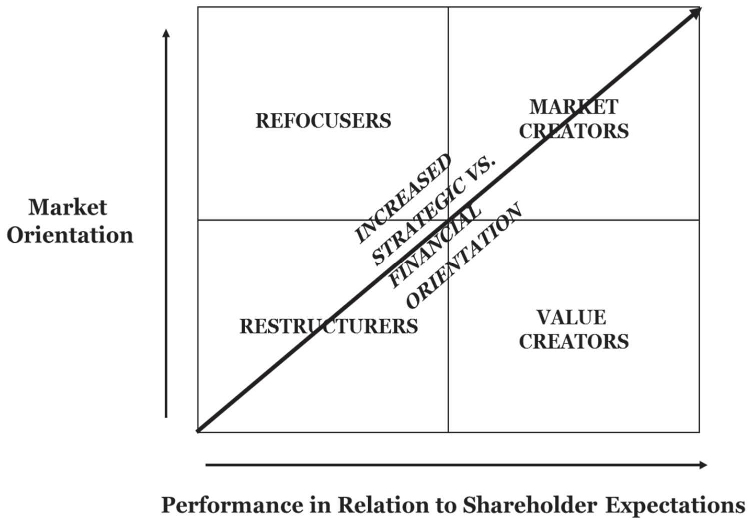

Figure 2. Contextual framework for strategic investment decision making practices

The new framework proposed gives rise to four broad contingency positions, which we categorise as *market creators*, *refocusers*, *value creators* and *restructurers* to illustrate their different situational contexts.[40] Well-performing *market creators* are relatively free of short-term financial constraints and can therefore emphasise long-term market development and positioning. They will put a strong emphasis on strategic considerations in their SID making approach, and will be relatively flexible in their use of

[39] Contingency studies on management accounting (MA) practices have rarely conceptualised performance as an independent variable, having an influence on MA systems/practices. This study draws on Oldman and Tomkins (1999) to consider performance as one of the key variables influencing MA practices.
[40] Perceptive readers will recognize that our framework subsumes the well-known Directional Policy Matrix framework (see. e.g. Brownlie, 1985; Hussey, 1978; Robinson et al., 1978), which in term yields *build*, *hold*, and *harvest* strategy typologies of notable interest to e.g. Gupta and Govindarajan (1984), Langfield-Smith (1997) and Cadez and Guilding (2008).

financial targets. Similarly disposed, but experiencing greater short-term pressures to perform, *refocusers* are likely to be forced into greater conservatism and serious re-focusing, while still having to protect crucial intangible assets, including brands and technology. Thus, *refocusers* will pay attention to both strategic and financial considerations in their SID making approach and set moderately tight financial targets for their SIDs. Well-performing *value creators* emphasise internal efficiencies and 'value creation' for their customers, often through superior cost control. As with *refocusers*, *value creators* will pay attention to both strategic and financial considerations in their SID making approach, and set moderately tight financial targets. Finally, *restructurers* engage in radical re-structuring and cost-cutting due to strong short-term pressures to perform. *Restructurers* will put strong emphasis on financial considerations, set very tight financial targets for their SIDs and, in general, will be very conservative in their SID approaches.

In summary our working hypothesis is as follows:

The SID orientation of a company may be predicted by the four archetypes model reflected in Figure 2.

The counterfactual is that such differences in practices may be more effectively explained by one or other of our single variables taken in isolation: for example, Miles and Snow (1978)'s major strategic configurations, or even by cross-country differences. A further issue in operationalizing the proposed framework is that, while a set of variables can be identified; there is an absence of any theoretical or empirical evidence suggesting that any particular individual variable is more influential than another. Consequently, in this exploratory analysis, variables are integrated on an unweighted basis. Again the counterfactual is that such a seemingly random approach is unnecessary: and that it is therefore preferable to stay with just one, more theoretically established categorisation approach.

4. Research approach and methodology

In order to empirically explore the above proposed framework's explanatory power on SID making practices, matched comparative case studies on company SID practices have been undertaken. These cases were particularly pertinent to our research objective for two key reasons. Firstly, they provided rich enough data to enable scoring along the several variables identified above as relevant and to explore overall SID approaches in considerable depth. Secondly, they enabled comparison of the SID practices across the four contextual categories described above.

To explore the influential dimensions of the four contingency-based typologies, companies representing diverse business sector and shareholder influence contexts were selected. These comprised companies from the telecommunications sector (at the time of study an attractive, dynamic business sector) and vehicle components (at the time of study a relatively stable, less attractive sector). To extend the range of shareholder influence contexts, the vehicle component sample covered Japanese as well as U.K. and U.S. companies. Earlier studies had indicated that Anglo-Saxon and Japanese companies exhibit substantial differences in shareholder influences (Carr, 2005; Carr and Tomkins, 1998). The resulting sample included 4 matched telecom companies (2 U.K, 2 U.S.) and 10 matched vehicle component companies (3 U.K., 4 U.S. and 3 Japanese). All case companies were large, multinational companies, operating in several countries, and among the global or regional leaders in their industries.

Interviews with senior executives, who had been personally involved with SIDs, formed the basis of the 14 case studies (see Appendix A). In 7 out of the 14 cases, interviews were conducted with several company representatives. The interview approach was predominantly one of discussion around broad themes, aimed at obtaining managers' own perceptions of practices and events. An interview guide was used to ensure cross-case comparison of specific themes, e.g. in the use of capital budgeting techniques. We also prompted managers to give their explanations of the wider aspects of management control, strategic planning and the competitive situation. Interviews averaged approximately 2.5 hours and all were taped and transcribed.

The empirics were exploratory in nature and were drawn from an international study on SID practices conducted by one of the authors between 1994 and 1997. Although over a decade old, the data remains appropriate for an initial assessment of the corporate typologies developed in the paper. These typologies are expected to be enduring in nature, similar to those of Miles and Snow (1978) which have been in research use for over 30 years. Moreover, in three of the companies (one from each country), some further data, gathered in 2001-2003, was available and was used to confirm the longitudinal durability of the typologies. For example, in all three of these cases the principal capital budgeting techniques had remained the same and the hurdle rate targets had likewise remained largely unchanged.

Data analysis involved several phases. To enable positioning of the companies in the context of the proposed explanatory framework, investigated companies were first scored on a scale between 1 and 9 on all contextual variables. To analyse our composite strategic orientation variable, we reviewed the quotations for all the four sub-variables (market/financial orientation, strategic configuration, generic strategy and management style) individually. The assessment was theoretically informed and entailed searching for quotations that would provide an indication of, for example, a *prospector* type strategic configuration. The scores were assessed by two researchers working independently through all transcripts. Key quotations underlying the judgments were then collated to facilitate cross-case comparison across all variable scores. After joint analysis and comparison, the two researchers agreed on their final scores. To assess the validity of our scoring, we asked for independent reviews from experienced academics in the field from two different universities, working independently of each other. This analysis resulted in almost identical scores. The first researcher's initial scores diverged one point from our original scores in two instances. The second researcher agreed on all scores. The scores used in the study were confirmed after discussion with the authors. This independent analysis resulted in no material differences in the scores, or changes in the categorisation of companies.

Where appropriate, use was made of secondary research data based on publicly available information. Performance scores were determined using a detailed financial benchmarking of companies, against each other and their worldwide sector peers. As the performance score aimed to capture companies' long-term financial and strategic performance, benchmarking was based on 5-year average sales growth %, 5-year average ROCE % (Y1994, Y1999 and Y2004), and relative market shares (Y1996). The details of the financial benchmarking are elaborated in more detail in Appendix B. Market attractiveness scores were determined by assessing the 5-year average sales growth % and 5-year average ROCE % for the two business sectors, as elaborated in Appendix C. Finally, market dynamism scores were assessed first for the telecommunications and vehicle component sectors overall. After this, the scores for individual companies were determined in the light of evidence that particular companies experienced more or less dynamic environments as compared to their sectors overall.

All of the interview transcripts were then reviewed to identify potential differences in the SID practices across the contextual categories. The transcripts were first examined for any potential differences in the use of capital budgeting techniques, hurdle rates, and other specifics related to the use of techniques. As well as analysing differences across the four contextually based categories, a systematic cross-check was made for differences against every composite contextual variable on a one-by-one basis. These analyses addressed the counter-hypothesis of whether our framework does have further explanatory power than that possessed by any individual variable. For example, do we really need all our new categories, rather than say just Miles and Snow (1978)'s strategic configurations? Checks were also made for differences in the SID practices of Anglo-Saxon and Japanese companies. This analysis addressed the other counter-hypothesis that country context, rather than contextual category, might afford a more convincing explanation of differences observed. Since our analyses included only 14 cases, these analyses were inevitably very tentative, but provided, nonetheless, some indication of the individual variable and country influences.

Thereafter, the transcripts were reviewed and analysed again, this time with an attempt to identify emergent themes that would characterize the overall SID approaches of the four corporate types. Finally, the transcripts of the three follow-up interviews were analysed and compared with initial interview transcripts to assess any changes in SID practices subsequent to initial interviews.

5. Research findings

5.1. Positioning companies in terms of our contextual framework

Table 1 presents the scores used for positioning investigated companies against our earlier proposed framework. Scores for the market context and strategic orientation variables are aggregated first to provide overall positioning on the vertical axis (*market orientation*). The scores for the performance and shareholder influence variables are then aggregated to provide positioning along the horizontal axis (*performance in relation to shareholder expectations*). The scores for the market context and strategic orientation dimensions are themselves averages from component elements, drawn from our overall framework and are detailed separately in Table 1.

	Brit-Tel1	Brit-Tel2	Am-Tel1	Am-Tel2	Brit-Comp1	Brit-Comp2	Brit-Comp3	Am-Comp1	Am-Comp2	Am-Comp3	Am-Comp4	Jap-Comp1	Jap-Comp2	Jap-Comp3	Mean score
Market Orientation															
Market Context															
1=extremely stable environment, 9=extremely dynamic environment	8.0	7.0	7.0	7.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.5	3.0	4.4
1=very low market attractiveness, 9=very high market attractiveness	8.0	8.0	8.0	8.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.1
Average market context	**8.0**	**7.5**	**7.5**	**7.5**	**4.0**	**3.5**	**3.5**	**3.5**	**3.5**	**3.5**	**3.5**	**4.0**	**3.8**	**3.5**	**4.8**
Strategic Orientation															
1=very strong financial orientation, 9=very strong market orientation	3.0	5.0	5.0	3.0	5.0	2.0	5.0	5.0	5.0	5.0	6.0	9.0	9.0	9.0	**5.4**
1=purely cost leadership, 9=purely differentiation	7.0	5.0	5.0	5.0	6.0	4.0	8.0	3.0	5.0	6.0	7.0	4.0	6.0	8.0	**5.6**
1=extreme defender[a], 9=extreme prospector	9.0	3.0	4.0	6.0	8.0	5.0	4.0	6.0	6.0	6.0	7.0	6.0	7.0	7.0	**6.0**
1=extreme financial control style, 9=extreme strategic planning style	5.0	5.0	2.0	6.0	5.0	3.0	4.0	8.0	6.0	5.0	5.0	9.0	7.0	8.0	**5.6**
Average strategic orientation	**6.0**	**4.5**	**4.0**	**5.0**	**6.0**	**3.5**	**5.3**	**5.5**	**5.5**	**5.5**	**6.3**	**7.0**	**7.3**	**8.0**	**5.7**
Market Orientation	**7.0**	**6.0**	**5.8**	**6.3**	**5.0**	**3.5**	**4.4**	**4.5**	**4.5**	**4.5**	**4.9**	**5.5**	**5.5**	**5.8**	**5.2**
Performance in Relation to Shareholder Expectations															
Performance															
1=severe financial crisis, 9=very high performance above expectations	**9.0**	**7.0**	**6.0**	**4.0**	**8.0**	**2.0**	**3.0**	**3.5**	**4.5**	**7.0**	**5.5**	**8.0**	**6.0**	**4.0**	**5.5**
Shareholder Influence															
1=very high shareholder influence 9=very low shareholder influence	**3.0**	**5.0**	**2.0**	**2.0**	**5.0**	**3.0**	**3.0**	**7.0**	**5.0**	**6.0**	**4.0**	**9.0**	**9.0**	**8.0**	**5.1**
Performance in Relation to Shareholder Expectations	**6.0**	**6.0**	**4.0**	**3.0**	**6.5**	**2.5**	**3.0**	**5.3**	**4.8**	**6.5**	**4.8**	**8.5**	**7.5**	**6.0**	**5.3**

[a]Similarly to most SMA and SID studies applying Miles and Snow's (1978) typology, we have operationalized their typology simply as a continuum between defender and prospector (see.e.g. Cadez and Guilding, 2008; Chen, 2008)

Table 1. Analysis of contextual positions of investigated companies

Figure 3 draws on the analysis from Table 1 to position the investigated companies within the proposed framework. Vehicle component companies operating in a stable and less attractive business sector, and exhibiting diverse market orientation, performance and shareholder influence contexts are spread among the *market creator*, *value creator* and *restructurer* categories. Telecom companies operating in a dynamic and attractive business sector and showing a general tendency to be market orientated are, on the other hand, clustered exclusively in the upper *market creator* and *refocuser* categories. Although substantial differences are evident for the two sectors, there is nevertheless a significant level of overlap, particularly in the *market creator* category suggesting that some companies, even located in such different sectors, are subject to similar overall contextual influences.[41]

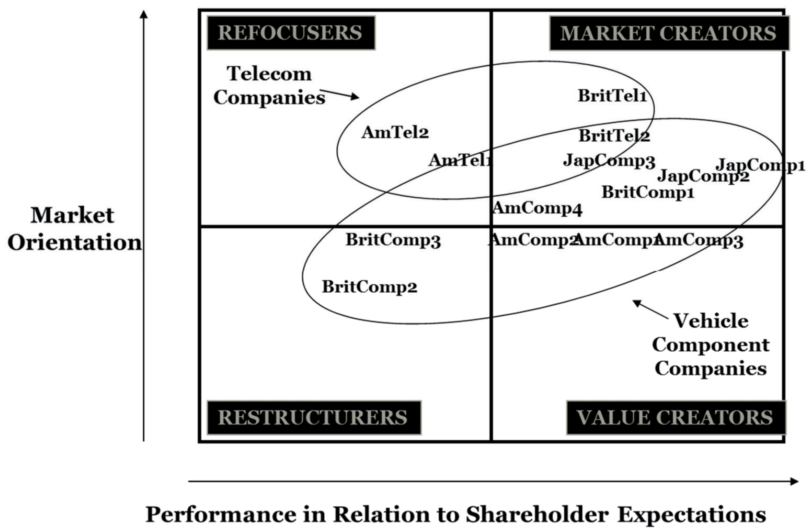

Figure 3. Contextual positions of investigated companies[42]

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[41] Most companies were well distinguished by our four contextual categories, but for three, positions were less clear-cut. This grouping virtually on the border between *market creators* and *value creators*, nevertheless, lay distinctly apart from *market creator* companies in our sample, and exhibited distinctive SID making practices.

[42] Pseudonyms are used throughout, suffixes 'Brit', 'Am' and 'Jap' indicating British, American and Japanese origins, and 'Tel' and 'Comp' indicating telecommunications and vehicle component sectors.

5.2. Analysis of capital budgeting techniques for contextual categories

Our analysis in Table 2 shows little systematic variation in terms of the actual choice of specific capital budgeting techniques employed. Companies typically employ about four different techniques, DCF techniques and particularly IRR being the most popular and also the most influential. Any differences by category are generally subtle. *Value creators* and *market creators* most frequently prioritize some form of DCF technique; they downplay the traditional payback method, sometimes preferring return on capital methods. *Re-focusers and restructurers,* by comparison, are distinctive only in that all of them utilise EPS growth targets, a technique utilised by no *value creators* and just one *market creator*. All *refocusers and restructurers* also perceive substantial shareholder pressures, so this may be the reason for the more extensive use of EPS growth targets. *Refocusers* and *value creators* utilise a greater number of capital budgeting techniques as will be discussed later.

Categories	**Capital budgeting technique most frequently prioritised**	**Other techniques applied (listed in the order of prioritisation)**	**Average number of techniques applied**
Market creators	IRR	Return target, NPV, Payback, EPS growth, Sensitivity analysis	3.4
Value Creators	IRR/NPV/ Return target	Payback, Sensitivity analysis	4.3
Refocusers	NPV/EPS growth	IRR, Return target, Payback, Sensitivity Analysis	5.0
Restructurers	IRR/Payback	EPS growth, Sensitivity analysis	3.5
All companies	IRR	NPV, Return target, Payback, EPS growth, Sensitivity analysis	3.9

Table 2. Use of capital budgeting techniques by contextual categories

Table 3 on financial targets and time horizons adopted in applying capital budgeting techniques exhibits more systematic differences among the contextually based categories. IRR hurdle rates rise as we move from the strategically orientated *market creator* category towards the more financially orientated *restructurer* category. The average hurdle target rates are 16% for *market creators,* 18% for *value creators*, 20% for *refocusers,* and 22% for *restructurers.*[43] These differences in the hurdle rates appear to reflect differences in the cost of capital, as we find the premium set over cost of capital to show less systematic difference across our contextual categories. The most noteworthy difference here is that the most strategically orientated *market creators* appear to be willing to accept lower premiums. The payback target and time horizon figures for the *market creator*, *value creator* and *refocuser* categories are, on the other hand, remarkably similar.

Categories	IRR target	Premium over cost of capital	Payback target	Time horizon
	%	%	Years	Years
Market creators	16	6.3	5	8
Value Creators	18	8.5	4	11
Refocusers	20	9.5	5+	10
Restructurers	22	8	2.5	3
All companies	18	7.4	4	9

Table 3. Financial targets and time horizons by contextual categories

Reflecting their weak performance and strong shareholder influence, *restructurers* exhibit a consistent, distinctly conservative approach. Their IRR target hurdle rates are correspondingly higher, averaging 22% compared to 18% average for our whole sample. Similarly, their payback targets are shorter, averaging 2.5 years compared to 4 years for our whole sample. Their time

43 Please note that this data was gathered in the 1990's. These hurdle rates may hence seem high in comparison with current interest rate levels.

horizons are even more distinctive, averaging only 3 years, compared with 9 years for our whole sample.

5.3. Overall SID approaches

More in-depth analysis of the qualitative interview data suggests more profound differences in the overall SID approaches across our four contextual categories. Most significantly, the data suggests systematic, expected differences in the extent to which SIDs are based on strategic as opposed to financial considerations. As expected, *market creators* exhibit a strong emphasis on strategic considerations and use financial analysis in a supportive role. *Restructurers*, on the other hand, tend to put strong emphasis on financial considerations and pay very little attention to strategic analysis. *Value creators* and *refocusers* demonstrate a more balanced emphasis on both strategic and financial considerations, but exhibit other marked differences in their overall SID approaches. The overall SID approaches of our four contextual categories are portrayed in more detail in the following sections.

5.3.1. Market creators

Consistent with the contextual framework, *market creators* tend to put strong emphasis on strategic considerations when making decisions on strategic investments. Although *market creators* often also conduct financial analyses, these analyses tend to have a secondary, supportive role in their strategic investment decision making. Executive Vice President of Operations at AmComp4 explained:

> *"We will still argue for strategic decision making as the dominant basis for investment strategy after going through all this generation of (financial) valuation...Financial people are support people, not decision makers."*

The strategic emphasis is also reflected in the fact that *market creators* often determine specific strategic criteria for evaluating their strategic investments. *Market creator* companies are also willing to allow for significant flexibility in the use of financial targets. If an investment is viewed as strategically significant, there could even be attempts to modify financial valuations in order to meet the set financial criteria. Executive Director at BritTel1 explained:

"If we saw IRR's which are low, then frankly we wouldn't be very interested in investing there…if the first cut is not looking right, but you still feel deep down it is an interesting investment, we will still try to justify it financially."

Strict financial targets could be seen as a hindrance for achieving the rather aggressive growth targets of many *market creator* companies. The Head of Strategic Planning at BritTel2 commented:

"Any fool can put in a big hurdle rate but what that does is - you know- if X has a lower hurdle rate than me, they will accept growth opportunities that I will reject."

Some very prospectively oriented *market creator* companies have also adopted very bold attitudes towards incorporating synergies into calculations. They consider potential investments as part of their global investment portfolio, and pay strong attention to getting synergies out of these businesses at an operating level. In contrast, some less prospective *market creators* have a more cautious, yet open, attitude towards calculating synergies. They take into account synergies that can be measured in advance.

5.3.2. Value creators

Value creators tend to take a more balanced approach to SID making by paying attention to both strategic and financial analysis. Central to the *value creator* approach tends to be an intention to provide decision-makers with a multi-faceted, thorough analysis. Vice President of financial administration at AmComp1 explained this approach: *"I think AmComp1 culture is, we want to make every analysis as accurate as possible, and then react and use the data to make decisions."* Reflecting the intention to conduct profound analysis, *value creators* are often not content with using only standard strategic techniques, and have developed other, complementary techniques to assist strategic evaluation. This was exemplified by the comment of the Vice President of financial administration at AmComp1:

"We'll think about it (BCG, Five Forces), but we are not rigorous to say those are the only things we are going to think about…. We have got methodologies that we have developed overtime."

As the strategic investment decisions of *value creators* are influenced by strategic considerations, *value creators* are, like *market creators*, willing to stretch their financial targets if investments are viewed as strategically significant. Senior Vice President of AmComp2's automotive business noted:

> *"We wouldn't want to (go below the return target), but in a few cases we have, rarely, but we have…I could tell you that I have never gone into single digits, but I have on occasion looked at something in the 10% range."*

Value creators tend to take a rather open attitude towards synergies when evaluating their strategic investments. The Director responsible for acquisitions, divestitures and joint ventures at AmComp3 commented:

> *"We look at all the kind of cost and sales based synergies, technology, product, you name it; we look at it fairly broadly and rigorously, speculating of potential synergies, probably putting more weight on cost base because that's more in our control…"*

5.3.3. Refocusers

As with the *value creators*, the two *refocusers* in our sample pay attention to both strategic and financial analysis. Whereas *value creators* tend to put specific emphasis on the thoroughness of their strategic analysis, the two *refocusers* in our sample exhibit a tendency to strive towards very sophisticated financial analysis. The corporate development director at AmTel1 explained their approach:

> *"Yes, strategy is important and it has to fit…otherwise we won't do it, but that is only the first cut and the first threshold decision criteria. It is always in the end going to come down to, 'Is it financially attractive for us to do?'"*

Striving towards very thorough and sophisticated financial analysis is reflected in *refocusers'* attempts to conduct their analysis in accordance with the latest financial theory, for example by calculating the cost of capital on a continuous basis. The corporate development director of AmTel1 explained:

> *"You see our philosophy is to determine the cost of capital as best we can and recognise there is going to be some fluctuation. We try to keep abreast of what's going on in the financial theory as much as possible and we try to use it as much as practical."*

The Vice President of strategic management at AmTel2 stated for his part:

> *"They re-assess the cost of capital, I think on an hourly basis in our financial organisation, so that it is always going on...we try to analyse those situations, we try to model those situations and run sensitivity analysis."*

High shareholder influence, which is typical of *refocuser* companies, is reflected in shareholder value creation being viewed as a primary driver when making decisions on strategic investments. Vice President of strategic management at AmTel2 explained:

> *"We have all the primaries (financial analysis) you ever want to see, but essentially if you boil it down to its least common denominator... you have to build growth on earnings per share."*

Perhaps reflecting the high shareholder influence, refocusers tend to take a much more cautious attitude towards calculating synergies than their market creator and value creator peers. They incorporate synergies into calculations only when there is a very high probability for these synergies to materialize.

5.3.4. Restructurers

As suggested by the contextual framework, *restructurers* exhibit a very strong financial emphasis. Strategic considerations are given very little attention. Deputy Marketing Director at BritComp2 commented bluntly:

> *"We are going in to make money, and to return cash. We are not just doing it for strategic reasons. Hence, the emphasis is on financial side when looking at these projects... So we don't accept their (Germans') view which is that strategy is what counts in any conflict with the financials. From our perspective, this would be ´nuts'."*

Potentially influenced by their low performance and high shareholder influence, *restructurers* tend to set very tight financial targets for their SIDs. The director responsible for finance and acquisitions at BritComp3 explained:

> *"We use the sensitivity analysis and we use the gap between the two hurdle rates, you might say we are ultra conservative... Now that means that we are more likely*

to turn down deals that they would go forward with and we have experience of that.”

The financially constrained position of restructurer companies also tends to drive them to take a very short-term perspective in evaluating SIDs. As expected, restructurers are very cautious in their attitude towards calculating synergies when evaluating strategic investment decisions. The cautious attitude towards synergies is driven by the high shareholder influence encountered by restructurers. The director responsible for finance and acquisitions at BritComp3 explained:

“When you have built a successful business to date and the shareholders are behind you and you have a good market rating, to bring in the unquantifiables into your next year you are running a very big risk, because it is not only the risk for the acquisition to the brink of benefits you thought it was going to get, but it is the impact it has on your total business because all of a sudden the confidence in the management by investors goes and so your market rating goes. Overall the loss of value to shareholders is very, very significant, so if you like, we are cautious.”

To conclude, the qualitative data analysis provides significant evidence confirming expected differences in the extent to which SIDs are based on strategic as opposed to financial considerations across our four contextual categories. We find also other marked differences in the contextual SID approaches. These are summarised on the following page in Figure 4.

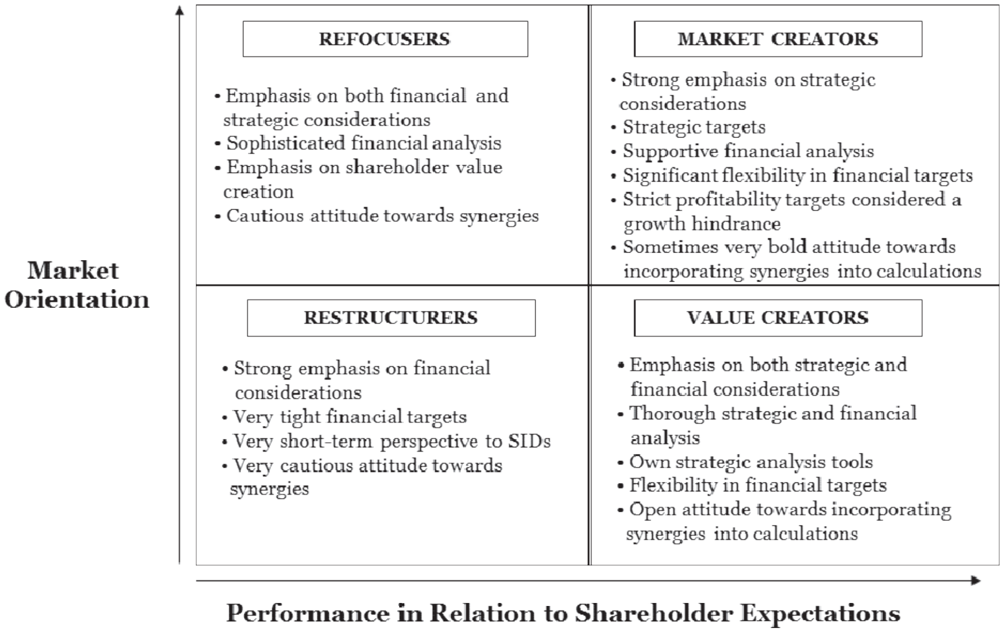

Figure 4. Contextual strategic investment decision making approaches

6. Discussion

This study provides evidence of substantial differences in the way companies make their decisions on strategic investments. These differences are not revealed simply in regard to the *choice* of capital budgeting techniques, but are also particularly apparent in the *way* the techniques are used, and in how they *influence* decision making on strategic investments.

Given reports of the widespread use of capital budgeting techniques such as DCF, the extent of convergence in the choice of techniques is not surprising (see e.g. Graham and Harvey, 2001; Sangster, 1993). What makes this more notable is the fact that, in the research design of this study, key contextual variables have been deliberately extended (e.g. market context and country/shareholder influence context). Yet, the degree of convergence in the use of capital budgeting techniques remains high. This is despite the international nature of the study and prior evidence of cross-country differences in the use of capital budgeting techniques (e.g. Carr and Tomkins, 1996, 1998; Jones et al., 1993).

Nevertheless, close observation of the manner in which these techniques really influence SIDs reveals differences in approaches that do, indeed, vary in accordance with the contextual framework proposed. Correspondingly, *market creators* exhibit the most strategically orientated approach to SIDs. Financial analyses have a more supportive role and they are likely to be over-ridden or even manipulated by decision-makers. At the other extreme, *restructurers* emphasise financial considerations and are more rigid and conservative when handling targets and non-quantifiables. As expected, *value creators* and *refocusers* pay attention to both strategic and financial considerations. They also emerge as the most thorough and also the most active in terms of the number of techniques utilised. *Refocuser* practices reflect perceived pressures to improve shareholder value, with a heavy emphasis on EPS growth targets; *value creators* do not use such targets at all and, by comparison, are more amenable to strategic arguments.

Correspondingly, from Figure 2, a consistent pattern of IRR rates is apparent, increasing as we move from the most strategically orientated *market creator* category to the most financially orientated *restructurer* category. *Restructurers* are also unique in adopting far shorter term time horizons and paybacks targets, whilst all other categories here exhibit very similar practices.

The counter-argument to using the four typology framework developed is that differences in SID making practices may be explained more simply and plausibly, by an individual variable. This counter-factual was addressed by systematically cross-checking for differences against every contextual variable on a one-by-one basis. Since the analysis included only 14 cases, the results must be interpreted with care but, given this caveat, individual variables do appear to provide only a partial indication of why SID practices differ. For example, the variables included in the composite strategic orientation variable (strategic configuration, generic strategy, market/financial orientation and management style) were each found to have different impacts on SID practices. None of the individual variables appeared to dominate other explanatory variables.

Considering Miles and Snow (1978) in isolation, our *market creators* versus *value creators* at first sight seem similar to more traditional *prospector* versus *defender* typologies. However, our tentative uni-variable analysis indicates that the latter categorisation does not predominate other explanatory variables. Furthermore, the Miles and Snow model does not handle the issue of poor/failing performance well. For Miles and Snow only *reactors* (an entirely different category not endorsed in other SMA studies) are associated with poorer performance. Our poorer performing cases might conceivably have been classified as *reactors* had they all grouped just above the mid-way vertical axis given their uncertain environments, offset by ill-adaptive market orientations. We observed, by contrast, two groups, one relatively higher and the other relatively lower on our vertical '*market orientation'* axis. Thus, poorly performing types do not conform to just one single *reactor* typology. Moreover, these two groups (differently positioned in our framework as respectively *refocusers* and *restructurers*) exhibit different SID making behaviours, and these would have been inexplicable if Miles and Snow's typology were used. Finally the hybrid *analyser* position, half-way between *prospectors* and *defenders*, can also be accommodated in our framework.

The strongest counter-argument to our more complex categorisation is that differences in country contexts alone may explain differences in practice. Here, the literature suggests a strong convergence in practice within Anglo-Saxon countries, such as the U.K. and the U.S.A, and differentiation in countries such as Japan (Carr, 2005; Carr and Tomkins, 1998). When comparing the cross-country influence to the explanatory power of our contextual framework, our tentative analysis of 14 cases indicates that the country context does have a particularly strong influence on the number of capital budgeting techniques and the level of IRR target hurdle rates, but the proposed contextual framework better explains differences in the time horizon adopted. When addressing the broader SID making approaches, we find our contextual framework has a much stronger explanatory power when compared to the cross-country influence. Although all three Japanese companies in our sample fall into the more strategically oriented *market creator* category, this category also includes companies from the Anglo-Saxon U.K. and U.S. contexts, providing evidence that companies from quite different country environments are subject to similar contextual influences and exhibit similar behaviour in terms of SID making practices. The thesis of cross-country influence would also fail to explain the intra-country differences in SID making practices that have been found (see Figure 2 for the contextual positions of investigated companies and Figure 4 for the contextual SID making approaches).

Each of the individual variables used in the study do appear to contribute, in part, to the explanation for differences in SID making practices. However, when combined into the four contextual categories, explanation is enhanced considerably. The proposed corporate typologies model also affords recognition of country context effects as extreme as those found in Japan, in so far as these are effectively transmitted through the in-direct country effects included in the framework (see e.g. Carr, 2005; Carr and Tomkins, 1998).[44] The proposed model has thus the virtue of wider applicability than models that omit these important indirect country effects. It is suggested here that researchers should use universal frameworks with some appreciation and understanding of cultures quite different to their own.

While the use of the four firm types developed in this paper does contribute to the understanding of how contextual factors can help explain SID practice (as demonstrated above), their novelty and limited testing means that their generalizability has yet to be fully established. 14 cases categorised into four typologies composed from a wide range of variables cannot aspire to statistical rigor. The justification for limiting the number of cases is that our research is exploratory, case-based and involves considerable attention to contextual considerations (Butler et al., 1993; Marsh et al., 1988). Nowhere is this more important and nowhere is survey-based, statistically orientated research more vulnerable than in decision making at a genuinely strategic level. Confidentiality considerations and the sheer difficulty of responding to complex, strategic oriented questions, compromise the generation of reliable data from forced choice scales.

7. Conclusion and directions for future research

Empirical research in management accounting (MA) consistently demonstrates that both similarities and differences arise in the intrinsic nature of techniques and in the way in which they are applied. Identifying the determinants of practice is a central quest for MA researchers. Without such knowledge, explanations and understanding of the discipline will be defective and prescription hazardous. One way of tackling this quest is the route followed in this paper. MA variation can be accounted for as a response to a set of situational characteristics which can be used to define explanatory contexts which can be used to categorise corporate behaviour. This is an approach widely adopted in the investigation of how strategy impinges on MA practice.

The contribution of this paper has been to encompass a wide range of acknowledged variables into a single overall contextual framework and to explore this framework's potential for explaining differences in SID making

[44] Previous studies have provided evidence for significant cross-country differences in shareholder influence, market orientation and management style, in particular between Anglo-Saxon and Japanese companies (see e.g. Carr, 2005; Carr and Tomkins, 1998).

practices. The empirical aspect of the research comprised an exploratory set of 14 matched field case studies from the U.K., U.S. and Japan, providing coverage of vehicle components and telecommunications sectors. Application of the four contextual categories in the framework provided a successful explanation of variation in companies' overall SID approaches and the specific decision support techniques adopted.

The findings indicate substantial differences in approach across the four firm typologies, particularly in terms of the emphasis on strategic versus financial considerations, the thoroughness and rigidity of financial analysis and the attitudes towards incorporating less easily quantifiable factors such as synergies into calculations. Additionally, IRR target rates are higher in the most strategically orientated *market creator* category as compared to the most financially orientated *restructurer* category. Choice of specific investment techniques exhibits more moderate systematic variation, but this can be explained by the near universal adoption of discounting techniques in large firms.

Thus the empirics, although limited in scale, do support the potential of the proposed framework to explain SID practice. In order to confirm this potential and to more fully investigate the utility of the typology, further research is needed. First, there is a need for deeper organisational field studies, to verify and further develop understanding of the nature of SID making practices and to further elaborate the implications of the firm types for the finance function. While covering three continents and 14 cases, the scope of the empirics precludes study of the related underlying organisational processes as proposed by Miller and O'Leary (2005, 2007). An enhancement of the clarity of key variables and expected relationships from process-centred research could provide a basis for studies designed to provide a more extensive and rigorous statistical analysis. A key challenge in pursuing larger scale studies of this type is access to reliable, credible data on the commercially sensitive and highly complex data pertinent to SIDs. It would also be desirable to have more longitudinal studies to explore further the question of consistency of SID making practice and the applicability of the four proposed firm types over time.

Finally, the developed contextual framework may have a wider applicability for explaining differences in SMA (as opposed to merely SID) practice. Most variables in the framework were derived from the broader SMA and strategic management literatures. Therefore, further studies could, for example, seek to examine whether the framework can help explain differences in companies' utilisation of strategic cost management tools, of externally orientated SMA techniques (see e.g. Cadez and Guilding, 2008; Guilding, 1999; Guilding and McManus, 2002) or of more strategically oriented controls, such as the Balanced Scorecard (Kaplan and Norton, 2001).

Appendix A. Background information about the interviews and SIDs discussed[a]

Company	Persons Interviewed	Date of the Interview	Estimated length in minutes	Length of the Transcript in words
Initial Interviews				
BritTel1	Executive Director	04-Sep-97	75	5,600
BritTel2	Head of Strategic Planning	11-Sep-97	120	8,456
AmTel1	Director, Corporate Development; Director, Financial Planning; Controller	06-Sep-94	150	37,105
AmTel2	Vice President, Strategic Management	28-Jul-94	100	7,184
BritComp1	Manager responsible for BritComp1's operations in the US	09-Sep-94	80	4,307
	Manager responsible for BritComp1's operations in France	03-Jun-98	150	15,624
BritComp2	Deputy Marketing Director, Group Financial Controller	22-Aug-97	75	3,775
BritComp3	Director responsible for finance and acquisitions on a corporate level	28-Aug-97	150	13,948
AmComp1	Vice President, Fin' Administration; Director, Fin' Analysis; Gen' Man' Sector X Operations	24-Aug-94	150	26,884
AmComp2	Senior Vice President and Controller of AmComp2´s Automotive business	01-Sep-94	150	34,511
AmComp3	Director responsible for acquisitions, divestitures and joint ventures	12-Aug-94	100	18,956
AmComp4	Executive Vice President, Operations; Assistant to Executive Vice President	07-Sep-94	180	44,011
JapComp1	several senior executives involved in SIDs	31-Aug-95	100	8,298
JapComp2	Director responsible for investment decisions	30-Aug-95	125	12,206
JapComp3	General Manager Corporate Planning Officer	Aug-95	115	11,894
			1,820	**252,759**
Follow-up Interviews				
BritComp1	Strategic Planner	21-Jan-01	80	9,534
JapComp1	General Manager of Corporate Planning Department	20-Sep-02	70	2,266
AmComp1	Head of Finance; Financial President of a major business	17-Sep-03	70	12,562
Total in minutes and words			**2,040**	**277,121**
Estimated total number of interview hours			**34**	
Estimated average interview time per company (in hours)			**2.43**	

[a] Pseudonyms are used throughout, suffixes ‘Brit’, ‘Am’ and ‘Jap’ indicating British, American and Japanese origins; ‘Tel’ and ‘Comp’ indicating telecommunications and vehicle component sectors.

Appendix B. Analysis for the performance scores

		Y2004	Y1999	Y1994	Y2004	Y1999	Y1994	Y1996	
BritTel1	**9.0**	1390.63	313.84	211.49	-5.23	30.04	46.20	0.30	
BritTel2	**7.0**	29.95	31.38	3.67	10.29	14.53	13.37	0.15	
AmTel1	**6.0**	-19.52	49.75	20.35	11.84	11.34	9.18	0.24	
AmTel2 merged corp	**4.0**	114.88	140.54	20.46	11.17	15.27	5.82	n.a.	Mergered after the interview
Av Tel (top 28 w'wide)		101.44	194.43	307.48	6.89	10.24	9.23		
BritComp1	**7.0**	35.27	67.64	-17.96	13.15	27.02	6.93	0.16	Worldwide no 1. Long term survivor. High margins.
BritComp2	**2.0**			29.62			5.21	0.04	Showed losses even in extraord. items.
									Acquired subsequently by a failed company.
BritComp3	**3.0**		452.26	643.59		12.58	3.16	0.01	
AmComp1	**3.5**	34.66	47.51	28.33	5.19	9.80	3.70	0.17	
AmComp2[c]	**4.5**	50.56		17.60	16.42	23.10	5.56	0.28	Auto division subsequently divested
AmComp3	**7.0**	48.18	50.53	26.88	9.14	13.88	8.60	0.22	Consistency in performance over the years
AmComp4[d] (tire division)	**5.5**	-5.22	56.52	61.89	7.45	12.89	16.18	0.17	We evaluate the figures sceptically,
									as these figures relate only to the tire business.
JapComp1	**8.0**	96.99	-2.60	36.57	5.34	5.28	5.03	0.43	Number 1 VC company in Japan, Number 2 globally
JapComp2	**6.0**	183.03	-8.35	56.59	1.88	4.21	2.92	0.07	ROCE over local cost of capital; excellent long-term growth
JapComp3	**4.0**	45.44	-6.17	58.33	0.85	1.50	2.25	0.03	Figures show negative performance,
Av Comp (top 42 w'wide)		49.30	242.75	70.20	5.26	11.35	6.20		but include business unrelated to vehicle components
Average (Sample)	**5.5**	167.07	99.40	85.53	7.29	13.96	9.58	0.17	

[a]The scores for performance determined intuitively by taking into account long-term financial performance, market position and additional comments.

[b]Relative market share calculated by dividing 1996 sales by that for the largest player in the industry; as BritTel1 operates in a different segment, BritTel1 evaluated against the largest player in that segment; as AmTel1 operates both in the segments of BritTel1 and BritTel, we have calculated AmTel1's relative market share by using the average sales figure of the largest companies in both segments.

[c]The figure for 5 year average ROCE 1994, and the figures for 5 years sales growth for 1994 and 1999 based on the data for former AmComp2

[d] tire division, figures for AmComp4 (corporate)

Appendix C. Analysis for the market attractiveness scores

Company Name	Averaged 5 Year Sales Growth for the Industry[a] Y1996	Averaged 5 Year ROCE % for the Industry[b] Y1996	Scores[c,d]
BritTel1	44	10	8
BritTel2	44	10	8
AmTel1	44	10	8
AmTel2	44	10	8
BritComp1	9	8	4
BritComp2	9	8	4
BritComp3	9	8	4
AmComp1	9	8	4
AmComp2	9	8	4
AmComp3	9	8	4
AmComp4	9	8	4
JapComp1	9	8	4
JapComp2	9	8	4
JapComp3	9	8	4

[a]Averaged 5 Year Sales Growth calculated by dividing the total Averaged 5 Year Sales Growth of all companies in the industry by the number of companies in the industry.
[b]Averaged 5 Year ROCE calculated by dividing the total Averaged 5 Year ROCE for the whole industry by the number of companies in the industry.
[c]The scores for market attractiveness determined intuitively by taking into account average 5 year sales growth and ROCE % figures.
[d]The scores for telecommunications industry based on 52 companies listed on the Thompson database, the scores for the vehicle component industry based on 638 companies listed on Thompson.

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Shaping strategy formation with knowledge-integrating corporate-level management control systems

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Abstract

This study seeks to provide new insight into the roles management control systems (MCSs) play in shaping strategy formation by examining the use of knowledge-integrating corporate-level MCSs. The paper argues that the role of MCSs in shaping strategy formation may be more multifaceted than what is suggested by prior management accounting literature. Prior evidence indicates that MCSs shape strategy formation by triggering on-going strategic debate and organisational learning. This study suggests that MCSs also have more immediate influence over strategy formation - they facilitate the integration of strategically critical knowledge and contribute to business managers possessing more complete knowledge when they formulate their business strategies. Furthermore, the paper indicates that when corporate-level MCSs are used for this purpose, they share characteristics with interactive control systems (ICSs). Since the purpose of such a corporate-level MCSs is to integrate strategically critical knowledge rather than to trigger on-going organisational learning, their focus, temporal and organisational properties differ from those previously specified concerning learning-oriented business-level use. More specifically, such systems provide a more concrete and finite time and space for the interaction. Finally, this paper suggests that the role of MCSs in enhancing decision-making may not be limited to information generation. MCSs may also combine individuals' specialised, qualitative knowledge in a way that it is more readily applicable throughout the organisation. Based on these findings, we propose an extension to Simons' (1990) process model of the relationship between business strategy and MCSs by adding a corporate-level perspective to it.

Key words: strategy, management control system, interactive control system, knowledge integration, organisational learning

1. Introduction

How strategies are formed in organisations remains ambiguous (Whittington and Cailluet, 2008). Much of the academic discussion on strategy formation has been characterised by a fierce debate between two schools of thought, known as the 'planning' and 'learning' schools of strategy formation (Brews and Hunt, 1999). Proponents of the so called 'planning school' argue that explicit strategies, formed through a process a conscious thought, are beneficial both in stable and unstable business environments (Ansoff, 1991, 1994; see also Brews and Hunt, 1999). The 'learning school' tradition criticizes the underlying premises of the planning school and maintains that strategies emerge through a process of incremental learning (Mintzberg, 1990, 1991, 1994; Quinn, 1980).[45] Recently, strategy scholars have suggested alternative approaches for a reconciliation between these schools, including 'strategy as structured chaos' (Brown and Eisenhardt, 1997, 1998), 'strategy as simple rules' (Eisenhardt and Sull, 2001), 'strategy as guided evolution' (Lovas and Ghoshal, 2000), 'strategy formation as planned emergence' (Grant, 2003), and 'strategy as a pattern of attention focusing' (Ocasio, 1997; Ocasio and Joseph, 2005, 2008). Common to these approaches is the notion of guiding the strategy formation process, either explicit or implicit, – with only limited structure.[46]

The management accounting literature suggests that a selective use of management control systems (MCSs) may provide one alternative for integrating the 'planning' and 'learning' school approaches. Simons' (1990, 1991, 1995) field studies indicate that managers seek to trigger organisational learning. They shape the emergence of new strategic initiatives by choosing to involve themselves personally with only few, typically one, MCS. By using some MCSs in a more interactive way, managers seek to focus the organisation's attention on key strategic uncertainties, and thereby trigger strategic debate and foster organisational learning.

Influencing strategy formation by guiding strategic debate and organisational learning is, however, likely to be slow and ambiguous (Ansoff, 1991; Goold, 1996, Pascale, 1984). Corporate-level managers may have an incentive to develop more immediate ways to shape business strategy

[45] Mintzberg et al. (1998) used the term 'planning school' to refer only to one of their identified ten schools of thought on strategy formation. We draw on Brews and Hunt (1999) to use the term 'planning school' more generally to refer to an approach to strategy formation that emphasises formal analysis and planning.

[46] A potential for reconciliation between the planned and emergent approaches of strategy formation was also noted by Mintzberg and Waters' (1985) initial writings on deliberate and emergent strategies.

formation (Goold and Campbell, 1987; Goold et al., 1994). In particular, in companies where strategic decision-making authority is delegated to a business level, corporate-level managers have an interest to establish systems and processes to ensure that business-level strategic decisions are in line with corporate objectives (Grant, 2003; Ocasio and Joseph, 2005, 2008). Their ability to call business strategies into question is, however, restricted by the fact that strategic knowledge of, for example technology and markets, is dispersed throughout the organisation (Buckley and Carter, 2004; Grant, 1996b; Teece, 2000; Tsoukas, 1996). As a consequence, corporate-level managers have an interest to also develop processes and systems that enhance the transfer and integration of strategically critical knowledge (Grant, 1996a, 1996b, Kogut and Zander, 1992; Teece, 2000).[47] This enables corporate-level managers not only to ensure that they are themselves in a better position to review business-level strategic plans: also business-level managers possess more complete knowledge in order to make informed strategic decisions.[48] How formal organisational means may be used to enhance knowledge integration and sharing remains, however, a somewhat obscure phenomenon (Buckley and Carter, 2004; Foss et al., 2010; Foss and Pedersen, 2004), because the knowledge management literature has tended to focus on cognitional issues, knowledge flows and informal aspects of the organisation (Foss, 2007; Foss and Pedersen, 2004).

Recent advancements in MCS literature suggest that MCSs may possess knowledge management properties (Grandori, 1997; Roberts, 2006; Turner and Makhija, 2006), serving also as instruments for knowledge integration (Ditillo, 2004). Available evidence suggests that the design of knowledge-integrating MCSs is context-specific, being influenced by the codifiability and complexity of the knowledge which is to be integrated (Ditillo, 2004). The evidence indicates that when knowledge is characterised by a low level of codifiability and cognitional complexity – which is likely to be the case when strategically critical knowledge is integrated for strategy formation purposes – formal management accounting systems may not provide adequate means for knowledge integration. Effective knowledge integration is more likely to become mobilised through verbal face-to-face interaction, which facilitates the transformation of private, largely uncodifiable knowledge into shared

[47] Please see section 3 for a conceptual discussion on the terms 'knowledge' and 'knowledge integration'.

[48] The notion of 'completeness' refers to the degree to which the critical knowledge for decision-making is entirely sufficient and available for the decision maker's use (Turner and Makhija, 2006).

knowledge which can be expressed in more explicit terms. (Ditillo, 2004; Grant, 1996b; Nonaka, 1991, 1994)

Prior evidence of the knowledge-integrating role of MCSs has focused on the project team level, where verbal, face-to-face communication can occur naturally, as part of the regular interaction between project participants (Ditillo, 2004). At higher organisational levels such face-to-face interaction may, however, not occur without intervention by managers. Formal processes and platforms may be needed to enable specialists from different locations, functions and cultures to interact, and thereby integrate their specialised knowledge (Buckley and Carter, 2004; Grant, 1996b; Kulkki and Kosonen, 2001). How MCSs may serve as levers for knowledge integration at higher organisational levels, including business and corporate levels, remains unclear.

This study seeks to shed new light on the knowledge-integrating, strategy formation shaping role of MCSs. It focuses on the corporate-level use of MCSs. We define corporate-level MCSs as systems that corporate-level managers use to ensure that the behaviours and decisions of business-level managers are consistent with the organisation's objectives.[49] Our conceptualisation thus acknowledges that planning systems can constitute a significant *ex ante* control-oriented part of an overall control package (Flamholtz et al., 1985; Otley and Berry, 1980; Malmi and Brown, 2008). Our empirical examination draws on an exploratory case study in two global multi-business companies. They represent different business strategies and environmental contexts.

Our analysis suggests that the role of MCSs in shaping strategy formation may be more multifaceted than suggested by existing management accounting literature. Prior evidence indicates that MCSs shape strategy formation by triggering on-going strategic debate and organisational learning (Simons, 1990, 1995). Our analysis suggests that MCSs may also have a more immediate influence over strategy formation: they may facilitate the integration of strategically critical knowledge, and thereby contribute to business managers possess more complete knowledge when they formulate their business

[49] We use the term 'corporate-level system' to refer to systems that address issues that are common to the whole organisation – such as corporate-level strategic issues – and that are used principally at a corporate rather than business level. Organisation-wide systems such as budget planning systems are thus not regarded as corporate-level systems in this study. Further, we use the term 'corporate-level managers' to refer to those parties who are in the position to exert control over business managers. Such parties include the CEO, the Board members and, depending on the company in question, managers responsible for key corporate functions such as finance & control and strategic planning.

strategies.[50] This enables corporate-level managers to exert influence over business strategy formation, while retaining authority for business strategy formulation at a business level. Our analysis also indicates that when corporate-level MCSs are used for this purpose, they share characteristics with interactive control system (ICSs) (Simons, 1990, 1991, 1995). Since the purpose of such corporate-level ICSs is to integrate strategically critical knowledge, their focus, temporal and organisational properties differ, however, from those previously specified concerning business-level, learning-oriented ICSs (Bisbe et al., 2007; Simons, 1990, 1991, 1995), providing a more concrete and finite time and space for the interaction.[51] Finally, our analysis provides further evidence that the role of MCSs in enhancing decision-making may not be limited to information generation. MCSs may also assist in combining individuals' specialised, qualitative knowledge, in a way that it is more readily applicable throughout the organisation. These findings are integrated, proposing an extension to Simons' (1990) process model of the relationship between business strategy and MCSs: we add a corporate-level perspective to the model.

The remainder of the paper is organised into six sections. First, we address prior literature on the role of MCSs in shaping strategy formation, by paying particular emphasis on Simons' (1990, 1991, 1995) findings about the learning-oriented, strategy formation shaping role of MCSs. The subsequent section focuses on the knowledge-integrating role of MCSs. It discusses conceptual differences between data, information and knowledge as well as between knowledge integration and organisational learning; and addresses prior evidence of the knowledge integrating role of MCS. The subsequent section introduces the research approach of the study. Thereafter, we present the case

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[50] While organisational learning and knowledge integration are inevitably interrelated concepts (see e.g. Bell et al., 2002; Crossan et al., 1999; Garvin, 1993; Huber, 1991; Thomas et al., 2001), they differ in their scope and time orientation. Organisational learning has a broader scope and longer time orientation. Organisational learning typically aims at rather abstract, long-term outcomes such as strategic renewal (Crossan and Berdrow, 2003; Fried, 2010; Kuwada, 1998) and adaptation (Edmonson and Moingeon, 1998; Nelson and Winter, 1982). Knowledge integration, on the other hand, has more immediate and concrete objectives. Its focus is on the effective application of existing knowledge, rather than the acquisition and creation of new knowledge (Grant, 1996a, 1996b). A more thorough discussion of the conceptual differences between 'organisational learning' and 'knowledge integration' is presented in section 3.2.

[51] We use the term business-level MCS to refer to MCSs, such as budgets and quality systems, that are used extensively throughout the organisation, and the term business-level ICS to such business-level MCSs with which top managers choose to involve themselves personally in order to trigger strategic debate across several organisational levels and/or functions (Simons, 1990, 1991). As noted earlier in footnote 5, we use the term 'corporate-level system' to refer to systems that are used principally at a corporate rather than business level.

analysis, and its theoretical implications. The concluding section discusses the broader implications of these findings and suggests areas for further research.

2. The role of MCSs in shaping strategy formation

Simons' (1990, 1991, 1995) field studies have laid the foundation for studying the role of MCSs in strategy formation. His investigations into the 'management processes of control and strategy' suggested that top managers choose to involve themselves personally with some - typically one - MCS in order to focus attention on strategic uncertainties. Simons defined those uncertainties as dimensions that top managers believe they must monitor personally to ensure that the goals of the firm are achieved. His findings indicated that top managers trigger strategic debate and foster organisational learning about the uncertainties by using some MCSs in a more interactive way. Simons (1990, 1991, pp. 49-50) referred to this type of MCSs as interactive control systems (ICSs). Such systems tended to reflect four conditions: i) information generated by the MCS is an important and recurring agenda addressed by the highest levels of management, ii) the process demands frequent and regular attention from operating managers at all levels of the organisation, iii) data are interpreted and discussed in face-to-face meetings of superiors, subordinates and peers, and iv) the process relies on the continual challenge and debate of underlying data, assumptions, and action plans.[52]

Simons (1990) integrated his findings into a process model of the relationship between business strategy and MCSs. He proposes a two-way relationship between strategy and MCSs. While strategy influences the use of MCSs by determining key strategic uncertainties and by influencing top managers in their choice of MCSs for interactive use, the use of such interactive MCSs does, on the other hand, direct and foster organisational learning. This influences business strategy formation by triggering new strategic initiatives.

[52] Bisbe et al. (2007) have subsequently sought to specify the construct in more specific terms by identifying five principal dimensions of ICS properties: i) an intensive use by top management, ii) an intensive use by operating managers, iii) a pervasiveness of face-to-face challenges and debates, iv) a focus on strategic uncertainties, and v) a non-invasive, facilitating and inspirational involvement. Bisbe et al. (ibid, p. 798) highlight, however, that the nature, meaning, and properties of ICS may depend on the purpose of such systems; and emphasise that consideration for the purpose and context of ICS is required when defining the construct. As Bisbe et al. were building their specification of ICS on an in-depth examination of Simons' (1987, 1990, 1991, 1994, 1995, 2000) writings, they were implicitly analysing ICS at the business level.

Simons' (1990) conceptualisation of the role of MCSs in shaping strategy formation is strongly influenced by the 'learning school' perspective. MCSs shape strategy formation by guiding organisational learning – by stimulating learning about strategic uncertainties, and by consequently shaping the emergence of new strategic initiatives. Simons (1995, pp. 115-116) makes his view explicit in his subsequent argument by proposing an inverted relationship between strategy, planning and control *"which equates interactive control with strategy formation and strategic planning with implementation"*. Strategic planning could be conceptualised as a diagnostic tool, the principal purpose of which is to limit search activities. To Simons, *"new strategic initiatives are developed not through strategic planning, but rather through interactive controls that guide the development of new strategic initiatives within the constraints provided by boundary systems"*, of which strategic plans constitute a part. As this approach entails an intention by top management to guide the emergence of new strategic initiatives, it represents an alternative for integrating the 'planning' and 'learning' schools of strategy formation. While strategies are allowed to emerge in a bottom-up fashion, the selective use of MCSs enables top management to influence the range of issues to which the new strategic initiatives are likely to be related.[53]

Shaping strategy formation by guiding strategic debate and incremental learning is, however, likely to be slow and ambiguous (Ansoff, 1991; Goold, 1996; Pascale, 1984). The use of organisation-wide ICSs may also be costly. It may lead to positive performance outcomes only in situations in which the organisation is going through a major strategic redirection. (Abernethy and Brownell, 1999; Kober et al., 2007) Corporate-level managers may have an incentive to develop more immediate ways to shape business strategy formation (Goold and Campbell, 1987; Goold et al., 1994; Grant, 2003). Their ability to call business strategies into question is, however, likely to be hindered by the fact that strategic knowledge of, for example technology and markets, is scattered throughout the organisation (Buckley and Carter, 2004; Grant, 1996b; Grant, 1997; Teece, 2000; Tsoukas, 1996). Thus, corporate-level managers may have an incentive to develop processes and systems that

[53] Simons' (1990, 1995, 2000, 2005) stance on organisational learning could be classified as the process school of organisational learning, which considers that organisations have only limited capacity to process information (Bell et al., 2002; e.g. Cyert and March, 1963; Simon, 1991). While organisations are viewed to possess a capacity to learn when required, management is considered to have a critical role in nurturing an organisation's information processing capability by removing barriers to effective and efficient information-processing practices (Bell et al., 2002). Organisational learning is considered to be incremental, and it evolves over time (Miner and Mezias, 1996; cf. e.g. Argyris, 1977; Argyris and Schön, 1978).

facilitate the integration and sharing of strategically critical knowledge (see e.g. Buckley and Carter, 2004; Grant, 1996a, 1996b, Kogut and Zander, 1992). This may enable corporate-level managers not only to ensure that they are in a better position to review business-level strategic plans themselves: also that business-level managers possess more complete knowledge when making strategic decisions.

3. The role of MCSs in facilitating knowledge integration

3.1. Data, information and knowledge

Data, information and knowledge are related but not interchangeable concepts. They are often conceptualised as representing a hierarchy of meaning, depth and relevance to action (e.g. Ackoff, 1989; Buckley and Carter, 2004; Davenport and Prusak, 1998; Rowley, 2007). The term *data* refers to unprocessed discrete facts and figures, which bear little relevance or purpose by themselves (Davenport and Prusak, 1998; Elearn, 2007; Zeleny, 2005). Once data is interpreted and structured so that it has meaning for the user, it becomes *information* (Buckley and Carter, 2004; Davenport and Prusak, 1998; Elearn, 2007). For example, plotting sales data on a chart to identify trends may enable converting data into information that has meaning and value for the user (Elearn, 2007).

Whereas information may be created by interpreting and structuring data, *knowledge* derives only partially from information, and it cannot be conceptualised simply as 'structured information' (Davenport and Prusak, 1998; Nonaka, 2001; Zeleny, 2005; cf. Ackoff, 1989; Buckley and Carter, 2004). Knowledge has a personal, human quality (Davenport and Prusak, 1998; Nonaka et al., 2001; Takeuchi, 2001). It resides primarily at an individual level – in the minds of 'knowers' (Davenport and Prusak, 1998; Grant, 1996b; Kogut and Zander, 1992; Nonaka et al., 2001). Knowledge accumulates over time through experience (Davenport and Prusak, 1998; Kogut and Zander, 1992; Nonaka and Teece, 2001); it contains subjective insights and judgement (Davenport and Prusak, 1998; Elearn, 2007; Nonaka et al., 2001); and it is impacted by the values and beliefs of the 'knower' (Davenport and Prusak, 1998; Kulkki and Kosonen, 2001; Takeuchi, 2001). Knowledge is also more closely related to action. Unlike information that focuses on ‘what’ something is, knowledge involves an understanding of how something works. (Ackoff, 1989; Nonaka and Teece, 2001; Zeleny, 2005)[54]

The knowledge management literature has typically distinguished between *explicit* or *articulated* knowledge which can be expressed in formal and systematic language (Hedlund, 1994; Nonaka, 1991) and revealed and transferred through communication (Grant, 1996b); and between *tacit* knowledge which has a stronger personal quality which makes it more difficult to formalize (Nonaka, 1991, 1994; Polanyi, 1966). While highlighting the distinction between different types of knowledge, the knowledge management literature has been less specific about the definition of knowledge or the distinction between explicit knowledge and information (Zeleny, 2005; see e.g. Grant, 1996b, Kogut and Zander, 1992; Nonaka, 1991). While we acknowledge that the difference between information and explicit knowledge is subtle and ambiguous (see e.g. Kogut and Zander, 1992), we suggest that the personal, subjective dimension of explicit knowledge is the distinctive characteristic: it distinguishes explicit knowledge from information. While being less subjective than the highly personal tacit knowledge (Nonaka et al., 2001), explicit knowledge contains subjective insights and judgement that do not characterise the more objective information (see Davenport and Prusak, 1998; Elearn, 2007). What distinguishes explicit knowledge from tacit knowledge is its stronger capacity for articulation, formalisation and communication (Kogut and Zander, 1992; Grant, 1996b; Nonaka et al., 2001).

3.2 Knowledge integration and organisational learning

Since knowledge resides primarily at the individual level – among specialists from various geographical locations and organisational entities (Buckley and Carter, 2004; Grant, 1996a, 1996b; Kosonen and Kulkki, 2001) – the organisational capability to amplify, explicate, transfer and integrate knowledge is critical for competitive advantage (Grant, 1996a; Kogut and Zander, 1992; Nonaka, 1994; Roberts, 2006; Teece, 2000). As a significant part of critical knowledge is tacit (Grant, 1996a, 1996b; Kogut and Zander, 1992;

[54] For the purposes of this paper we define knowledge according to Davenport and Prusak (1998, p.5) as “*a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organisations, it often becomes embedded not only in documents or repositories, but also in organisational routines, processes, practices and norms.*”

Nonaka, 1991, 1994), which is slow, costly and uncertain to transfer (Kogut and Zander, 1992, 1995), the transformation and integration of knowledge to a format that is more readily applicable throughout the organisation becomes a critical organisational capability (Nonaka, 1991, 1994; Grant, 1996b; Teece, 2000).

Knowledge integration involves combining individuals' specialised knowledge in a way that it is more readily applicable throughout the organisation (Buckley and Carter, 2004, Grant, 1996a, 1996b). The focus is specifically at knowledge application, rather than knowledge acquisition or creation (Grant, 1996a, 1996b). Since the knowledge being integrated is often complementary in nature, knowledge integration may, however, also be value-adding. It can produce new knowledge (Buckley and Carter, 2004). Knowledge integration is typically mobilised through organisational routines, procedures, processes, structures, documents or other repositories (Cyert and March, 1963; Morris and Empson, 1998; Nelson and Winter, 1982; Roberts, 2006; Teece, 2000).[55]

Knowledge integration and organisational learning are, inevitably, interrelated concepts (see e.g. Bell et al., 2002; Crossan et al., 1999; Garvin, 1993; Huber, 1991, Mintzberg et al., 1998; Thomas et al., 2001).[56] The effective use of knowledge – through, for example, knowledge acquisition, information distribution and interpretation, and organisational memory (Huber, 1991), or through intuiting, interpreting, integrating and institutionalizing knowledge (Crossan et al., 1999; Crossan and Berdrow, 2003) - is generally seen as a key element of the organisational learning process. Knowledge integration and organisational learning differ, however, in their scope and time orientation.

[55] For the purposes of this paper, we adopt the definition of 'knowledge integration' brought forward by Buckley and Carter (2004), and define the term as *"a combination of complementary knowledge which may be value-adding and result in the production of new knowledge"*. Our conception of knowledge integration is thus broader than that of Grant (1996a, 1996b), which focuses solely on the application of existing knowledge and argues that knowledge acquisition/creation occurs solely at an individual level.

[56] The organisational learning literature has reached little converge or consensus of what is meant by the term or the basic nature of organisational learning because of the diversity of research domains and schools of thought in which the learning phenomena have been explored (Bell et al., 2002; Crossan et al., 1999; Edmonson and Moingeon, 1998; Fiol and Lyles, 1985; Huber, 1991). For example, Bell et al. (2002) have categorised the literature into the economic, developmental, managerial and process schools of organisational learning. There seems, however, to be wide agreement on that organisational learning is a process in which organisation's members use information or knowledge in a way that it supports strategic renewal and an organisation's adaptation to its environment (see e.g. Crossan et al., 1999; Edmonson and Moingeon, 1998; Fiol and Lyles, 1985).

Organisational learning has a broader scope and a longer time orientation. It is generally viewed as a rather open-ended process, which aims at fairly abstract outcomes, such as the enhancement of an organisation's long-term performance (Garvin, 1993; Senge, 1990; Thomas et al., 2001), strategic renewal (Crossan and Berdrow, 2003; Fried, 2010; Kuwada, 1998; Mintzberg and Waters, 1985; Quinn, 1980; Simons, 1990, 1995), adaptation (Edmonson and Moingeon, 1998; Nelson and Winter, 1982), and, ultimately, survival (Nelson and Winter, 1982). Knowledge integration, on the other hand, has a narrower scope and more concrete objectives. It aims at integrating dispersed, specialised knowledge in organisational routines, procedures, processes, structures, documents or other repositories (Cyert and March, 1963; Grant, 1996a, 1996b; Morris and Empson, 1998; Nelson and Winter, 1982; Roberts, 2006; Teece, 2000). The focus is more on the effective application of existing knowledge, rather than on the acquisition or creation of new knowledge that would enhance strategic renewal and adaptation over time (Grant, 1996a, 1996b).

3.3. MCSs as knowledge-integrating mechanisms

The role of MCSs in enhancing decision-making is widely acknowledged within the management accounting literature (see e.g. Malmi and Brown, 2008; Zimmerman, 1997, 2001). Accounting based MCSs, in particular, are generally considered to provide an efficient and effective means for structuring data into more meaningful information (see e.g. Anthony and Govindarajan, 2003; Drury, 2005). Such formal systems may not, however, provide adequate means for capturing the private, qualitative and subjective insights that characterise knowledge (McDermott, 1999; Mohamed, 2006; Nonaka et al., 2001).

Recent advancements in the MCS literature suggest that MCSs may also possess knowledge management properties (Grandori, 1997; Roberts, 2006; Turner and Makhija, 2006), serving a role in knowledge integration (Ditillo, 2004). Available evidence indicates that MCSs may be used to foster the type of knowledge integration that is particularly suitable for the specific type of knowledge in question. It suggests that when knowledge is characterised by a high level of codifiability and the purpose is to integrate a large number of highly codifiable pieces of knowledge, action controls can be used - not only to control individuals' behaviour, but also to foster knowledge integration through codification and documentation. When the purpose is, on the other hand, to integrate highly specialised technical knowledge, result controls can be used to integrate and embody the diverse technical knowledge. Finally, when knowledge is characterised by low level codifiability and cognitional complexity, informal face-to-face interaction can provide an effective means for achieving both knowledge integration and control. (Ditillo, 2004)[57]

Human interaction is likely to be critical when strategically critical knowledge is being integrated for strategy formation purposes. Strategically critical knowledge is likely to include diverse personal and qualitative insights that cannot become compressed into codifiable pieces of information. Processes and forums for human interaction are needed. These enable individuals to articulate their knowledge, enhancing the development of shared understandings and language. This facilitates the transformation of private, largely uncodifiable knowledge into more explicit knowledge that is more readily applicable throughout the organisation (McDermott, 1999; Mohamed et al, 2006; Nonaka et al., 2001; Grant, 1996b; Teece, 2000). Prior evidence of the knowledge-integrating role of MCSs has focused on the project team level, where verbal, face-to-face communication can occur naturally, as part of the regular interaction between project participants (Ditillo, 2004). Nevertheless, how MCSs may serve as levers for knowledge integration at higher organisational levels remains unclear.

4. Research approach

Given the limited prior knowledge of the role of corporate-level MCSs in facilitating knowledge integration and in shaping strategy formation, we adopted an exploratory research approach (Eisenhardt, 1989; Eisenhardt and Graebner, 2007; Otley and Berry, 1994; Scapens, 1990). Although the empirical examination was informed by prior theoretical constructs - in particular the construct of ICS (Bisbe et al., 2007; Simons, 1990, 1991, 1995) and the process model of the relationship between MCS and business strategy (Simons, 1990, 1991) - these constructs served mainly as theoretical frames of reference that guided the empirical analysis (Ahrens and Chapman, 2006; Siggelkow, 2007). The research approach was open-ended and empirically sensitive in character,

57 Ditillo (2004) and Caglio and Ditillo (2008) use the term 'knowledge complexity' to refer to the three types of knowledge integration situation mentioned here. More specifically, they use the term 'computational complexity' to refer to situations in which a large number of codifiable pieces of knowledge need to be combined, the term 'technical complexity' to situations in which highly specialised technical knowledge is being integrated, and the term 'cognitional complexity' to situations in which knowledge resources are insufficient and new problem solving is required.

in order to facilitate the emergence of new theoretical insights (Ahrens and Dent, 1998; Keating, 1995; Vaivio, 2008).

The empirical investigation drew on case studies in two global multi-business companies. These represent different business strategies and environmental contexts. The first case study focused on Titan, a company that operates in a relatively stable and mature business environment. It builds its competitive advantage largely on cost advantages.[58] As this initial investigation yielded interesting preliminary findings of the role of corporate-level MCSs in facilitating knowledge integration and shaping strategy formation, we decided to examine the phenomenon further, and in more organisational depth, in a contrasting contextual setting. Our second case study focused on Saturn, a company that operates in a dynamic business environment characterised, for example, by short product life cycles. Saturn competes largely through product innovation and marketing. It is widely acknowledged for its innovation capability, and it also invests heavily in brand building. Both case companies are large multinational companies, being amongst the global leaders in their respective industries. Our choice to focus the analysis on two organisations with different business strategies and business environments was motivated by prior evidence: this indicated that these contextual factors could influence the role of MCS in shaping strategy formation (Grant, 2003; Simons, 1990). Choosing two case companies with contrasting characteristics was expected to provide some insight into whether the found practices could be applicable to organisational contexts outside those investigated in this study (Eisenhardt, 1989; Eisenhardt and Graebner, 2007; Lukka and Kasanen, 1995; Scapens, 1990; Spicer, 1992; Vaivio, 2008).

The case data was gathered during a period of four years, between May 2006 and September 2010. As the study sought to examine the use of corporate-level MCSs, our empirical examination focused primarily on corporate-level executives, and their intentions in using MCSs. Interviewed corporate-level managers represented essential corporate staff functions, such as corporate strategy, HR, finance and control, branding and marketing. Some of the corporate-level managers also had prior experience of operating at a business area level. The interviewees included also business area and business unit level managers in order to provide some indication of the extent to which corporate managers' intentions in regard to using MCSs were effective in practice. In total, 32 interviews, lasting from 30 to 150 minutes, were conducted (See

[58] The pseudonyms 'Titan' and 'Saturn' are used throughout the paper to refer to the case companies.

Appendix A).[59] Of the 32 interviews, 28 were tape recorded and transcribed.[60] When tape recording was not possible, notes were taken. These notes were immediately transcribed after the interviews and were sent for validation to the interviewees (McKinnon, 1988).

Following the explorative, open-ended approach of the study, interviewees were first approached with fairly open questions. For example, interviewees were asked to provide their views on 'how strategies are formed and what is the role of MCSs in strategy formation'. As the objective was to develop an in-depth understanding of the role of MCSs in shaping strategy formation, management practices and management systems were addressed broadly. Since the data analysis proceeded in parallel with data gathering, the researcher was increasingly able to pose more specific questions, probing deeper into initial ideas as the project and the data collection progressed. (Ahrens and Dent, 1998; Ahrens and Chapman, 2006; McKinnon, 1988; Vaivio, 2008)

Interview data were complemented with internal documents. We studied planning process descriptions and documents related to the performance measures used at corporate and business levels (McKinnon, 1988; Scapens, 1990, Vaivio, 2008). Numerous publicly available documents related to the case companies were also used. These documents included, for example, broker presentations, press releases and articles and books which addressed these case companies. Finally, multiple informal discussions with key informants enabled us to engage in more general discussions regarding the case companies' management approach and their use of MCS, providing a platform for more detailed questions. This made it possible to elaborate further on initial theoretical ideas (See Appendix A for a list of informal discussions). The empirical data comprised, in total, over 47 hours of face-to-face discussion with key informants.

Consistent with the explorative, open-ended character of the study, the data analysis commenced during the data gathering phase. It involved several rounds of iterative reflections between data and theory (Ahrens and Dent, 1998; Ahrens and Chapman, 2006). The data analysis involved searching for emerging themes of significance, reorganising data according to themes, and using these themes as input to further interviews (Ahrens and Dent, 1998). Internal and public documents were used to elaborate on and confirm issues

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[59] One interview with two overseas executives was conducted over phone through a conference call.

[60] Two interviews could not be recorded because the interviewees did not provide permission for recording and two telephone interviews with overseas executives could not be recorded due to technical limitations.

that arouse in interviews (Eisenhardt, 1989; Yin, 2003). An on-going research relationship with the case company provided the researchers with the opportunity to test initial theoretical understandings with key informants during the data gathering and analysis phase. The overall analysis was also verified by key informants at both case companies (Scapens, 1990).

5. Case analysis

This empirical section is divided into three subsections. The first outlines the organisational structure and the strategic planning processes of the two case companies. The second section illustrates how the case companies use corporate-level planning systems as mechanisms for knowledge integration and sharing. The third subsection describes how the corporate managers of the two case companies use these corporate-level planning systems as management control systems to shape business strategy formation.

5.1 Organisational structure and strategic planning process

Saturn is organised principally along three global business areas. Each of these is responsible for a distinct set of products and customer segments. Business areas constitute the key unit of profit and loss responsibility, and they are given clear authority for their business strategies and operations. Their performance is evaluated mainly based on financial performance in regard to, for example, sales growth, profitability and efficiency. Business areas are supported by two global horizontal organisations that have group-wide responsibility for sales, marketing, purchasing and logistics as well as technological competitiveness. Some of these horizontal organisations are further divided into regional entities.

The strategic planning process starts with a 'world map process'. This scans the environment very broadly and aims to identify points of discontinuity in the world. The 'world map process' is followed by another externally oriented process - referred to as the 'business environment outlook process' - which focuses on business related issues in the environment, serving as input to both corporate and business-level strategies. Next, the business-level strategy formulation work starts. After the business strategies are presented to the executive management group, they, alongside financial long range plans, are being finalised and communicated extensively throughout the organisation.

Titan has recently been reorganised along four global product divisions. In addition there are geographical responsibilities in the biggest growth areas. The four global product divisions are further divided into business units, accountable for profit and loss. Similarly to Saturn, strategic decision making authority is located at a business level. Global product divisions operate rather independently. Their performance is monitored only according to four financial criteria: ROCE, sales, operating margin, and EBITDA or EBIT (depending on the product division in question). Occasionally, additional measures related to for example customer satisfaction are added - in order to signify the importance of improving performance in that area.

The strategic planning process centres on a discussion between the Board and the operating management. The process starts in early spring. Divisional management and area managers give presentations about their operations' current status and the future outlook. Based on these presentations, the Board identifies a limited number of strategic themes. These are used to provide focus for subsequent strategy formulation work. The process culminates in August: business strategies – formed around the specified strategic themes - are discussed with the Board.

Although the decision-making on business strategies is clearly positioned at a business level in both case companies, the strategy formulation work is steered by establishing group guidelines and a schedule for the strategic planning process. The guidance is more specific in Saturn in which business managers are given detailed guidance also in regard to the type of expected process outcomes. At Titan, the business managers are given much more discretion over the actual outcomes of the strategic planning processes. They are, for example, not given any specific templates or formats that they should apply.

5.2 Corporate-level planning system as mechanism for knowledge integration and sharing

Both case companies use corporate-level planning systems as mechanisms for knowledge integration and sharing. In **Saturn** the business environment outlook process is used explicitly for this purpose. The Corporate Strategy Director described the purpose of the process:

> *"Well, the purpose of the process is to generate our best understanding of strategically relevant development issues in our business environment. There are an awfully great number of issues happening in our environment, but with this*

process we aim to screen those issues that need to be taken into account when businesses consider their strategies… The key motivation for the process is both developing an understanding of the external business environment and sharing the view on that; maybe it is more that we have a shared understanding…that we do not have competing views."

The business environment outlook process is explicitly positioned at a corporate level with an aim of achieving a comprehensive, business area neutral view of the business environment. The process scope is determined accordingly – focusing on strategic issues, such as technology and consumer trends, that are common to all business areas. The process is, however, purposefully kept open-ended in nature. This seeks to facilitate the emergence of all strategically critical issues during the process.

Each part of the business environment process work has a dedicated owner and a facilitator. Together with a representative of Corporate Strategy, they select participants who they assume to possess the most critical knowledge related to the specific streams. Attention is also paid to that the participants would holistically represent different parts of the organisation. As the process proceeds, new individuals with specialised knowledge get involved in the process. Participation in the process is regarded as a privilege, and there are generally considerably more people willing to participate in the process than what could be involved at a particular moment.[61] The Corporate Strategy Director explained this further:

How we do it in practice is that we mobilize an extensive organisation to address these issues…We have about a dozen people working on the process full time, in other words use over half of their time on the process, but then as contributors I would say that we have close to a hundred, could be over. But they are not using very much of their time on the process…But, it is a rather major effort."

The Marketing Planning Director for one of the business areas, who had personally been involved with the process, recalled for her part:

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[61] Individuals have, in general, strong incentives for sharing their personal insights and knowledge at Saturn. The annual performance evaluation focuses not only the extent to which individuals have been able to reach their targets, but also on the extent to which they have reached these targets by acting in accordance with the organisational values. As sharing one's knowledge with other organisational members is regarded as one of the key organisational values, an individual's career development in the company is partly dependent on his/her willingness and ability to share his/her knowledge. The organisational culture does also, in general, encourage individuals to express their views.

"The process seeks to get input from a large number of key people with a purpose of testing ideas. Based on this input an overall view is constructed, which is again tested here and there. So it is not kind of that there would be a specific group of people who would meet at regular intervals and would then develop a report…It is very much so that we seek touch base from different directions."

Top management is also highly involved in the process. The CEO reviews and comments the progress and results. Reviewing is organised thorough separate meetings, and through formal governance bodies, such as the group executive board. External experts are also included to provide complementary views to the process. Overall, the process involves a large number of individuals with specialised knowledge, in order to generate a holistic, multifaceted view of significant developments in the business environment. The Head of Strategic Planning commented this as follows:

"Complementing different perspectives is very important, because the parameters we have to take into account in our strategic decision making are also multiple, and we need to be able to take them into account broadly in our decision making…For example in our recent workshop we gathered a large number of different types of inputs prior to the discussion. We interviewed over 80 internal and external experts. We could hence also draw on their personal insights in our discussion."

The process is organised through a series of workshops that provide a forum for articulating personal insights, and facilitating discussion and debate about these insights. Data and insights are gathered and articulated through several forms of interaction – such as emails, telephone conversations and face-to-face discussions. But it is these face-to-face workshops that facilitate the combining of different perspectives, and refining insights. The Head of Strategic Planning continued:

"Discussing these issues face-to-face is very important. Many issues, such as data and charts about the market development, can, in a way, be "no-brainers"….But it is when we discuss these issues – when everyone can bring their own perspective and knowledge - when these insights are refined… As an example in our recent workshop we had representatives from all key units where we addressed all the streams and inputs and sought to determine the most critical planning assumptions and their implications (questions) for us. So in a way we seek to refine and iterate the insight in several phases to make sure that we can distil the most critical statements and questions for us."

All participants are expected to bring their specialised knowledge to the process. Discussing these issues face-to-face facilitates the articulation of qualitative, personal insights. The Head of Strategic Planning explained this further:

> *"If we consider, for example the individuals, who work close to our customers, they produce the data about what the customer has said, as well as the figures and priorities of that particular customer. But their insight may then enable them to say that even though this is what the customer says, the customer may actually be considering other alternatives based, for example, on these events in the past.... So in a way all participants produce their own contribution building on their own experience, context and knowledge."*

Although the process is owned and driven by the strategic planning function, the finance & control function is also involved. It ascertains that all financial figures used in the process are realistic. The Chief Financial Officer commented their role in the process:

> *"The parameters that the finance & control function produces for the strategic planning process are corporate finance type of parameters, such as WACC. The parameters related to for example the market size are produced by the strategic planning function...Then, of course, if any internal financial information is required during the process, we will produce that... We have a finance & control unit - which reports directly to me - referred to as 'business planning support' which produces all the financials needed during the strategic planning process."*

Knowledge integration takes a very explicit form in Saturn. The process results in 20-30 explicit statements related to how the company considers the business environment's future - on strategically important dimensions - within a 3-5 year perspective. These statements need to be backed up with supporting data and analysis. The group of statements typically comprises estimates and views relating to industry level "megatrends", as well as to trends in consumer behaviour. Some of the statements maintain an acute status over several years. But the statements typically include also new pronouncements. These statements require managers' immediate attention. The Global Head of *Marketing explained:*

> *"These statements, they can be quite diverse. There are statements related to consumer behaviour, and then there are statements related to industry megatrends. So these statements are related, but they may address quite different issues. So*

there is in a way a b-to-be perspective and a consumer perspective - these statements are not completely commensurable...The group of statements typically comprises of new statements, and statements that have risen earlier, but that have remained relevant. That is probably why not all statements are treated equally. If a particular issue is still relevant, but we know that we are already addressing it in several ways, we do not have to emphasise it that much anymore."

The Head of Strategic Planning explained this further:

"These statements relate to changes in the current planning assumptions, to new planning assumptions or to changes in their prioritisation. We may also identify new causalities... a particular trend may, for example, reinforce or undermine other trends."

Developing a shared view on the statements entails lively face-to-face discussion and debate. As the process involves specialists from very divergent organisational entities, the end-result is inevitably a compromise. The Corporate Planning and Analysis Director observed:

"The validation of statements is happening already during the business environment outlook work and when the statements are kind of released, they have already been validated by all businesses. And of course it is a compromise...but it is already during the work that they need to kind of settle on where the corporate wide view on that particular trend is. "

Sometimes the participants may not arrive at a common understanding about all the statements. These statements may still provide valuable insight to the subsequent strategy formulation work. The Head of Strategic Planning commented:

"We may not necessarily have a shared understanding of every statement, and that is perfectly fine. There are always issues like, say the GDP growth rate, which is likely to be close to the forecasted level unless something extraordinary happens. But then, we have issues like, the competition parameters in a particular market – that consumers will emphasize a particular aspect over another one during the following three years – that is merely a belief, an assumption....We may say that this is not even a shared view, but within our best knowledge there is a high probability that these will be the key competition parameters in that particular market. In our decision making we may then have to take this uncertainty into consideration by, for example, developing a real option type approach, which enables us to react if the key competition parameters materialize to be different

from those assumed. But this is still valuable, because these statements are not really meant to be the end result; their purpose is to enable us to make informed decisions."

By contrast, **Titan** uses a more informal approach for integrating and sharing strategically critical knowledge. Knowledge integration and sharing is, in practice, facilitated by providing a system for an open and inspirational face-to-face interaction. Similarly to Saturn, the process is steered by focusing the discussion around a few strategic themes. These are common to all product divisions. Diverging from Saturn, where the process is purposefully kept open-ended in nature the process is more focused at Titan. It focuses on a few predefined strategic themes. These tend to change annually. They provide a clear focus for discussion and knowledge integration. The Chief Communications Office and a long-time management group member explained:

"The strategy process varies somewhat from year to another... The annually changing themes are defined in cooperation between the management team and the Board...During some years there have been special themes such as 'large growth markets' and what is our strategy there and what is our strategy in 'saturated European and North-American markets'."

The Senior Vice President, in charge of one of the major product divisions recalled for his part:

"There can be, for example this - which we find very important - that how we ensure that we are close to the customer in the value chain. It is an example of a theme that has been common for all businesses. So the strategic theme is the same, but the business area specific solutions may be very different. "

The integration and sharing of knowledge culminates during the second phase of the strategic planning process: the members of the extended management group engage in an open and inspirational discussion on the strategic themes. The group includes top managers in charge of product divisions, geographical areas and main functional areas. And as the managers are expected to provide grounded presentations related to the strategic themes, the process enhances the integration and sharing of strategically critical knowledge. Similarly to Saturn, external experts are engaged in the process. They provide complementary views. Key individuals with specialised knowledge are also involved, but to a considerably lesser extent than in Saturn. The Chief Communications Officer explained:

> *"Well, it depends on the theme how it is addressed, but I do not think that the process would extend to a third layer…some experts are involved to examine some specific themes".*

Discussion about the themes is non-invasive and facilitative in character. The Chief Communications Officer crystallised, referring to the second phase of the discussion: *"It is very interactive, open debate. We discuss these issues freely based on the presentations."*

In both case companies these corporate-level systems also serve to integrate and share knowledge about key strategic uncertainties. This is, however, not the principal purpose of these systems. There are several other systems and processes in place to cover important strategic uncertainty areas. The Corporate Planning and Analysis Director of **Saturn** commented for their part:

> *"In very many ways actually (strategic uncertainties are followed)…So we have different kinds of intelligence processes on different layers. We have on corporate level this industry intelligence group that is for example all the time regularly sending updates on the key competitors and now we are not including the traditional competitors, but…not even necessary competitors, but industry players…Then on a more kind of generic basis…deep dive studies by using both external and internal resources on selected topics and they are usually related to these sort of weak signals or strategic threats or strategic uncertainties…and then on corporate level also one very big effort is this business environment outlook…that obviously tries to cover all of the significant uncertainty areas in the analysis…So it depends on the aggregation level that you want to look into, but there is certainly someone."*

The Chief Legal Officer at **Titan** explained for their part:

> *"Many strategic uncertainties are followed up in a centralised way. For example, for environmental issues we have a dedicated organisation that follows these uncertainties."*

The Chief Corporate Technology Officer added, on his part:

"Well, it (information related to strategic uncertainties) is gathered by the strategic planning process and in several other meetings...and this business intelligence network is one standard source of information...management group gets for example from Asia quarterly a brief business intelligence report that addresses local development, what the competitors have done, what the mega trends are, so that management group would be more aware of what is going on."

5.3 Shaping business strategy formation

In addition to facilitating knowledge integration and sharing, these corporate-level planning systems also serve as mechanisms for shaping business strategy formation. While the authority for strategic decision-making is clearly located at a business level, these systems seek to shape business strategy formation. They provide business-level managers with more complete knowledge about strategically critical issues, and they focus managers' attention to the most pivotal strategic issues. This represents a non-invasive, enabling approach to exerting influence over business strategy formation. It seeks to mobilise business managers' knowledge, and it enables them to deal more effectively with their inevitable contingencies (Adler and Borys, 1996; Ahrens and Chapman, 2004; Wouters and Wilderom, 2008). Simultaneously it creates some boundaries to the range of issues that they should take into account in their decision-making. The Head of Strategic Planning at **Saturn** explained how the business environment outlook process is used as an enabling mechanism for exerting influence over business strategy formation:

"These statements enable us to determine our (corporate-level) strategic priorities. But these statements also enable us to provide a framework for strategic decision-making - because we cannot, of course, control everything top-down. So in a way, this business environment outlook process enables us to say that "ok, if you make your decisions based on these statements, your decisions should not go too much wrong."

Sharing the results of the business environment outlook is given high priority. Previously, the results were first shared and discussed in a senior management workshop, involving 150-160 top managers. Currently, the results are even more tightly integrated to the strategy formulation work and they are brought up in several forums involving top and middle-level management. The Marketing Planning Director commented again:

"This (business environment outlook process) is a kind of kick off for the actual strategy work... then everyone who is involved in the strategy work, and that is again a rather extensive group of people, they do of course get this...the aim is to use this to understand some specific sub-strategy."

The Global Head of Marketing explained for his part the extent to which the statements are shared within the organisation.

"We do not necessarily communicate these statements down to the grass root level; they are shared mainly among those who make strategic decisions. At that level it is important to have this type of insights. But these statements influence for example what products we develop... And I would say that people do commit to these statements – once these issues have been identified their relevance is not questioned. And I would like to point out that our organisational culture is not militaristically strict – we do in general open for discussion considerably more issues than many other companies would."

To provide even more readily applicable guidance to the strategy formulation, the business environment outlook process also seeks to explicate a list of key questions that business areas should take into account in their strategy formulation work. These questions seek to enhance the application of the knowledge integrated during in the business environment outlook process. They also provide focus for the strategy formulation work. The Corporate Strategy Director explained:

"There are basically two dimensions... On the other hand, what are the questions for us, and then we seek to partially examine also what are the implications of that for us. The distinction is important, because the implications are in fact partially strategy already and our aim with the business environment outlook work is not to formulate strategy, but to determine strategic boundaries, which is then input to actual strategy. But it includes, in addition to the statements, also what are the key questions, i.e. the implications for us. These implications are formulated through key questions."

The Global Head of Marketing illustrated this further:

"An example of a consumer behaviour related statement could be "greenness grows in all of us". This of course raises the question whether our product development should develop more green products, whether our production processes should be modified, whether we should be proactive and become greener than our

competitors, and whether we should emphasise greenness in our marketing... Then, there are also statements related to business and industry level phenomena- such as "cloud computing". This is of course a trend that does not influence our communication or marketing to consumers, but we need to think whether this trend should somehow be reflected in our solutions to consumers."

To explain how the business environment outlook process had influenced the formulation of brand and marketing strategies in practice, the Global Head of Marketing continued:

"Well, if we think of the brand and marketing strategy, of course they are influenced by the business environment outlook process. If we think of the Saturnus brand, what are the core elements of our brand, these issues do not change on an annual basis. But it [the business environment outlook process] influences how we interpret our vision. We need to have a good understanding of where we are leading the business, and we need to make sure that the brand core essence and marketing efforts are aligned to that. So it [business environment outlook process] has an influence on our campaigns and any outward oriented marketing activity."

In **Titan** the influence over business strategy formation is also non-invasive and enabling in character. The discussion over strategic themes serves not only to provide managers with a more complete knowledge over strategically critical issues: they also provide clear focus to the strategy formulation work. As the system enables changing the themes on an annual basis, it provides a mechanism for dynamically focusing managers' attention to the strategic issues that are most relevant at a specific point in time. The Senior Vice President in charge of one of the global product divisions commented:

"Yes, the themes change annually...It is related to what is the focus then. What is topical, what is important at a specific point in time."

The Chief Legal Officer commented for his part: *"Selected themes are expected to be reflected in the plans at several levels."*

6. Discussion

The above analysis of the two corporate-level systems provides, we argue, new insight into the role of MCSs in shaping strategy formation. While these two systems are essentially planning systems – established to facilitate the process of strategic planning – they also provide a means for exerting influence over business strategy formation, and serve as MCSs from the corporate managers' perspective (Flamholtz et al., 1985; Malmi and Brown, 2008; Otley and Berry, 1980). The practice at Titan appears fairly conventional - in the sense that the board and top management select few strategic themes which guide strategy work at divisions and business units. In contrast, the system in Saturn appears more unique. It entails an extensive involvement of experts from various parts of the organisation, resulting in a list of explicit statements and questions that shape the subsequent strategy formulation work.

Hence, the case analysis indicates that the role of MCSs in shaping strategy formation may be more multifaceted than suggested by prior management accounting literature. Previous studies have suggested that MCSs shape strategy formation by triggering on-going strategic debate and organisational learning (Simons, 1990, 1995). This study suggests that MCSs may also have a more immediate influence over strategy formation: they can facilitate the integration of strategically critical knowledge. This gives business managers more complete knowledge for formulating their business strategies. This also provides an effective, enabling way for exerting influence over business strategy formation, while retaining authority for decision making at a business level (Ahrens and Chapman, 2004; Wouters and Wilderom, 2008).

This approach shares characteristics with recent advancements in the strategic management literature, which suggest reconciliation between the 'planning' and 'learning' schools of strategy formation by guiding strategy formation with only limited structure (see e.g. Brews and Hunt, 1998; Brown and Eisenhardt, 1997, 1998; Eisenhardt and Sull, 2001; Grant, 2003; Lovas and Ghoshal, 2000; Ocasio and Joseph, 2005, 2008). It corresponds particularly closely to Grant's (2003) concept of 'planned emergence': business managers exhibit substantial autonomy and flexibility in strategy making, but corporate management seeks to shape the strategy making by providing the structure and context for the planning. Similarly to the 'planned emergence' approach illustrated by Grant (2003), the approach presented in this paper involves providing channels and forums for communication and knowledge sharing. How this approach differs from the approach illustrated by Grant is that, particularly in the case company Saturn, a strong emphasis is paid to integrating knowledge in a very explicit and readily digestible form. This facilitates that the knowledge sharing is not limited to those participating in the process, but can be shared more extensively throughout the organisation (Grant, 1996b; Teece, 2000). To further promote the application of this knowledge in actual strategy formulation, the knowledge is also presented in a format where explicit questions become addressed in the strategy work. While the intention to use a corporate-level planning system as a mechanism for knowledge integration is, as such, not particularly novel, it is this purposeful use of the system as a mechanism for transforming subjective personal insights into very explicit, readily applicable knowledge that may be shared beyond those participating in the process, and the emphasis paid onto applying this knowledge in the subsequent strategy formulation work that make the approach presented in this paper as novel.

The two corporate-level MCSs illustrated in this paper also share characteristics with the concept of ICS. They represent an inspirational, facilitating and non-invasive management process, which involves intensive face-to-face challenge and debate (Bisbe et al., 2007; Simons, 1990, 1995). Their focus, organisational and temporal properties differ, however, from those previously specified regarding business-level learning-oriented ICSs (Bisbe et al., 2007). While the absence of some of the specified ICS properties may indicate that the systems illustrated in this paper are essentially different from the concept of ICS, the divergence in the properties may also result from the different *purpose* and *context* of these systems and those previously discussed in the management accounting literature (Bisbe et al., 2007, pp. 798). As the purpose of these systems is to facilitate the integration of strategically critical knowledge, dispersed among specialists from various geographical locations and organisational entities (Buckley and Carter, 2004; Grant, 1996a, 1996b; Kosonen and Kulkki, 2001), it is essential to establish a more concrete and finite time and space for the interaction than that previously described regarding business-level learning-oriented ICSs. An interactive use of one of the more standard MCSs - such as a profit planning system or brand revenue budget (Simons, 1991) - would not facilitate the simultaneous face-to-face interaction of geographically and organisationally distant individuals, which is needed for transforming their personal, qualitative knowledge into explicit and shared knowledge (Nonaka, 1991, 1994). Rather than facilitating continuous discussion and interaction throughout the organisation (Simons, 1990, 1995), these systems are thus used on a repetitive basis. This, more finite temporal scope also contributes to these systems being more firmly integrated with the annual strategic planning process. They can also provide more immediate influence over business-level strategy formulation work.

The organisational properties of these processes are also more limited than those previously specified regarding business-level learning-oriented ICSs.

Rather than entailing an intensive use by top and operating level managers throughout the organisation (Bisbe et al, 2007; Simons, 1990; 1995), these knowledge integration-oriented systems entail an intensive involvement by top management and key individuals with specialised knowledge. This more limited organisational involvement contributes to that face-to-face interaction and debate between the process participants is feasible. Finally, the focus of these systems differs also to some extent from that previously specified regarding business-level learning-oriented ICSs. Similarly to the business-level ICSs, these systems also serve to integrate and share knowledge about strategic uncertainties (see Bisbe et al., 2007, Simons, 1990, 1995), but it is not the primary purpose of these systems.[62] There are several complementary MCSs in place to ensure that strategic uncertainties are addressed in sufficient depth and breadth. These systems focus on key corporate-level strategic issues – such as 'expanding to growth markets' and 'technological development'. This enables corporate management to ensure that these corporate-level strategic issues are reflected in the business-level strategic plans, and that managers possess more complete knowledge about these issues when formulating their strategies.

Despite these dissimilarities in terms of focus, as well as in terms of temporal and organisational properties, we conceptualise the corporate-level systems illustrated in this paper as ICSs on the basis of their strong emphasis on face-to-face interaction and debate, and their enabling influence over business strategy formation (Simons, 1990, 1991, 1995). The differences we identified in these properties we interpret as manifestations of the different purpose and context of the systems illustrated in this paper and those previously discussed in the management accounting literature (See Bisbe et al., 2007, pp. 798). Table 1 presents a comparison of the purpose and properties of the learning-oriented business-level ICSs and the knowledge integration-oriented corporate-level ICSs illustrated in this paper.

[62] The term strategic uncertainty refers to a contingency that could provide threats or opportunities as circumstances change (Daft et al., 1988; Simons, 1991).

	Learning-oriented business-level ICS (Bisbe et al., 2007; Simons, 1990, 1991, 1995)	**Knowledge integration-oriented corporate-level ICS**
Purpose	• To trigger strategic debate and organisational learning • To shape the formation of emergent business strategies	• To integrate and share knowledge • To shape the formation of intended business strategies
Properties	• Focus on strategic uncertainties • An inspirational, facilitating and non-invasive management process, in which top and operational level managers involve themselves intensively in face-to-face challenge and debate • Continuous process that is not necessarily integrated to the strategic planning process	• Focus on corporate-level strategic issues • An inspirational, facilitating and non-invasive management process, in which top management and key individuals with specialised knowledge involve themselves intensively in face-to-face challenge and debate • Repetitive process that is an integral part of the strategic planning process

Table 1. Comparison of the purpose and properties of learning-oriented business-level ICS and knowledge integration-oriented corporate-level ICS.

Moreover, the case analysis indicates that corporate and business level MCSs may be used to shape business strategy formation in different ways. Previous studies have indicated that business-level MCSs shape the formation of emergent business strategies by focusing an organisation's attention to strategic uncertainties, and by triggering strategic debate and organisational learning about these uncertainties (Abernethy and Brownell, 1999; Kober et al., 2007; Simons, 1990, 1991, 1995). This case analysis suggests that corporate-level MCSs may be used to exert more immediate influence over business strategy formation. They may be used to focus organisation's attention on key corporate-level strategic issues, to facilitate knowledge integration and sharing about these issues, and to exert non-invasive influence over the formulation of intended business strategies. Figure 1 combines these key findings to propose an extension to Simons' (1990) process model of the relationship between strategy and MCS that integrates the corporate-level perspective to the model.

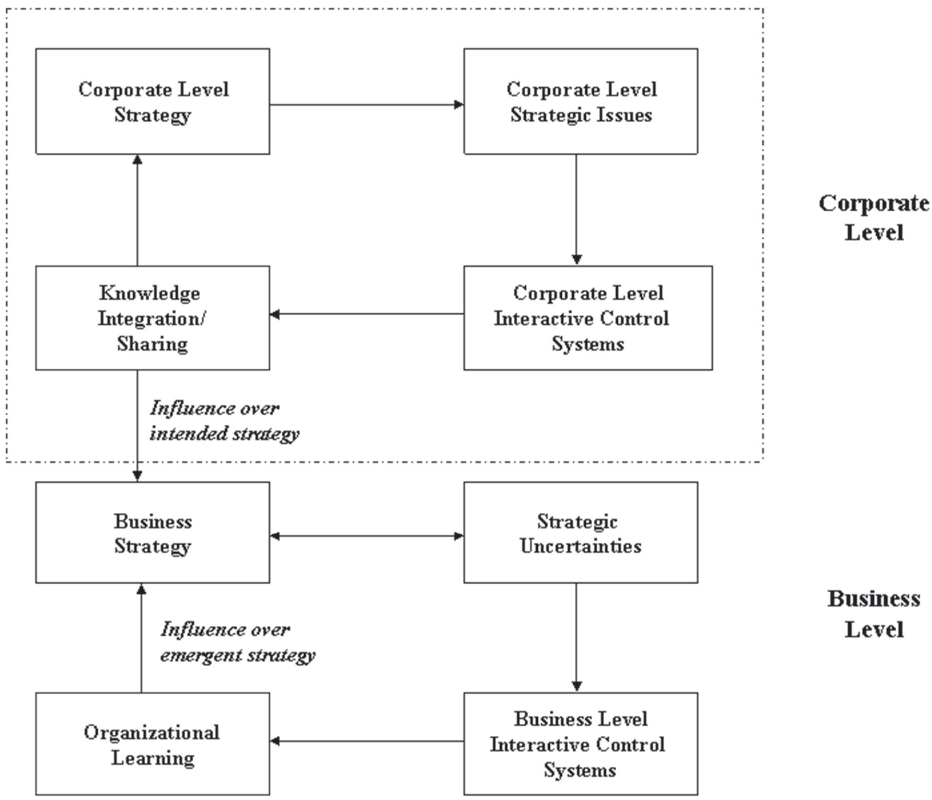

Figure 1. Integrated process model of the relationship between strategy and MCSs (the business-level model adopted from Simons, 1990).[63]

[63] We draw on Ocasio's (1997) 'attention-based view of the firm' to refer to the term 'strategy' a pattern of organisational attention, the distinct focus of time and effort by the firm on a particular set of issues, problems, opportunities, and threats. Further, we build on Thomson and Baden-Fuller (2010, pp. 22) to distinguish between 'corporate' and 'business' strategy on the basis of whether the issues are related to the long-term direction and scope of the *whole corporation*, or the *business unit* in question. Our definition of corporate strategy is thus broader than the traditional definition, which views corporate strategy as the question of which businesses should a corporation compete in, and how can these businesses be managed so that they create "synergy" (Dess and Lumpkin, 2003, pp. 188; Goold et al., 1994, pp. 5).

In addition to the found similarities in the use of corporate-level MCSs, the case analysis also indicates contextual differences in the scope and the scale of organisational involvement between the two processes illustrated in this paper. The process scope is considerably broader at Saturn. The process is guided by determining a few broadly defined streams, such as 'customer groups' and 'technology'. But it is purposefully kept open-ended in nature, in order to ensure that any strategically critical issues would not be ignored in the analysis. The process is much more focused at Titan. It focuses on a few predefined strategic themes that tend to change annually, providing a clear focus for discussion and knowledge integration. The scale of organisational involvement is also considerably more extensive at Saturn. In addition to the top managers who are highly involved in the process, the process involves an extensive group of specialists. At Titan, top management is highly involved, but key individuals with specialised knowledge are involved to a considerably lesser extent than in Saturn. Even though this study did not directly seek to examine any contextual influences on the use of MCSs, prior evidence indicates that these found differences could have been influenced by the different business strategy and business environment contexts of the two case companies. Prior studies have indicated that companies operating in a dynamic business environment and with an entrepreneurial, product differentiation type strategic orientation are likely to use broader scope of planning information and to be more extensive in their environmental scanning as compared to companies operating in less dynamic business environments and with a more conservative, cost-focused strategic orientation (see e.g. Chenhall, 2003; Chenhall and Morris, 1995; Guilding, 1999; Simons, 1987).

7. Conclusions

Strategies are formed through multifarious processes. On one hand, they result from a process of conscious thought. Explicit strategies are formulated based on rigorous analysis. (Ansoff, 1991, 1994) On the other hand, they emerge as patterns of organisational behaviour thorough a process of incremental learning (Mintzberg, 1990, 1991, 1994; Quinn, 1980). Previous studies have indicated that MCSs shape strategy formation through triggering strategic debate and organisational learning (Simons, 1990, 1991, 1995). This study suggests that the influence of MCSs may also be mobilised by using MCSs as knowledge-integrating mechanism to ensure that managers possess more complete knowledge when formulating their business strategies. In both approaches the use of MCSs is enabling in character - designed to enable managers to deal more effectively with inevitable contingencies (Ahrens and Chapman, 2004).

Shaping strategy formation thorough the use of MCSs may not, however, be unproblematic. Available evidence indicates that using MCSs to exert influence over strategy formation entails judgement in regard to the set of issues – be it strategic uncertainties (Simons, 1990, 1991, 1995) or corporate-level strategic issues as in the case studies illustrated in this paper – on which the organisation's or managers' attention is focused. Although such attention focusing is likely to enhance strategic alignment (Ocasio and Joseph, 2005, 2008), it may also reduce an organisation's capability to account for changing circumstances (Brown and Eisenhardt, 1998; Doz and Kosonen, 2008; Gray, 1990; Lovas and Ghoshal, 2000). Further research is needed to establish how MCSs may be used to shape strategy formation - without realizing the potential negative consequences of such intervention. Further investigation could also shed more light on the potentially differential ways by which the influence of corporate and business-level MCSs on strategy formation may be mobilised.

This study suggests also, that further clarification about the focal essence and contextual properties of ICS are needed. This study has presented a comparison of the properties of learning-oriented business-level ICSs (Bisbe et al., 2007; Simons, 1990, 1991, 1995) and knowledge integration-oriented corporate-level ICSs. The found differences in the focus, as well as in the organisational and temporal properties between these systems could indicate that the systems illustrated in this paper are essentially different from the concept of ICS. We have interpreted these differences as manifestations of the different purpose and context of the systems illustrated in this paper and those previously specified in the management accounting literature (Bisbe et al., 2007, pp. 798). We have argued that these systems' strong emphasis on face-to-face interaction and their enabling influence over business strategy formation (Simons, 1990, 1991, 1995) suggest their substantial similarity with the concept of ICS. Further empirical research could seek to provide additional evidence and specification on the contextual variation in the purpose and properties of ICSs.

Finally, this paper suggests for that the decision-making enhancing role of MCSs is not necessarily limited to information generation. MCSs may also combine individuals' specialised, qualitative knowledge in a way that it is more readily applicable throughout the organisation. The study provides evidence for

Ditillo's (2004) earlier findings that when knowledge is characterised by low level of codifiability and cognitional complexity, formal management accounting systems may not suffice to facilitate knowledge integration. Human interaction processes may be needed. They provide a context where personal qualitative insights may be articulated and integrated. This interaction may be guided by focusing attention to predefined issues. Future studies could continue to develop a more fine-grained understanding of the role of MCSs as knowledge-integrating mechanisms. So far, the knowledge-integrating role of MCSs has been examined at the project team (Ditillo, 2004) and corporate levels. Future studies could extend the examination to other organisational contexts, including the role of MCSs in integrating knowledge across several organisational levels, functions, and localities.

The approach for shaping strategy formation illustrated in this paper may be dependent on particular organisational and individual characteristics. It is critically dependent on individuals' willingness to share and explicate their knowledge (Buckley and Carter, 2004; Foss and Pedersen, 2004), their ability to absorb new knowledge (Cohen and Levinthal, 1990; Szulanski, 1996), and an organisation's capability to integrate knowledge (Grant, 1996a, 1996b; Kogut and Zander, 1992). Prior literature indicates that the existence of a shared cognitive background and understanding (Buckley and Carter, 2004; Grant, 1996b), common objectives for the knowledge integration (Teece, 2000) and an incentive system that rewards knowledge sharing between individuals (Simons, 2005) may facilitate such integration.

This study has only started to scratch the surface of corporate-level MCSs as knowledge integrating, strategy formation shaping mechanisms. More comprehensive organisational investigations are needed to develop a profound understanding of the challenges associated with their use. Further empirical research is also needed to provide a larger empirical base for the development of theoretical propositions that may be used in studies designed to provide more extensive statistical analysis. The found similarities in the approach across the studied companies provides some tentative indication of that the approach found in this paper could also be applicable to organisational contexts outside those investigated in this study (Eisenhardt, 1989; Eisenhardt and Graebner, 2007; Lukka and Kasanen, 1995; Scapens, 1990; Spicer, 1992; Vaivio, 2008). The found differences in the scope and the scale of organisational involvement between the two processes illustrated in this paper indicate, however, that there may be contextual differences in the specificities of these processes. These need to be examined further.

Notwithstanding these limitations, this study provides new insight into how the influence of MCSs on strategy formation may be mobilised in practice. It indicates that this influence may be more multifaceted than suggested by prior management accounting literature. It argues that MCSs may be used to shape the formation of both emergent and intended strategies, and that corporate and business level MCSs may differ in their influence.

Appendix: Interviews and informal discussions

INTERVIEWS			
With Whom	**Level**	**Date**	**Duration (min)**
Titan			
Executive Vice President, Corporate Communications	corporate	24 May, 2006	60
Senior Vice President, Legal Affairs	corporate	29 May, 2006	90
Senior Executive Vice President, Product Division X	business area	31 May, 2006	90
Executive Vice President, Corporate Technology and Asia Pacific	corporate	6 June, 2006	120
Senior Executive Vice President, Product Division Y	business area	14 June, 2006	60
Senior Executive Vice President, Corporate Services (including HR)	corporate	15 June, 2006	60
Executive Vice President, Corporate Strategy	corporate	21 September, 2006	150
Saturn			
Corporate Planning & Analysis Director, Former Strategic Planning Director for the largest business area	corporate	21 June, 2006 10 July, 2006	120 90
Marketing Planning Director for the largest business area	business area	10 August, 2006	90
Corporate Planning & Analysis Director with Finance & Control background	corporate	14 August, 2006	90
Vice President, Rewards & Benefits and Competence & Performance Management Director (joint telephone interview through conference call)	corporate	23 August, 2006	90
Corporate Planning & Analysis Director,	corporate	13 September, 2006	90

Former Strategic Planning Director for the largest business area			
Head of Finance & Control	corporate	21 September, 2006	60
Vice President, Business Improvement Services, and Senior Development Manager, Business Improvement Services	corporate	13 October, 2006	90
Corporate Strategy Director	corporate	23 October, 2006	90
Senior Development Manager, Business Improvement Services	corporate	27 October, 2006	60
Vice President, Business Improvement Services	corporate	3 November, 2006	60
Corporate Strategy Director	corporate	29 November, 2006	60
Competence & Performance Management Director	corporate	30 November, 2006	90
Director, Business Development & Strategy Projects, R&D for the largest business area	business area	7 January, 2008	90
Corporate Planning & Analysis Director	corporate	14 January, 2008	30
Director, F&C, Business Unit X within the second largest business area	business unit	14 January, 2008	90
Director HR, Executive Development, Talent and Performance Management, HR Development	corporate	22 January, 2008	90
Strategy & Portfolio Manager for one of the sales categories	business unit	14 March, 2008	60
Cost Management and Business Control Director for purchasing at the largest business area	business unit	15 March, 2008	30
Former Senior Manager, third largest business area	business area	11 June, 2009	30
Finance Director I for a major horizontal organisation (telephone interview)	business area	15 June, 2009	30
Finance Director II for a major	business	17 June, 2009	40

horizontal organisation	area		
Senior Vice President, Global Head of Marketing	corporate	31 August, 2010	60
Executive Vice President, Chief Financial Officer	corporate	27 September, 2010	50
Head of Strategic Planning, Corporate Strategy	corporate	28 September, 2010	90

INFORMAL DISCUSSIONS			
With Whom	**Level**	**Date**	**Duration (min)**
Titan			
Senior Advisor, Former Chief Financial Officer	corporate	2 December, 2005	60
Executive Vice President, Corporate Strategy	corporate	27 February, 2006	90
Chief Financial Officer	corporate	4 May, 2007	60
Saturn			
Corporate Planning & Analysis Director	corporate	23 May, 2006 9 June, 2006 27 October, 2006 19 January, 200	60 60 60 30
Senior Manager, Strategy & Business Development for the largest business area	business area	2 April, 2006 20 April, 2006 28 September, 2007 22 June, 2009	30 30 60 30

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Dynamic strategic performance measurement systems: Balancing empowerment and alignment

Katja Kolehmainen

Abstract

This paper examines how substantial dynamism can be built into strategic performance measurement systems (SPMSs), and how such flexible and adaptable SPMSs can be used for strategic alignment. It draws on an in-depth case study of a successful global leader in the telecommunications industry. This research suggests that building substantial dynamism into SPMSs, and using such flexible and adaptable SPMSs for strategic alignment, may require companies to seek a balance between empowerment and alignment. To do so, they may need to adopt a combination of management practices that differ considerably from those prevalent for more stable SPMSs. Further, this research argues that subjectivity may be a central feature in a dynamic SPMS. Indeed, it could be essential both more effectively to empower managers to take primary responsibility for measures, and to provide them with sufficient leverage to account for changes in the external and internal contexts. The paper concludes by discussing theoretical and managerial implications.

Key words: performance measurement, control, coordination, strategic change, multinational corporations, high velocity environment

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1. Introduction

Strategic performance measurement systems (SPMSs) have become an integral part of contemporary management practice.[1] They provide managers with a potentially effective mechanism for enhancing strategic alignment, by enabling the translation of strategy into a set of financial and non-financial measures that may be cascaded throughout the organisation.[2] By enhancing strategic alignment, however, SPMSs may also introduce organisational rigidity and slow down the organisation's ability to adapt to changing circumstances.[3]

Academic accounts have often underlined the need to enhance the dynamism of SPMSs.[4] Most writers have argued that the overall development of an SPMS should include a periodic review process that enables managers to ensure measures remain relevant in the light of external and internal development.[5] Specific audit tools have also been proposed that provide detailed guidance for the review.[6]

Much of the prior research on dynamic SPMSs has tended to be conceptual in nature.[7] Those studies providing empirical evidence have tended to focus on manufacturing companies, examining how the evolution of SPMSs may be managed over time.[8] Much less attention has been paid to the ways in which substantial dynamism can be built into SPMSs in order make frequent modifications to the measures possible. Yet, such a capability is likely to be vital in turbulent industries where companies seek strategic agility – the capability to change strategies and business models rapidly.[9] Not surprisingly, an examination of the ways companies seek to create sufficient dynamism into their SPMSs in such businesses has been highlighted as one of the key areas for future research on SPMSs.[10] This paper aims to respond to these calls by drawing on an inductive, in-depth case study of DynComp, a successful global leader in the turbulent telecommunications industry.[11] The paper examines how a substantial element of dynamism can be built into SPMSs, and how such a flexible, fluid and adaptable SPMS can be used for strategic alignment.[12] Diverging from much of the research on SPMSs, which has tended to focus on systems such as the Balanced Scorecard – which measure performance at an organisational level – the study presented here responds to recent calls for a broad examination of SPMSs, and extends the examination to include systems that measure contribution to strategic performance at an individual level.[13]

This in-depth examination of the use of SPMSs at DynComp suggests that building substantial dynamism into SPMSs and using such flexible and adaptive SPMSs for strategic alignment may drive companies to seek a balance between empowerment and alignment. This requires companies to adopt a combination of management practices that differ considerably from those prevalent for more stable SPMSs. The analysis suggests that building substantial dynamism into SPMSs may require companies to place the emphasis on individual-level SPMSs and to engage managers throughout the organisation to take primary responsibility for the relevance of measures. This allows for the incorporation of action-oriented measures, and enables discussion about measures to be embedded within the on-going interaction between managers and subordinates. Further, the analysis indicates that relying on this kind of empowering approach may require companies to establish alignment processes that give top management indirect influence at an individual level. These alignment processes – such as corporate-wide strategic focus areas and the evaluation of individuals' values-related behaviour – may enable top management to influence individual-level target-setting and behaviour, while primary responsibility for target-setting and performance evaluation still remains with the individual manager. Finally, this case study indicates that building and using a more fluid, dynamic SPMS may drive companies to a position where they allow – in fact, make unavoidable – greater subjectivity in the performance evaluation process than is generally suggested by the SPMS and management control literature.[14] This analysis suggests that subjectivity may be essential both more effectively to empower managers to take primary responsibility for measures, and to provide them with sufficient leverage to account for changes in the external and internal contexts.

This paper is structured in a way that reflects the study's inductive approach.[15] After discussing the research perspective, the paper proceeds to illustrate how SPMSs are used at DynComp. The paper concludes by discussing the theoretical and managerial implications of the study. These implications include making connections with the strategic planning literature that has been extensively covered in *Long Range Planning,* providing further evidence that governance channels may facilitate responsibility for strategic planning to be shared between corporate executives and middle-level managers, and indicating that these channels may foster strategic dialogue throughout the organisation, including with those organisational actors that may otherwise lie outside the strategic core.[16]

2. Research approach

Given the limited empirical evidence available to suggest how a substantial element of dynamism can be built into SPMSs or how such flexible and adaptable SPMSs can be used for strategic alignment, this study adopted an inductive approach to develop new theoretical insights. As the need for dynamic, more fluid SPMSs was assumed to be particularly pressing in turbulent industries (characterised by rapid and unpredictable change, short product life-cycles and temporary advantages), DynComp – a leading global player in the telecommunications industry – was chosen as the research site.[17] As a successful leader in a turbulent industry, it was conceivable that DynComp had adopted novel management practices. Although the research is based on a case study of a single setting, it aims to contribute beyond empirical description, by providing new theoretical insights. This study follows the theory-building case study process proposed by Eisenhardt. Since the adopted single-case design did not enable any cross-case analysis, it does not provide precise theoretical propositions. Rather, it presents empirically grounded reflections and new theoretical insights.[18]

The case data was principally gathered between May 2006 and March 2008, with some additional interviews conducted in June 2009 (see Table 1). Theme interviews with corporate, business area, and business unit level managers provided the principal source of field data. The corporate-level managers who were interviewed represented key corporate functions, such as corporate strategy, finance & control and HR, while the business area and business unit managers represented key business areas and horizontal organisations. Some of the corporate-level managers also had prior experience of operating at a business area level and could therefore also draw on this experience.[19]

Altogether, 22 interviews with an average length of over 70 minutes were conducted (see Appendix A). Of the 22 interviews, 18 were tape-recorded and transcribed.[20] When tape recording was not possible, notes were taken. These notes were immediately transcribed after the interviews and were sent for validation to the interviewees. Following the inductive approach adopted, interviewees were first approached with open questions. For example, interviewees were asked to provide their views on 'how management control systems are used for strategic alignment'. They were then asked more specific questions relating to SPMS, including the type and number of measures, and the processes of defining measures and evaluating performance. Since data analysis proceeded in parallel with data gathering, the researcher was able to pose increasingly specific questions and probe deeper into initial ideas as the project and the data collection progressed.

Interview data were complemented with relevant internal documents, such as planning process descriptions, performance appraisal schemes, operational mode specifications and documents relating to the use of performance measures. A variety of public documents – for example, analyst presentations, press releases and press articles – were also drawn upon. Finally, informal discussions with key informants enabled the researcher to engage in more general discussions regarding DynComp's management approach and their use of SPMS, provided a platform for more detailed questions, and thereby made it possible to elaborate on initial theoretical ideas (See Appendix A). Table 1 provides an overview of the data used in this study.

Type of data	What included	Purpose	When gathered
Theme interviews/ corporate-level managers	Theme interviews with executives representing key corporate functions such as corporate planning & analysis, corporate strategy, finance & control and HR. Many of the interviewees also had prior business experience.	To provide a multifaceted understanding of the use of SPMSs as well as the links between SPMSs and other control systems.	Principally June to December 2006, two interviews in January 2008
Theme interviews/ business-level managers	Theme interviews with business-level managers representing major business areas and horizontal organisations.	To deepen understanding of the use of SPMSs and to probe corporate-level views.	One interview in August 2006, four interviews January to March 2008, three interviews in June 2009
Internal documents	DynComp planning process descriptions (two successive versions), performance appraisal process descriptions, operational mode specification.	To provide an overview of the overall strategic planning process, appraisal process, DynComp Common Measures, and the principles and operational modes in general.	June 2006 to January 2007
Public documents	Press releases, analyst presentations, annual reports, information provided at DynComp's home pages, academic and business press articles on DynComp.	To provide complementary data about DynComp's business environment, corporate and business strategy, performance, management approach and the use of SPMSs.	May 2006 to March 2008
Informal discussions	Informal discussions with key informants, such as representatives of corporate planning & analysis and strategic planning.	To deepen the understanding of DynComp's management approach and the use of SPMSs through general discussions, asking detailed questions and probing initial theoretical ideas.	May 2006 to June 2009

Table 1. Description of data used

Consistent with an inductive approach, data analysis commenced during the data-gathering phase. The analysis involved several iterative rounds of reflection between data and theory, as well as the triangulation of data from different sources.[21] An on-going research relationship with the case study company provided the researcher with the opportunity to test initial theoretical understandings with key informants during the data-gathering and analysis phase. The overall analysis was also verified and accepted as accurate by multiple key informants at DynComp.

3. Case analysis of the use of SPMS at DynComp

3.1. Organisational context: an empowering management approach

Like most large multinationals, DynComp operates a complex matrix organisation. Sitting on top of the matrix are three global business areas, each responsible for distinct sets of products. Each business area is given clear responsibility over its business strategies and operations. They also constitute individual key entities with responsibility for profit and loss, although some business areas are further divided into separate profit and loss units. The business areas are supported by global horizontal organisations, which hold group-wide responsibility: for example, for sales, marketing, purchasing and technological development. Some of these horizontal organisations are further divided into regional entities.

DynComp's management approach is characterised by empowerment, openness and the encouragement of diverse perspectives. These principles are clearly expressed in the message of the chairman of the board, presented as a prologue to the 'Operational Mode' internal document:

> *"Within DynComp, we have always focused strongly on performance, at the same time cultivating an atmosphere of openness and positive, energising change. We thrive on active discussions, where people from every part of the organisation are given a strong voice. Places where opinions can be expressed freely, and indeed challenged freely, with all voices equally valued."*

The management approach also places strong emphasis on strategic dialogue. The strategy formation process involves an extensive group of people, and the strategies are extensively discussed throughout the organisation. Finance director A for a major horizontal organisation explained how he had sought to enhance understanding of strategy in practice:

> *"Sometimes I have been involved in the so-called DynComp café process, which involves a large group of people from all around the world. So I have sometimes myself been involved in innovating our strategy... If I have been not involved in that process, I have participated in a "strategy release event" and familiarised myself with the material that is available on our intranet. We have quite extensive strategy-related material on our intranet; videos, stories, blogs etc. And our department head also discusses the strategy with us, what it means to us."*

Management training is also used to strengthen managers' understanding of strategy. Training is typically organised in the context of a specific strategic theme. For example, if the management training is organised in the context of 'market retention', managers may be asked to define product attributes that would enhance market retention. As management training thus typically requires managers to consider how a particular strategic theme could be deployed in practice, it enhances managers' internalisation of strategy. As training is often organised along group work, managers can also share views of how a particular strategic theme could be deployed in practice.

DynComp also places a very strong emphasis on organisational values. The recruitment process emphasises value compatibility, values are extensively communicated on the company's intranet pages, and organisational values are linked to the way individual-level performance is evaluated. This strong emphasis placed on organisational values is also reflected in that the management approach aims to balance 'value-based' versus 'fact-based' management.[22] The relative emphasis of the two approaches has changed over time. During the period of research, the emphasis had recently re-shifted towards 'value-based management', and the current aim was to place equal emphasis on the two approaches.

3.2. Stable organisational level SPMS for performance monitoring

The performance of business areas and horizontal organisations is evaluated at a corporate level by employing a small group of measures known as DynComp Common Measures. These measures are identical in each of the company's three business areas and have been chosen to include only elements that are truly common among these areas. Consequently, there is an emphasis on financial measures related to growth, profitability and productivity, although strategic measures such as market share and customer satisfaction are also included. Many of the measures are considered to be drivers of economic value added (EVA) growth. Indeed, some measures, such as market share, are carefully followed by stock market analysts. Horizontal organisations are evaluated by using a more limited set of these measures, reflecting their specific functional roles.

Although the group operates in a turbulent industry, the composition of DynComp Common Measures tends to be stable in that they are not normally reviewed as part of the annual strategy process. Such revision occurs on an 'as-needed' basis; for example, in relation to major changes in strategy or organisation. The stability of the DynComp Common Measures was described by the finance and control director of one of the business units:

> *"Well, if you think of this from the Common Measure perspective, DynComp's overall operations do not change every six months... strategies are not changed all the time...so if we look at things from a bird's-eye view, the view does not really change that much...and many of the financial figures are derived directly from accounting, so they cannot change that much."*

Although the composition of the measures is not actively reviewed, performance in relation to these measures is followed intensively. As the corporate strategy director explained: *"At this corporate-level DynComp Common Measures are followed very actively, monthly, so I would say that they are perhaps the most important element by which top management gets an understanding of what is really going on."* The main purpose of the DynComp Common Measures could thus be summarised as the monitoring of business area and horizontal organisation performance in terms of key financial and strategic measures. This aims to ensure that 'things are on track' and the corporation as a whole is adding value for shareholders.

In addition to the DynComp Common Measures that are followed at a corporate level, business areas and horizontal organisations also set their own targets; these are derived directly from their specific business strategies. Although the use of balanced scorecards (often referred to simply as scorecard at DynComp) is not forced on business areas and horizontal organisations, scorecards are widely used throughout the organisation. In terms of the actual measures used, there seems to be a tendency to emphasise financial and process measures, although customer and people perspectives are also included.[23]

The composition of the scorecards, like that of the DynComp Common Measures, is not systematically reviewed as part of the annual strategy planning process. Business areas still tend to review their measures but do not change them very often because they capture such fundamental dimensions of performance. The business development and strategy projects director for R&D at a business area explained:

> *"These scorecard elements that are included ...they are based on such high-level principles that they might not change if we set an objective A or B, that is strategy A or B...So the measures and their underlying logic may stay the same."*

3.3. Flexible individual-level SPMS for dynamic strategic alignment

An individual-level SPMS, referred to as 'the performance appraisal process', is used for enhancing dynamic strategic alignment at DynComp.[24] In practice, strategic alignment is enhanced by transforming strategic objectives into action plans, which are then translated into individual action-oriented targets.

> *"Actually, strategic objectives need to be transformed into action plans. So for every strategic objective you need to establish an action plan that defines the way by which you intend to reach the objective... of course that link works in some cases and in some cases not as well, but anyway we aim at that..."* (corporate strategy director).

> *'By that [performance appraisal process] individuals get action points for the following six-month period – which are derived from specific strategies. The action points follow a strategy implementation plan that is developed during the strategy generation phase.'* (marketing planning director for the largest business area)

These action-oriented strategic targets are often defined in a qualitative form. Managers are still requested to set *a priori* minimum, maximum and target values for the measures (see Table 2 for examples).

	Example of a qualitatively defined strategic target	Example of a quantitatively defined strategic target
Minimum	Drafting new credit policy documentation in cooperation with all business areas.	To develop one new business case.
On target	Finalising the new credit policy documentation so that it has been approved by all business areas and relevant organisational bodies.	To develop three new business cases.
Maximum	Implementing the new credit policy so that there is evidence of successful cases where the new credit policy has been implemented in practice.	To develop five new business cases.

Table 2. Action-oriented strategic targets: example of a qualitatively and quantitatively defined target

In addition to the action-oriented strategic targets, the performance appraisal plans typically also include operational and scorecard-related, mainly financial targets.[25] The link between the organisational and individual-level SPMSs is hence enhanced by cascading key scorecard targets down to the performance appraisal plans. These scorecard-related targets tend to form a firm part of the performance appraisal plans for individuals in line management positions. Managers throughout the organisation have otherwise considerable freedom to determine the most appropriate targets to be included in their subordinates' performance appraisal plans.[26] As the performance appraisal process aims to focus individuals' attention on the strategically and tactically most significant and timely issues, the number of bonus-related individual-level targets is limited to six. A global process tool is used to ensure that the global guidelines in relation to the number of measures are also followed in practice. As limiting the number of individual-level targets to only six is sometimes challenging, managers are also allowed to set a maximum of three other targets that do not have influence on the bonuses.

This room for manoeuvre makes the performance appraisal process a very effective and flexible mechanism for strategic alignment. The corporate planning & analysis director explained:

"At that [individual level] you can combine financial targets, quantitative targets, more value-driven type of targets and very qualitative targets. There is a lot of room for variety. It combines them and links them to concrete strategy implementation. That is why I think it is very important."

This flexibility also makes the performance appraisal process an effective mechanism for local adaptation.[27] The same director continued:

"Both strategic targets and tactical focus areas may vary by location…since we have the flexibility and we have no built-in pressure for these to be exactly the same for example by country. Of course it pays off to take advantage of it."

Subordinates are actively involved in defining their own targets. Targets are typically defined in the bi-annual face-to-face meetings between managers and subordinates. Involving subordinates in the definition of their own targets enhances strategic dialogue and also enables managers and subordinates to form shared views of these targets.[28] But discussion about the measures is not limited to the bi-annual meetings in which subordinates' individual targets are defined. As strategic targets are action-oriented and often defined in a qualitative form, embedding discussion about these targets into the on-going interaction between managers and subordinates follows logically, in a natural way. A former senior manager for a business area recounted:

"I think that integrating strategic targets to the individual-level target-setting is a very good control approach, as it enhances strategic dialogue. These issues are discussed constantly. I myself tended to discuss these targets with my boss and my subordinates on a monthly basis. I always had a feeling that when we then, every six months, sat down to evaluate performance, I already knew beforehand what my own and my subordinates' evaluation would be like. This discussion was genuine, on-going management."

Finance director A for a major horizontal organisation commented on her part:

"We are constantly in contact with our subordinates… And I would assume that everyone follows his or her targets constantly. I for example have a habit of going through my targets a few times during every six-month period. I focus on the actions that we have agreed upon."

As decision-making on measures is largely delegated to individual manager level, it is generally a swift process. The only precondition is that a manager and his/her subordinate agree on the measures. The flexibility of the system – by allowing for the incorporation of action-oriented targets – also facilitates frequent modifications to the measures in practice. As these measures focus on specifying the real actions that are expected of individuals during the following six-month period, they can be effectively managed at a manager level, without having to accommodate any wider implications for the company's information systems. In practice, the action-oriented strategic targets and operational targets tend to change frequently, while the financial and other scorecard-related measures are more stable. As individuals are often held accountable for issues for which they do not have full control, these frequent modifications tend to reflect managers' intentions to focus attention, rather than a drive to refine individuals' accountabilities.[29]

Thus, the performance appraisal process provides managers with a very adaptable and flexible mechanism for strategic alignment. As the performance appraisal process also fosters on-going strategic dialogue throughout the organisation, it also contributes to DynComp's capability for making strategy revisions in a timely fashion.

3.4. Enhancing strategic alignment with corporate-wide strategic focus areas

At the time our research for this paper was conducted, the performance appraisal process had recently been modified, thereby permitting top management to determine strategic focus areas which can then be reflected in individuals' performance appraisal plans.[30] This process enables top management to exert influence on individual-level target-setting, while primary responsibility for measures remains at individual manager level. These strategic focus areas are considered to be an important mechanism for enhancing strategic alignment, and for focusing attention on the strategically and tactically most significant and timely issues. As top management is able to change strategic focus areas frequently, these focus areas also build dynamism into SPMSs. According to the corporate planning & analysis director: *"It is the machine with which we make strategic changes and with which we can also focus on tactically most important issues."* As these strategic focus areas are often defined on a rather abstract level, they entail local interpretations of their individual-level implications. Finance director B commented:

"Well, strategic focus areas are very much given. Then it is pretty much up to the manager to define how they are reflected...When we get a focus area, say Sox compliance, then I as a superior try to communicate the theme so that my subordinates can identify issues that contribute to the theme and which they can influence with their own work..."

Finding a link between an abstract group-wide strategic focus area and individual-level strategic targets can sometimes be challenging. Finance Director B continued:

"But to what extent individuals feel that they can influence the outcome...It depends very much on what level in the organisation an individual is working, if they are given a very comprehensive target and they operate in a very limited area, then they may feel that they cannot influence the target with their own actions."

3.5. Enhancing cooperation by evaluating individuals' values-related behaviour

DynComp has also developed a process through which top management aims to influence the way in which individuals seek to reach their individual targets. This process, referred to as 'the overall performance evaluation process', runs in parallel with the bi-annual performance appraisal process. While the performance appraisal process focuses on setting individual level targets and monitoring performance in relation to the set targets, the annual overall performance evaluation process extends evaluation to also encompass the extent to which targets have been sought in accordance with organisational values – thus paying attention both to what has been achieved (referred to as the 'what' in the evaluation), and how these results have been achieved (referred to as the 'how' in the evaluation).

Where the bi-annual performance appraisal process is linked to monetary bonuses (in a way that allows non-trivial subjectivity – more on this below), the annual evaluation has broader implications. It is related to merit increases, rises in base salary and opportunities to attend expensive training and equity programmes. Reflecting the re-emphasis on 'value-based management' at DynComp, the guidelines for weighting the 'what' and the 'how' in the overall performance evaluation changed shortly before the period of research, from the previous 60/40 (what/how) to the current equal weighting.[31]

With the overall performance evaluation process, the organisation seeks to mitigate some of the potential dysfunctional consequences often associated with linking rewards to performance measurement.[32] As individuals are often kept accountable for issues for which they do not have full control, particular emphasis is placed on enhancing cooperation between individuals.[33] The senior development manager from business improvement services explained:

> *"This approach enhances cooperation and the achievement of targets in practice…if you measured only cold figures that are easier to measure, you could undermine cooperation and create short cuts that would be detrimental for the ability to perform in the long-term."*

The research interviews with business unit level managers provide corroborating evidence that the system is working. The strategy and portfolio manager for one of the sales categories explained:

> *"We evaluate both what you reach and how you reach that. The how part is also important there. If you try relentlessly to push your own issues through, without paying attention to others, it is not in accordance with company values. And it will be taken into account in the evaluation. It [evaluating the how] is an essential part of the overall evaluation."*

The evaluation of the 'how' is facilitated in practice by providing detailed descriptions of values-related behaviours. The cost management and business control manager explained:

> *"We are given clear documentation for that…the PowerPoint presentation provides clear examples of what is "exceptional", "on target" and "improvement required" level behaviour in relation to each value. I have found the guidance helpful when discussing this with my team members. It enables them to clearly see what is generally expected and it helps me to explain what exceptional behaviour is, for example."*

There are also slightly modified versions of the descriptions available for managers in order to take into account their leadership role.[34]

Although these detailed descriptions aim to provide objectivity to the evaluation, the evaluation of individuals' values-related behaviour is still inherently subjective. As managers are not obliged to use these descriptions, and sometimes are not even aware of their existence, these descriptions are not always followed in practice. The finance & control director for one of the business units commented:

"Yes, I do take values into consideration in performance evaluation. But it is subjective...everyone has his/her own values and they are more or less in line with organisational values...I follow no particular format where I could tick that this went well and this did not go well."

As with the strategic focus areas, the evaluation of values-related behaviour also entails making local interpretations of centrally defined abstract constructs. The business development & strategy projects director for R&D at a business area remarked:

"Evaluation of individuals' values-related behaviour does include subjectivity. It requires in a way an interpretation of how that person can contribute to that value. In practice a superior and subordinate discuss together how, and with what operation models and action points, an individual could contribute to that value."

The evaluation of values-related behaviour is also rather sensitive, and based very much on a manager's subjective judgement:

"If I think of my own managerial work, we have gone through this point by point. But this is often a rather sensitive topic. At the end it would be very hard for anyone to work here unless he had internalised our company values. So these values are quite difficult to evaluate. In principal, if a manager wanted, he could categorise individuals either as that they have behaved in accordance with company values, or that they have not. So it depends very much on the discussion between a manager and his subordinate." (Finance director B)

As managers are only advised to apply the recommended equal weighting on the 'what' and the 'how', the weighting of these two elements also introduces subjectivity in practice. Overall, the evaluation of values-related behaviour provides managers with leverage for subjective judgement. Finance director B concluded:

"I think these values provide managers with a subjective element in the evaluation. They can always refer to that if all quantitative targets have been reached. It provides managers with some leverage."

3.6. Enabling subjectivity by strengthening procedural justice in the performance evaluation and reward process

Overall, the performance evaluation and reward process is hence quite subjective at DynComp. In addition to the subjectivity arising from the interpretation of centrally defined abstract constructs – strategic focus areas and organisational values – managers are permitted substantial subjectivity in evaluating their subordinates' performance. This enables managers to take into account changes in the external and internal contexts. The business development & strategy projects director for R&D explained this:

> *"You can in practice either modify your target-setting or be flexible in the evaluation. In principle, you can make changes to the target-setting during the whole six-month period. Of course you need to have a good reason for that, not only that the targets could not have been reached. On the other hand, you may also be flexible in the evaluation…for example now, in this changed market situation, we were given guidance to take that into account when we evaluate to what extent our subordinates have reached their targets."*

Finance director B commented for her part:

> *"Well yes, we have had particular review points…if we think of for example the spring period; we have tended to review the targets in March…whether there really has been a need to revise targets has been very much up to the manager and his/her subordinate to decide…Personally I have modified the targets a few times, due to organisational changes."*

As the performance evaluation and reward process includes this level of subjectivity, it is essential to enhance the fairness of the process.[35] Several features of DynComp's approach appear to contribute to procedural justice. Individuals are strongly and genuinely involved in the definition of their own targets. Managers seek to be well-informed about their subordinates' performance by gathering information from different sources. "*We gather feedback from people with whom a subordinate works – from his colleagues, subordinates and other superiors – feedback on how he operates in practice"* (business development & strategy projects director for R&D). Rooting discussion on measures in the on-going interaction between managers and subordinates further contributes to managers' understanding of their subordinates' performance. This is essential as individuals are often assigned qualitative action-oriented strategic targets which entail exercising managerial judgement in the evaluation. Anchoring dialogue on measures in the ongoing discussion also enables managers to be better informed about a potential need to modify target-setting, or to be flexible in evaluating performance. Managers also pay attention to developing trust within the manager-subordinate relationships.

> *"Subjectivity presumes that there is trust and security in the relationship between the manager and the subordinate. There cannot be any feelings of distrust...I think it is simply that you as a manager try to be as righteous and fair as possible." (Former senior manager for a business area)*

The organisation has also developed processes and systems that force managers to make at least part of their subjectivity explicit. Finance director A explained:

> *"We provide everyone also with written feedback; what you have achieved, what has been good in your work, where you could still improve. This written feedback is provided also about whether and how an individual has behaved in accordance with the company values."*

Furthermore, the fact that the individual-level SPMS requires managers to define *a priori* minimum, maximum and target levels also encourages them to make their potential subsequent modifications explicit.

In addition, the performance evaluation and reward process seem to be oriented more towards enhancing personal development than toward enforcing strict accountability. If an individual fails to reach his/her targets, a personal 'development plan' is developed to guide development. As a result individuals do not feel threatened by the process and can better accept the fact that their evaluations are to a large extent subjective.

Finally, procedural justice is also enhanced by cultivating relevant managerial capabilities. As individual-level target-setting and performance evaluation require managers to make local interpretations of the individual-level implications of strategic focus areas and corporate values, DynComp's overall management style and management training seek to ensure solid and pervasive manager understanding of these elements.

3.7. The overall SPMS constructed from stable and dynamic elements

As the previous discussion illustrates, DynComp's overall SPMS is composed of stable and more dynamic elements. These are linked primarily by cascading key targets and measures from the DynComp Common Measures down to the scorecards, and on to the individual-level SPMS. While the organisational-level SPMS, the DynComp Common Measures and the scorecards tend to focus on stable, more fundamental issues and are oriented towards performance monitoring, the individual-level SPMS – the performance appraisal process – is used as a flexible and dynamic mechanism for strategic alignment. It also fosters strategic dialogue, and strengthens DynComp's capability to make timely strategy revisions. While the scorecard-related measures tend to remain stable, other parts of the individual-level SPMS – the strategic and operational targets – tend to change frequently. Table 3 presents a synthesis of the corporate, business and individual level SPMSs at DynComp.

Level/ system	Functional organisation responsible for the system	Type of measures	How often measures reviewed	Purpose
Corporate level/ DynComp Common Measures	Finance & control	Common measures related to e.g. growth, profitability, productivity, customer satisfaction and market share. Emphasis on financial measures.	Stable. Reviewed on an as-needed basis.	To monitor business area and horizontal organisation performance in relation to key financial and strategic measures in order to enhance that the corporation as a whole is adding value to shareholders.
Business area level/ Scorecard	Finance & control	DynComp Common Measures as well as business area specific measures defined at business area level. Emphasis on financial and process measures; measures related to customer and people perspectives also included.	Fairly stable. Business area's own discretion.	To monitor performance in relation to key financial and non-financial measures.
Individual level/ 'performance appraisal process'; linked also to annual 'overall performance evaluation'	HR	Typically a mixture of strategic targets, operational targets and scorecard-related, mainly financial measures. Strategic targets and operational targets often action-oriented in nature (with pre-defined maximum, minimum and target values).	Every six months. (More frequently if needed due to changes in external or internal factors.)	To enhance dynamic strategic alignment, foster strategic dialogue, and enable timely strategy revisions.

Table 3. Synthesis of corporate, business and individual level SPMS at DynComp

In Figure 1 on the following page, the interplay between corporate, business and individual-level SPMSs at DynComp is described. The corporate-level SPMS – the DynComp Common Measures – is used to set targets for business-level SPMSs by defining key measures and their target levels. The business-level SPMS – the scorecard – provides input to the annual business-level strategic action planning. As the composition of business-level SPMS is not expected to be reviewed within the annual strategy process, the link of strategic action planning to the definition of business-level SPMS measures is not always strong. Finally, both business-level SPMS and business-level strategic action planning provides input to the individual-level SPMS – the business-level SPMS by cascading key, mainly financial, targets, and the strategic action planning by providing input to defining strategic action-oriented targets.

Clearly, an individual-level SPMS is used as a central and dynamic lever to ensure strategic alignment. The fact that it is linked not only to the organisational-level SPMS by cascading down key targets and measures, but also to several other key alignment processes, reflects the central role of the system. Perhaps the most significant link is from strategic action planning to the individual-level SPMS. Through this mechanism, strategic action plans are translated into action-oriented strategic targets. By defining corporate-wide strategic focus areas, top management is able to enhance strategic alignment while primary responsibility for measures remains at the individual manager's level. Finally, by coupling organisational values to the individual-level SPMS, top management aims to enhance cooperation and to influence the way individuals seek to reach their individual targets.

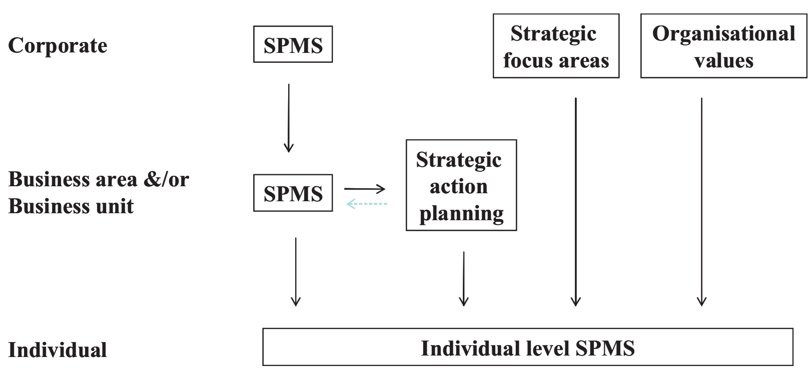

Figure 1. Interplay between corporate, business and individual level SPMSs at DynComp

The overall SPMS aims to enhance strategy alignment, while simultaneously allowing for sufficient dynamism and flexibility to cope with the dynamic business environment. By triggering strategic dialogue, it also contributes to the organisation's capability for timely strategy revisions. The business development & strategy projects director for R&D at a business area commented:

"It [the overall SPMS] clearly reflects our objective to be simultaneously very profitable, to systematically build forward, and as we know that we operate in a very dynamic business environment, to be sufficiently fast in order to respond to changes. In a way this system enables us to achieve this… It works well and it is after all a sufficiently light system. It can be implemented even in an organisation of this size and facing such a complex business environment."

The fact that DynComp operates in a dynamic industry is generally viewed by managers as amplifying the need for flexibility in the system.

"It [operating in a dynamic industry] is likely to increase the importance of flexibility in the system. A dynamic business environment increases demands for strategic agility. If the business environment was very stable, I believe there would be fewer needs for country and business unit-specific differences or for flexibility in the target-setting at an individual level." (Director, corporate planning & analysis)

Another key informant commented: "*Well, it [operating in a dynamic business environment] is likely to increase the need for variety and flexibility [in the overall SPMS system]."* (a business unit level finance and control director)

The coupling of organisational values to the individual-level SPMS is also perceived as influenced by operating in such an environment. The corporate planning and analysis director further commented:

"I also believe that if the business environment was very stable, the coupling of organisational values to performance measurement would be of less importance...because in a dynamic industry you cannot determine clearly beforehand how things will go. When there is more uncertainty, individuals have to be able to act in accordance with a specific value framework, even in unforeseeable situations."

According to the director responsible for performance management, organisational values also contribute to providing stability to the overall system.

4. Discussion and conclusion

The in-depth examination of the use of SPMSs at DynComp suggests that building substantial dynamism into SPMSs and using such flexible and adaptive systems for strategic alignment may require companies to seek a balance between empowerment and alignment.[36] Seeking such a balance may not, however, necessarily entail any significant trade-off between these two elements. The DynComp case illustrates that a combination of complementary management practices may allow companies to achieve both high empowerment and high alignment. The case analysis suggests that these management practices differ considerably from those prevalent for more stable SPMSs. The analysis offers a number of implications for academics as well as practitioners.

First, the case analysis suggests that building substantial dynamism into SPMSs may require companies to adopt more empowering approaches than suggested by the prior literature on dynamic SPMSs. Previous studies have proposed that dynamism can be built into SPMSs by establishing review processes and audit tools that enable managers to monitor whether the measures remain relevant in the light of external and internal developments.[37] The evidence presented here indicates that such approaches may not provide sufficient flexibility or adaptability for companies that need to retain the capability to make frequent modifications to their measures. In these kinds of companies, it may be more effective to place the emphasis on individual-level SPMSs and to engage managers throughout the organisation to take primary responsibility for the relevance of measures. This can provide an effective approach for mobilising local knowledge in relation to the most significant and timely issues, and result in the definition of more valid, reliable and understandable measures.[38] The evidence presented here indicates that it can also foster on-going strategic dialogue, and strengthen the organisation's capability to make timely strategy revisions.

Further, the analysis suggests that the capacity to be receptive to the incorporation of action-oriented strategic targets – that may often be defined in a qualitative form - may be a central feature of an empowering approach when it comes to building dynamism into SPMSs. It may be essential both for anchoring the dialogue on strategic measures in the on-going discussion between managers and subordinates, and for enabling managers to make modifications to their subordinates' measures without having to take into account the cumbersome implications of these changes for the company's information systems. The inclusion of action-oriented strategic targets may also provide an effective mechanism for enhancing strategic alignment, as such targets may be derived directly from strategic action plans. The SPMS literature generally suggests that individual-level strategic targets should preferably be quantitative in nature. The analysis indicates that in developing flexibility into individual-level SPMSs, it may be essential to allow for the incorporation of action-oriented, potentially qualitative strategic targets, in order to enhance the dynamism of SPMSs.[39]

Furthermore, the analysis suggests that permitting only a limited number of individual-level targets may also be central to such an empowering approach to building dynamism into SPMS. This may focus attention more effectively on significant and timely issues than does the more standard practice that permits up to 25 individual level targets.[40] Permitting only a small number of individual level targets may also enable frequent modifications, as it may prevent confusion, and make it easier for individuals to reorientate to the changing sets of measures.

In addition, the analysis suggests that in order for companies to be able to rely on an empowering SPMS for strategic alignment, they may need to establish alignment processes that provide top management with indirect influence at the individual level. These alignment processes – such as the corporate-wide strategic focus areas and the evaluation of individuals' values-related behaviour, illustrated in this paper – may enable top management to influence individual-level target-setting and behaviour, while primary responsibility for target-setting and performance evaluation remains at the level of an individual manager. The SPMS literature has tended to regard the alignment of individual-level strategic targets as a rather straightforward process - entailing the cascading of key financial and non-financial targets through organisational-level SPMSs to the individual level.[41] The analysis indicates that if primary responsibility for measures is located at the level of an individual manager, additional, more indirect alignment processes may be needed to ensure that individual-level measures and behaviour are in line with the company's strategic priorities.

Further, the analysis indicates that allowing considerable subjectivity in the performance evaluation and reward process may be central to building and using dynamic SPMSs, and to achieving a balance between empowerment and alignment. The evidence presented here indicates that the use of indirect alignment processes is likely to introduce subjectivity into performance evaluation and reward processes. As these kinds of alignment processes aim to influence individual-level target-setting and behaviour while locating primary responsibility for target-setting and performance evaluation at an individual manager's level, they entail local interpretation of their individual-level implications. The use of these alignment processes may also entail evaluating performance on qualitatively defined performance dimensions – such as the implementation of strategic actions or behaviour in accordance with company values – the evaluation of which is inherently subjective, in spite of attempts to increase objectivity by, for example, providing detailed guidance on how values-related behaviour could be evaluated in practice. Room for subjective judgement may also be essential to allow managers to take into account external and internal events when evaluating their subordinates' performance. Whereas the SPMS and management control literature generally highlights the negative consequences of subjectivity – bias, favouritism and loss of motivation – this analysis indicates that subjectivity may be an essential feature of a dynamic SPMS. It may be essential both for empowering individual managers to take primary responsibility for strategic measures, and for providing managers with sufficient leverage to account for changes in the external and internal contexts.[42]

Finally, the analysis suggests that in order to allow considerable subjectivity in the performance evaluation and reward process, companies may need to develop systems, processes and capabilities that strengthen procedural justice in the process. As prior literature on subjective performance measurement has tended to focus on the determinants and consequences of subjectivity, prior studies have presented only very limited empirical evidence as to which procedural features may enable a productive use of subjectivity in performance evaluation.[43] The conceptual management accounting and performance measurement literature has suggested that a superior's trustworthiness and ability to be well-informed about his/her subordinates' performance may be essential conditions for strengthening procedural justice, and for avoiding the typical dysfunctions of subjectivity.[44] This literature also argues that embedding discussion on performance measures in the on-going interaction between managers and subordinates may be an essential enabler for subjectivity, by helping managers to develop a thorough understanding of their subordinates' performance and the contexts within which they seek to reach their targets.[45]

The DynComp case provides empirical evidence for these arguments. It illustrates that rooting dialogue about measures within everyday management may indeed be an important enabler of subjectivity, as it strengthens managers' understanding about their subordinates' performance, and enables managers and subordinates to develop shared views of these measures – particularly if subordinates are involved in the definition of their own targets. The analysis suggests that embedding discussion on measures in the on-going interaction may be particularly important when some of the dimensions being measured are qualitative in nature, and when managers need to be well-informed about a potential need to modify target-setting or to be flexible in evaluating performance. The DynComp study suggests further that the introduction of subjectivity into performance evaluation may also drive managers to seek information from different parts of the organisation, in order to be better informed when making judgements about their subordinates' performance. The DynComp case also provides evidence for that building trust in the superior-subordinate relationship is essential for enabling a productive use of subjectivity in performance evaluation.[46]

Other procedural features may also be essential for enabling subjectivity. The evidence presented here indicates that the adoption of performance measurement and reward processes geared to personal development, rather than strictly accountability-oriented, –may also be an essential enabler of subjectivity. Such processes may enhance subordinates' acceptance of subjectivity, as they do not feel threatened by the consequences. The analysis suggests, as well, that the establishment of processes and systems that force managers to make at least part of their subjectivity explicit may also enhance that subjectivity, in that they will increase transparency in the evaluation and strengthen subordinates' capability to react to subjective, potentially undesirable, evaluations. As a final point, the analysis also indicates that the cultivation of relevant managerial capabilities may also be needed to enable a productive use of subjectivity in performance evaluation. This may be particularly important when individual-level target-setting and performance evaluation rely on managers' interpretations of abstract, centrally defined constructs – such as corporate-wide strategic focus areas and corporate values.

Table 4 on the following page compares the management practices found at DynComp and those generally suggested by the SPMS and management control literature. It suggests that building substantial dynamism into SPMSs and using such flexible and adaptive SPMSs for strategic alignment requires companies to adopt management practices that differ significantly from those suggested by the prior literature. The analysis suggests that a combination of these identified management practices may be needed to achieve a balance between empowerment and alignment.

	The approach found at DynComp	The approach generally suggested by the SPMS and management control literature
Approach to building dynamism into SPMS	• Placing emphasis on individual level SPMS • Engaging managers throughout the organisation to take central responsibility for the relevance of measures	• Establishing periodic review processes to the organisational level SPMS • Using formal audit tools to assist in the review process[47]
Type of individual level strategic targets	• Action-oriented, often qualitatively defined measures	• Quantitatively defined measures[48]
Number of individual level targets	• Limited, up to 6 measures	• Large, up to 25 measures[49]
Approach to exerting top management influence on individual level target setting	• Cascading key, mainly financial measures through organisational level SPMS • Establishing additional alignment processes that provide top management with indirect influence on individual-level target-setting and behaviour	• Cascading key financial and non-financial measures through organisational level SPMS[50]
Type of performance evaluation and reward process	• Performance evaluation and reward process permits substantial subjectivity	• Performance evaluation and reward process aims at objectivity[51]
Approach to strengthening procedural justice in the performance evaluation and reward process	• Building trust in the superior-subordinate relationship • Seeking to be well-informed about subordinates' actions and performance • Embedding discussion about measures to the on-going interaction between a manager and a subordinate • Developing a personal development-oriented performance evaluation and reward process • Establishing processes and systems to make subjectivity explicit • Cultivating relevant managerial capabilities	• Building trust in the superior-subordinate relationship[52] • Seeking to be well-informed about subordinates' actions and performance[53] • Embedding discussion about measures to the on-going interaction between a manager and a subordinate[54]

Table 4. Comparison of the approach found at DynComp and that generally suggested by the SPMS and management control literature

Further research could continue to develop a more fine-grained understanding of how companies seek a balance between empowerment and alignment in building and using dynamic SPMSs. The analysis indicates that a combination of management practices related to, *inter alia,* the location of the decision-making authority on measures, the type and number of performance measures permitted, the type of processes for strategic alignment, and the type of performance evaluation and reward processes applied may be essential for enhancing such a balance. Further studies could investigate what other combinations of management practices may enable companies to achieve this kind of balance.

Further research could also seek to shed more light on the role of subjectivity in contemporary organisations. This study suggests that we may have to re-evaluate our current understanding of how companies mobilise SPMSs. In the light of the empirical observations, is it conceivable that organisations operating in turbulent industries may be particularly prone to turn away from an overreliance on formal quantified strategic measurements?[55] For more than a decade, quantitative strategic measurements have been advanced as critical elements for a successful strategic alignment. The analysis indicates that subjectivity may reintroduce itself into strategic evaluation.

This study has also implications for the strategic planning literature that has formed a central dimension of this journal. It provides further evidence that governance channels may facilitate sharing responsibility for strategic planning between corporate executives and middle-level managers.[56] It suggests that these channels may facilitate the integration of corporate and local level strategic dialogues, and that corporate-level guiding principles – such as strategic focus areas and organisational values – may provide a means for such integration. Previous studies have found that CEOs may use guiding principles, such as value creation and justice, to guide their strategic decision making.[57] This study indicates that such principles may also be developed on a corporate level, and that training and on-going discussion on these principles may be used to improve their internationalisation by individual managers. Further studies could seek to shed more light on how such corporate-level principles may be transposed to individual managers. This study also indicates that governance channels may foster strategic dialogue throughout the organisation, and help to engage those organisational actors that may otherwise lie outside the strategic core.[58] Further investigations could tell us more about how governance channels may be used to bring more peripheral actors closer to the strategic core.

As this study is based on an in-depth case study in a single organisation, further qualitative research should also be conducted in order to enrich the suggested theoretical perspectives, providing a larger empirical base for the development of theoretical propositions that may later be tested. The empowering approach demonstrated here may be challenging. It requires the adoption of management practices that differ considerably from those prevalent for more stable SPMSs. Such an approach may be particularly suitable for companies which operate in turbulent industries, as they need to build the capability for making frequent modifications to their performance measures. Such an empowering and flexible approach may also be particularly suitable for multinational companies (MNCs) which need to build flexibility into their SPMSs in order to allow for local adaptation of their measures. Companies operating in stable industries, and with a less multinational orientation, may find less empowering approaches for building dynamism into SPMS to be more appropriate.[59]

Earlier studies have also indicated that several other contextual factors, such as size, the country of origin and the type of business strategy may have an influence on the development and use of SPMSs.[60] Further studies could hence also attempt to include companies of different size, country of origin and business strategy. Finally, because this study is limited by an exploration in a single empirical context, where the emphasis is placed on top management views, more comprehensive organisational investigations, for example exploring how SPMSs are mobilised on several organisational levels, may be needed.

With regard to implications for practice, the analysis highlights the complexity and challenge of building and using dynamic SPMSs (Please see Figure 2 on the following page). The analysis indicates that building substantial dynamism into SPMSs may necessitate a significant change in the management approach, shifting primary responsibility for the measures to the managers throughout the organisation. It may also entail placing the emphasis on individual-level SPMSs, and using the organisational-level SPMSs, such as the Balanced Scorecard, in a more management-by-exception type of role – for monitoring performance on fundamental issues that remain relevant over time. Further, the creation of dynamic SPMSs may involve developing such flexibility into the individual-level SPMS that it allows for the incorporation of action-oriented, qualitative measures; permitting only a small number of individual-level targets; and establishing several alignment processes that give top management indirect influence on individual-level target-setting and behavior. As a final point, it may also mean allowing for considerable subjectivity in target-setting and performance evaluation, and developing processes, systems and capabilities that help ensure the performance evaluation and reward process is perceived as fair by employees. This analysis suggests that a combination of these management practices may be needed to achieve a balance between empowerment and alignment.

1. Engage managers throughout the organisation to take central responsibility for the relevance of measures.
2. Use individual level SPMS as a dynamic lever for strategic alignment. Use organisational level SPMS for monitoring performance on fundamental issues that remain relevant over time.
3. Develop such flexibility into the individual level SPMS that it allows for the incorporation of action-oriented strategic measures.
4. Establish alignment processes that provide top management with indirect influence on individual level target setting and performance evaluation while retaining central responsibility at the level of an individual manager.
5. Provide managers with sufficient leverage in the performance evaluation to account for changes in the external and internal contexts.
6. Develop processes, systems and capabilities that contribute to the performance evaluation process being perceived as fair by employees.

Figure 2. Implications for managers: lessons from the DynComp case

Appendix A: Interviews and informal discussions

INTERVIEWS			
With Whom	**Level**	**Date**	**Duration (min)**
Corporate planning & analysis director, former strategic planning director for the largest business area	corporate	21 June 2006	120
Corporate planning & analysis director, former strategic planning director for the largest business area	corporate	10 July 2006	90
Marketing planning director for the largest business area	business area	10 August 2006	90
Corporate planning & analysis director with finance & control background	corporate	14 August 2006	90
Vice president, rewards & benefits and competence & performance management director (joint telephone interview through conference call)	corporate	23 August 2006	90
Corporate planning & analysis director, former strategic planning director for the largest business area	corporate	13 September 2006	90
Head of finance & control	corporate	21 September 2006	60
Vice president, business improvement services and senior development manager, business improvement services	corporate	13 October 2006	90
Corporate strategy director	corporate	23 October 2006	90
Senior development manager, business improvement services	corporate	27 October 2006	60
Vice president, business improvement services	corporate	3 November 2006	60
Corporate strategy director	corporate	29 November 2006	60
Competence & performance	corporate	30 November	90

management director		2006	
director, business development & strategy projects, R&D for the largest business area	business area	7 January 2008	90
Corporate planning & analysis director	corporate	14 January 2008	30
Director, F&C, business unit x within the second largest business area	business unit	14 January 2008	90
Director HR, executive development, talent and performance management, HR development	corporate	22 January 2008	90
Strategy & portfolio manager for one of the sales categories	business unit	14 March 2008	60
Cost management and business control director for purchasing at the largest business area	business unit	15 March 2008	30
Former senior manager, third largest business area	business area	11 June 2009	30
Finance director I for a major horizontal organisation (telephone interview)	business area	15 June 2009	30
Finance director II for a major horizontal organisation	business area	17 June 2009	40
INFORMAL DISCUSSIONS			
Corporate planning & analysis director	corporate	23 May 2006	60
Corporate planning & analysis director	corporate	9 June 2006	60
Corporate planning & analysis director	corporate	27 October 2006	60
Corporate planning & analysis director	corporate	19 January 2007	30
Senior manager, strategy & business development for the largest business area	business area	2 April 2006	30
Senior manager, strategy & business development for the largest business area	business area	20 April 2006	30
Senior manager, strategy & business development for the largest business area	business area	28 September 2007	60
Senior manager, strategy & business development for the largest business area	business area	22 June 2009	30

[1] For example, Silk estimated that 60 per cent of the USA *Fortune* 1000 companies had experience of using a Balanced Scorecard, a particular type of SPMS introduced by Kaplan and Norton. See S. Silk, Automating the Balanced Scorecard, *Management Accounting* **79**(11), 38-42 (1998). Rigby found evidence for the extensive use of SPMS in the US, finding 44 per cent of the surveyed US companies use Balanced Scorecard. D. Rigby, Management Tools and Techniques: A Survey, *California Management Review* 43(2), 139-160 (2001). Similar evidence of an extensive use of SPMSs has also been found elsewhere; see for example, M. Kald and F. Nilsson, Performance Measurement at Nordic Companies, *European Management Journal* **18**(1), 113-127 (2000), and G. Speckbacher, J. Bischof and T. Pfeiffer, A descriptive analysis on the implementation of Balanced Scorecards in German-speaking countries, *Management Accounting Research* **14**(4), 361-387 (2003). For the Balanced Scorecard, see for example, R. Kaplan and D.P. Norton, The Balanced Scorecard – Measures that Drive Performance, *Harvard Business Review* **70**(1), 71-79 (1992).

[2] See for example, R. Kaplan and D.P. Norton, *The Strategy-Focused Organization*, Harvard Business School Publishing Corporation, Boston (2001); M.Espstein and J-F. Manzoni, Implementing Corporate Strategy: From Tableaux de Bord to Balanced Scorecards, *European Management Journal* **16**(2), 190-203 (1998). For empirical examples of applying an SPMS, see A. Butler, S.R. Letza and B. Neale, Linking the Balanced Scorecard to Strategy, *Long Range Planning* **30**(2), 242-253 (1997), H. Ahn, Applying the Balanced Scorecard Concept: An Experience Report, *Long Range Planning* **34**(4), 441-461 (2001), A. Papalexandris, G. Ionnau and G.P. Prastacos, Implementing the Balanced Scorecard, *Long Range Planning* **37**(4), 351-366 (2004), and T-S. Tuomela, The interplay of different levers of control: A case study of introducing a new performance measurement system, *Management Accounting Research* **16**(3), 293-320 (2005). For the performance implications of using a SPMS see G.J.M. Graam and E.J. Nijssen, Performance effects of using the Balanced Scorecard: a note on the Dutch experience, *Long Range Planning* **30**(2), 335-349 (2004).

[3] U. S. Bititci, T. Turner and C. Begemann, Dynamics of performance measurement systems, *International Journal of Operations & Production Management* **20**(6), 692-704 (2000).

[4] See, for example, R.G. Eccles, The Performance Measurement Manifesto, *Harvard Business Review* **69**(1), 131-137 (1991), R.L. Lynch and K.F. Cross, *Measure up – The Essential Guide to Measuring Business Performance*, Mandarin, London (1991), and A. Neely, M. Bourne and M. Kennerley, Performance measurement system design: developing and testing a process-based approach, *International Journal of Operations & Production Management* **20**(10), 1119-1145 (2000).

[5] See, for example, J. D. Wisner and S. E. Fawcett, Linking firm strategy to operating decisions through performance measurement, *Production and Inventory Management Journal* **32**(3), 5-11 (1991), D. Medori and D. Steeple, A framework for auditing and enhancing performance measurement systems, *International Journal of Operations & Production Management* **20**(5), 520-533 (2000).

[6] See, for example, J.R. Dixon, A. J. Nanni and T. E. Vollmann, *The New Performance Challenge: Measuring Operations for World-class Competition*, Dow Jones-Irwin, Homewood, IL (1990), and A. Neely, H. Richards, J. Mills, K. Platts and M. Bourne, Designing performance measures: a structured approach, *International Journal of Operations & Production management* **17**(11), 1131-1152 (1997).

[7] See, for example, A. Neely, The performance measurement revolution: why now and what next?, *International Journal of Operations & Production Management* **19**(2), 205-228 (1999), and M. Kennerley and A. Neely, A framework of the factors affecting the evolution of performance measurement systems, *International Journal of Operations & Production Management* **22**(11), 1222-1245 (2002).

[8] U. S. Bititci, T. Turner and C. Begemann, Dynamics of performance measurement systems, *International Journal of Operations & Production Management* **20**(6), 692-704 (2000), and M. Bourne, J. Mills, M. Wilcox, A. Neely and K. Platts, Designing,

implementing and updating performance measurement systems, *International Journal of Operations & Production Management* **20**(7), 754-771 (2000).
[9] Y.L. Doz and M. Kosonen, The New Deal at the Top, *Harvard Business Review* **85**(6), 98-104 (2007).
[10] Neely has recently proposed 'how to develop dynamic rather than static measurement systems' as one of the key areas for future research on SPMSs. See A. Neely, The evolution of performance measurement research: Developments in the last decade and a research agenda for the next, *International Journal of Operations & Production Management* **25**(12), 1264-1277 (2005). Similar concerns about the limited available knowledge of how the dynamism of SPMS may be enhanced have been voiced by e.g. M. Kennerley and A. Neely, Measuring performance in changing business environment, *International Journal of Operations & Production Management* **23**(2), 213-229 (2003), and D. B. Waggoner, A. D. Neely and M. P. Kennerley, The forces that shape organisational performance measurement systems: An interdisciplinary review, *International Journal of Production Economics* **60/61**(3), 53-60 (1999).
[11] The pseudonym DynComp is used throughout the paper to refer to the case study company.
[12] In this paper the term dynamic SPMS refers to such SPMSs that enable frequent modifications to the measures and targets; i.e. an SPMS that allows for measures and targets to be modified at intervals that are considerably shorter than an annual planning cycle. Similarly, the term substantial dynamism refers to the capability to modify measures and targets at such short intervals. To avoid tautology, the terms flexible, adaptable and fluid SPMS are also used for such dynamic SPMS in this paper.
[13] For the recent calls for a broad examination of SPMSs, see M. Franco and M. Bourne, Factors that play a role in 'managing through measures', *Management Decision* **41**(8), 698-710 (2003), and B. Marr and G. Schiuma, Business performance measurement – past, present and future, *Management Decision* **41**(8), 680-687 (2003). In accordance with this study's broad scope, a wide definition of SPMS is adopted. This definition draws on Franco-Santos *et al.* who have recently identified 'performance measurement' and 'supporting infrastructure' as the necessary features of business performance measurement systems. To highlight the strategic role of SPMSs here, they are defined in this study as *formal performance measurement systems used to measure strategic outcomes and/or strategic actions*, the 'formal' referring to the existence of supporting infrastructure, and the 'measure strategic outcomes and/or strategic actions' to that the systems measure performance on dimensions of strategic importance. See M. Franco-Santos, M. Kennerley, P. Micheli, V. Martinez, S. Mason, B. Marr, D. Gray and A. Neely, Towards a definition of business performance measurement systems, *International Journal of Operations & Production Management* **27**(8), 784-801 (2007).
[14] The term subjectivity has been defined in the SPMS and performance measurement literature in several ways. For example, Gibbs *et al.* have defined subjectivity as the view that all or part of bonus is based on subjective judgements about performance; that the weights on some of the measures are determined subjectively; or that a subjective threshold is used. See M. Gibbs, K. A. Merchant, W. A. Van der Stede and M. E. Vargus, Determinants and Effects of Subjectivity in Incentives, *The Accounting Review* **79**(2), 409-436 (2004). Moers, on the other hand, has defined subjectivity as referring to situations where there is a 'superior's subjective judgment about qualitative performance indicators'. See F. Moers, Discretion and bias in performance evaluation: the impact of diversity and subjectivity, *Accounting, Organizations and Society* **30**(1), 67-80 (2005). This paper builds on Manzoni to refer to subjectivity more generally as regarding any form of subjective judgment in the performance evaluation process. See J.-F. Manzoni, On the folly of hoping for A, simply because you are trying to pay for A, M. J. Epstein and J.-F. Manzoni, *Performance Measurement and Management Control: Measuring and Rewarding Performance*, Emerald Jai, Bingley, 19-41 (2008).
[15] N. Siggelkow, Persuasion with case studies, *Academy of Management Journal* **50**(1), 20-24 (2007).
[16] For a discussion about the role of governance channels in strategic planning see W. Ocasio and J. Joseph, Rise and Fall – or Transformation? The Evolution of Strategic

Planning at the General Electric Company, 1940-2006, *Long Range Planning* **41**(3), 248-272 (2008). For a discussion about the core and periphery of strategic actors in organizations see S. Miller, D. Hickson and D. Wilson, From Strategy to Action: Involvement and Influence in Top Level Decisions, *Long Range Planning* **41**(6), 606-628.

[17] See R. M. Grant, Strategic planning in a turbulent environment: Evidence from oil majors, *Strategic Management Journal* **24**(6), 491-517 (2003) and R. Cooper, Lean enterprises and the confrontation strategy, The *Academy of Management Executive* **10**(3), 28-39 (1996).

[18] See K. M. Eisenhardt, Building Theories from Case Study Research, *Academy of Management Review* **14**(4), 532-550 (1989). Several authors have claimed that even single case studies can provide a basis for developing new theoretical insights provided these cases are particularly revelatory and provide insights that other organisations are unlikely to provide. See K. M. Eisenhardt and M. E. Graebner, Theory building from cases: Opportunities and challenges, *Academy of Management Journal* **50**(1), 25-32 (2007); N. Siggelkow, Persuasion with case studies, *Academy of Management Journal* **50**(1), 20-24 (2007).

[19] Overall, the interviewees represented a group of highly knowledgeable informants that viewed the focal question from different perspectives; as recently highlighted by Eisenhardt and Graebner. See K. M. Eisenhardt and M. E. Graebner, Theory building from cases: Opportunities and challenges, *Academy of Management Journal* **50**(1), 25-32 (2007).

[20] Two interviews could not be recorded because the interviewees did not provide permission for recording and two telephone interviews with overseas executives could not be recorded due to technical limitations.

[21] R. K. Yin, *Case Study Research: Design and Methods*, 3rd Edition, Sage Publications, Thousand Oaks (2003).

[22] Differing from a more prevalent meaning of the term where value-based management refers to an approach that aims to maximise shareholder value creation, the term value-based management was mobilised at DynComp to refer to an approach that emphasised organisational values. See e.g. C. D Ittner and D. F. Larcker, Assessing empirical research in managerial accounting: a value-based management perspective, *Journal of Accounting and Economics* **32**(1-3), 349-410 (2001).

[23] Relevant process measures included, for example, measures related to quality, product development and logistics. Customer measures were also included and they could separately address, for example, the satisfaction of key customer groups. Although people measures were also included, their weight seemed to be lower. In some business areas key business area level measures were cascaded further to the business unit level, while in some other business areas the link was not as explicit.

[24] The authentic name of the process is disguised and the term 'performance appraisal' process used instead throughout this paper.

[25] Similar to the strategic targets, operational targets tended to be action-oriented in nature. They differed from the strategic targets *inter alia* in that they were not derived directly from the strategic action plans.

[26]This reflected DynComp's empowering management approach, which delegated decision-making authority to lower levels in the organisation. Freedom to determine the most appropriate measures was thus not limited to the execution details.

[27] The capability to enhance local adaptation may be of particular significance to companies like DynComp that operate globally. The international business literature suggests that multinational companies (MNCs) are faced with simultaneous pressures for global integration and local adaptation and that they cope with these pressures by using management mechanism flexibly in order to suite the particular contexts of local operations. See for example, C. K. Prahalad and Y.L. Doz, *The Multinational Mission: Balancing Local Demands and Global Vision*, Free Press, New York (1987); Y.L. Doz and C.K. Prahalad, Managing DMNCs: A Search for a New Paradigm, in S. Ghoshal and D. E. Wastes, D. Eleanor (eds.) *Organization Theory and the Multinational Corporation*, St. Martin's Press, New York, 24-50 (1993); N. Nohria and S. Ghoshal, *The Differentiated Network: Organizing multinationals for value creation,* Jossey-

Bass, San Francisco (1997); C. A. Bartlett and S. Ghoshal, *Managing across Borders: The Transnational Solution*, 2nd Edition, Harvard Business School Press, Boston (2002). Recently, Doz *et al.* have conceptualised modern MNCs as metanational companies in which local sites of specialised expertise, rather than national subsidiaries, form the basic organisational building blocks, and in which, for example, incentive systems should foster collaboration between the sites. See Y. Doz, J. Santos and P. Williamson, *From Global to Metanational: How Companies Win in the Knowledge Economy*, Harvard Business School Press, Boston, 99-101; 112-113 (2001).

[28] Prior research has indicated that employee involvement in performance measurement system design may enhance strategic dialogue, and enable managers and employees to develop shared understandings of the measures. See M. de Haas and A. Kleingeld, Multilevel design of performance measurement systems: enhancing strategic dialogue throughout the organization, *Management Accounting Research* **10**(3), 233-261 (1999); M. de Haas and J. A. Algera, Demonstrating the effect of the strategic dialogue: participation in designing the management control system, *Management Accounting Research* **13**(1), 41-69 (2002).

[29] One of the fundamental premises of the performance measurement literature is that individuals should, at least ideally, be kept accountable only for issues they can control. See e.g. K. A. Merchant and D. T. Otley, A Review of the Literature on Control and Accountability, in C. S. Chapman, A. G. Hopwood and M. D. Shields, *Handbook of Management Accounting Research: Volume 2*, Elsevier, Oxford, 785-802 (2007). Empirical evidence indicates, however, that it may be common to hold managers accountable for areas over which they have little or no control. See e.g. K.A. Merchant, How and why firms disregard the controllability principle, in W.J. Bruns Jr. and R.S. Kaplan, *Accounting and Management: Field Study Perspectives*, Harvard Business School Press, Boston, 316-338 (1987).

[30] The term top management refers here to the corporate and business area levels.

[31] Whether individual managers actually apply this weighting in the overall performance evaluation is currently based on trust. This reflects DynComp's empowering overall management approach. According to the director responsible for performance management, there still tends to be more emphasis on the 'what' part. But the situation is improving as there is strong support for the approach from top management. For example, the CEO views the evaluation of the 'how' as very important. Business level interviews also provide evidence that at least in some parts of the organisation the equal weighting is already being applied.

[32] Previous studies have indicated that linking individual rewards to performance measurement may result in such dysfunctional consequence, as not prioritising organisation's primary goals, competition between individuals and the manipulation of data. See for example V. F. Ridgway, Dysfunctional Consequences of Performance Measurement, *Administrative Science Quarterly* **1**(2), 240-247 (1956); A. Hopwood, An Empirical Study of the Role of Accounting Data in Performance Evaluation, *Journal of Accounting Research, 1972 Supplement* **10**(3), 156-182 (1972) and D. Otley, *Accounting Control and Organizational Behaviour*, Heinemann Professional Publishing, Oxford (1987).

[33] Simons has recently proposed that individuals' span of accountability may extend their span of control, if these individuals gain support from others in the organisation. The evidence presented here indicates that the monitoring of individuals' values-related behaviour may enhance such organisational support. It may extend individuals' accountability beyond reaching their own targets, to behaving in a way that enables others to reach their targets as well. See R. Simons, *Levers of Organization Design: How Managers Use Accountability Systems for Greater Performance and Commitment*, Harvard Business School Press, Boston (2005).

[34]Although the researcher was able to review these documents in practice, she was unfortunately not given permission to disclose any detailed information related to the descriptions.

[35] One of the potential dangers associated with the use of subjectivity is the potential drop in perceived fairness, as a subjective assessment becomes less predictable. See for example, C. Prendergast and R. H. Topel, Favoritism in Organizations, *The Journal of*

Political Economy **104**(5), 958-978 (1996); C. D. Ittner, D. F. Farcher, and M. W. Meyer, Subjectivity and the Weighting of Performance Measures: Evidence from a Balanced Scorecard, *The Accounting Review* **78**(3), 725-758 (2003).

36 Similar evidence of an intention to balance empowerment and alignment has also been documented in relation to the strategic planning practices of companies operating in turbulent industries. This paper indicates that such a balance is also essential, when companies seek to build dynamism into their SPMSs, and when they use such systems for strategic alignment. See R. M. Grant, Strategic planning in a turbulent environment: Evidence from oil majors, *Strategic Management Journal* **24**(6), 491-517 (2003).

37 For example, Bititci *et al.* have proposed that the dynamism of SPMSs may be enhanced by establishing an auditing tool that comprises of an external monitoring system, an internal monitoring system, a review system and an internal deployment system. Bourne *et al.* have, on the other hand, showed that the dynamism of SPMSs may be enhanced by establishing a multi-layered review process, which regularly reviews targets, measures, and sets of measures. U. S. Bititci, T. Turner and C. Begemann, Dynamics of performance measurement systems, *International Journal of Operations & Production Management*, **20**(6), 692-704 (2000); M. Bourne, J. Mills, M. Wilcox, A. Neely and K. Platts, Designing, implementing and updating performance measurement systems, *International Journal of Operations & Production Management*, **20**(7), 754-771 (2000).

38 M. Wouters and C. Wilderom, Developing performance-measurement systems as enabling formalization: A longitudinal field study of a logistics department, *Accounting, Organizations and Society* **33** (4-5), 488-516 (2008).

39 For the idea that strategic measures should, in general, be objective see e.g. R. Simons, *Performance Measurement & Control Systems for Implementing Strategy: Text & Cases*, Prentice Hall, Upper Saddle River, 236-237 (2000). The potential benefits of more subjective, qualitatively defined performance measures have been previously noted by R. Simons, *Levers of Organization Design: How Managers Use Accountability Systems for Greater Performance and Commitment*, Harvard Business School Press, Boston, 146 (2005) and J.-F. Manzoni, On the folly of hoping for A, simply because you are trying to pay for A, M. J. Epstein and J.-F. Manzoni, *Performance Measurement and Management Control: Measuring and Rewarding Performance*, Emerald Jai, Bingley, 19-41 (2008). Earlier studies have suggested that system inflexibility may be a major barrier to achieving dynamic SPMS. See U. S. Bititci, T. Turner and C. Begemann, Dynamics of performance measurement systems, *International Journal of Operations & Production Management*, **20**(6), 692-704 (2000); M. Kennerley and A. Neely, A framework of the factors affecting the evolution of performance measurement systems, *International Journal of Operations & Production Management*, **22**(11), 1222-1245 (2002). This study thus identifies that the flexibility of SPMSs, created by allowing for the incorporation of action-oriented strategic measures, can be an essential element of enhancing their dynamism.

40 See, for example, R. S. Kaplan and D. P Norton, Transforming the Balanced Scorecard from Performance Measurement to Strategic Management: Part II, *Accounting Horizons* **15**(2), 147-162 (2001). Similar to the evidence found here, Simons has argued that the number of individual level targets should be limited in order to effectively focus attention. See R. Simons, *Performance Measurement & Control Systems for Implementing Strategy: Text & Cases*, Prentice Hall, Upper Saddle River, 239-240 (2000).

41 See e.g. R. Kaplan and D.P. Norton, *The Strategy-Focused Organization*, Harvard Business School Publishing Corporation, Boston (2001).

42 See, for example, C. Prendergast and R. Topel, Discretion and bias in performance evaluation, *European Economic Review* **37** (2-3), 355-365 (1993); C. Prendergast and R. H. Topel, Favoritism in Organizations, *The Journal of Political Economy* **104**(5), 958-978 (1996); C. D. Ittner, D. F. Larcker and M. W. Meyer, Subjectivity and the Wieghting of Performance Measures: Evidence from a Balanced Scorecard, *The Accounting Review* **78**(3), 725-758 (2003); and F. Moers, Discretion and bias in performance evaluation: the impact of diversity and subjectivity, *Accounting,*

Organizations and Society **30**(1), 67-80 (2005). Similar evidence that a willingness to introduce subjectivity into performance evaluation to account for uncontrollable events has been reported among high-performing companies. See J.-F. Manzoni, Management control: Toward a new paradigm?, M. J. Epstein and J.-F. Manzoni, *Performance Measurement and Management Control: A Compendium of Research*, Jai, Amsterdam, 15-46 (2002).

[43] See, for example, M. Gibbs, K. A. Merchant, W. A. Van der Stede and M. E. Vargus, Determinants and Effects of Subjectivity in Incentives, *The Accounting Review* **79**(2), 409-436 (2004); W. A. Van der Stede, C. W. Chow and T. W. Lin, Strategy, Choice of Performance Measures, and Performance, *Behavioral Research in Accounting* **18**, 185-205 (2006). The procedural justice literature has presented evidence that strengthening the procedural justice of performance evaluation process in general results in positive implications, such as an increase in task satisfaction, job satisfaction and performance. This literature has not, however, focused specifically on those procedural features that may enable a productive use of subjectivity. See for example, T. M. Lindquist, Fairness as an antecedent to participative budgeting: examining the effects of distributive justice, procedural justice and referent cognitions on satisfaction and performance, Journal of Management Accounting Research 7, 122-147 (1995); C. M. Lau, K. M. Wong and I. R. C. Eggeleton, Fairness in performance evaluation procedures and job satisfaction: the role of outcome-based and non-outcome-based effects, *Accounting and Business Research* **38**(2), 121-135 (2008).

[44] J.-F. Manzoni, Management control: Toward a new paradigm?, M. J. Epstein and J.-F. Manzoni, *Performance Measurement and Management Control: A Compendium of Research*, Jai, Amsterdam, 15-46 (2002).

[45] R. Simons, *Levers of Control: How Managers Use Innovative Control Systems to Drive Strategic Renewal*, Harvard Business School Press, Boston, 118-119 (1995).

[46] For prior empirical evidence of the importance of trust for a productive use of subjectivity see M. Gibbs, K. A. Merchant, W. A. Van der Stede and M. E. Vargus, Determinants and Effects of Subjectivity in Incentives, *The Accounting Review* **79**(2), 409-436 (2004).

[47] See Kennerley and Neely for a brief review of literature on dynamic SPMS; M. Kennerley and A. Neely, Measuring performance in changing business environment, *International Journal of Operations & Production Management* **23**(2), 213-229 (2003).

[48] See, for example, R. S. Kaplan and D. P. Norton, Putting the Balanced Scorecard to Work, *Harvard Business Review* **71**(5), 134-147 (1993).

[49] R. S. Kaplan and D. P Norton, Transforming the Balanced Scorecard from Performance Measurement to Strategic Management: Part II, *Accounting Horizons* **15**(2), 147-162 (2001). Similar to the evidence found here, Simons has argued that the number of individual level targets should be limited (up to 7) in order to effectively focus attention. See R. Simons, *Performance Measurement & Control Systems for Implementing Strategy: Text & Cases*, Prentice Hall, Upper Saddle River, 239-240 (2000).

[50] See, for example, R. Kaplan and D.P. Norton, *The Strategy-Focused Organization*, Harvard Business School Publishing Corporation, Boston (2001).

[51] For a brief overview of the 'traditional management control paradigm', including the preference for objective performance evaluation, see J-F. Manzoni, Management control: Toward a new paradigm?, M. J. Epstein and J.-F. Manzoni, *Performance Measurement and Management Control: A Compendium of Research*, Jai, Amsterdam, 15-46 (2002).

[52] For prior empirical evidence of the importance of trust for a productive use of subjectivity see M. Gibbs, K. A. Merchant, W. A. Van der Stede and M. E. Vargus, Determinants and Effects of Subjectivity in Incentives, *The Accounting Review* **79**(2), 409-436 (2004).

[53] J.-F. Manzoni, Management control: Toward a new paradigm?, M. J. Epstein and J.-F. Manzoni, *Performance Measurement and Management Control: A Compendium of Research*, Jai, Amsterdam, 15-46 (2002).

[54] R. Simons, *Levers of Control: How Managers Use Innovative Control Systems to Drive Strategic Renewal*, Harvard Business School Press, Boston, 118-119 (1995); J-F. Manzoni, Management control: Toward a new paradigm?, M. J. Epstein and J.-F. Manzoni, *Performance Measurement and Management Control: A Compendium of Research*, Jai, Amsterdam, 15-46 (2002).

[55] Manzoni has previously presented similar evidence of a willingness to introduce subjectivity into performance evaluation among high performing companies. See J.-F. Manzoni, Management control: Toward a new paradigm?, M. J. Epstein and J.-F. Manzoni, *Performance Measurement and Management Control: A Compendium of Research*, Jai, Amsterdam, 15-46 (2002).

[56] For a discussion about the role governance channels in strategic planning see W. Ocasio and J. Joseph, Rise and Fall – or Transformation? The Evolution of Strategic Planning at the General Electric Company, 1940-2006, *Long Range Planning* **41**(3), 248-272 (2008).

[57] J. Woiceshyn, Lessons from "Good Minds": How CEOs Use Intuition, Analysis and Guiding Principles to make Strategic Decisions, *Long Range Planning*, **42**(3), 298-319.

[58] For a discussion about the core and periphery of strategic actors see S. Miller, D. Hickson and D. Wilson, From Strategy to Action: Involvement and Influence in Top Level Decisions, *Long Range Planning* **41**(6), 606-628.

[59] The international business literature highlights that MNCs differ in the extent to which they emphasise global integration versus local adaptation. This literature argues that MNCs with a so called *multinational* orientation, placing emphasis on local as opposed to global orientation, are more likely to emphasise local adaptation in their management approach. See e.g. C. A. Bartlett and S. Ghoshal, *Managing across Borders: The Transnational Solution*, 2nd Edition, Harvard Business School Press, Boston (2002).

[60] For the potential influence of size on the use of SPMSs see e.g. Z. Hoque and W. James, Linking Balanced Scorecard Measures to Size and Market Factors: Impact on Organizational Performance, *Journal of Management Accounting Research* **12**, 1-17 (2000). For the potential influence of business strategy on the use of SPMSs see V. Govindarajan and A. K. Gupta, Linking control systems to business unit strategy: impact on performance, *Accounting, Organizations and Society* **10**(1), 51-66 (1985) and C. D. Ittner, D. F. Larcker and M. V. Rajan, The choice of performance measures in annual bonus contracts, *Accounting Review* **72**(2), 231-255 (1997). For the potential influence of the country of origin on the use of SPMSs, see e.g. F. Nilsson and M. Kald, Recent Advances in Performance Management: The Nordic Case, *European Management Journal* **20**(1), 235-245 (2002); G. Speckbacher, J. Bischof and T. Pfeiffer, A descriptive analysis on the implementation of Balanced Scorecards in German-speaking countries, *Management Accounting Research* **14**(4), 361-387 (2003).

Elaborating on the concept of values-based control

Katja Kolehmainen

Abstract

This paper seeks to elaborate the concept of values-based control – a control approach whereby managers utilize organisational values for influencing organisational members' behaviour. The paper begins with an analysis of key values-based control concepts applied within the management control system (MCS) literature, including the concepts of clan control, cultural control, belief system and value-based control. The analysis yields a summary of similarities and differences between these concepts, and identifies key values-based control approaches suggested by them. After discussing the limitations of these approaches, the paper proposes a new, broader conceptualisation of values-based control. This conceptualisation highlights that organisational members can engage in desirable values-related behaviour not only by relying on their intrinsic motivation, but also by relying a on their perceptions of the benefits relating to such behaviour. This new conceptualisation portrays values-based control as comprising of an array of complementary values-based control approaches. These differ in the extent to which they seek to exert direct influence on organisational members' behaviour. An in-depth case study of a large global organisation with a strong administrative heritage in values-based control is then used to illustrate how the identified values-based control approaches - selection, acculturation, communication and incentivisation - can be applied in practice. The paper concludes by discussing its theoretical implications, and by suggesting avenues for further research.

Keywords: value, values-based control, cultural control, clan control, belief system, management control system

1. Introduction

The notion that managers utilize organisational values as a means of influencing organisational members' behaviour is well established within the management control system MCS (e.g. Langfield-Smith, 1995; Malmi and Brown, 2008; Merchant and Van der Stede, 2007, Ouchi, 1979; Simons, 1995a) and organisational behaviour literatures (e.g. Harris and Ogbonna, 2011; Meglino and Ravlin, 1998; Wiener, 1982). Such a control approach – discussed as *values-based control* in this paper – is often contrasted with formal, bureaucratic forms of control (e.g. Eisenhardt, 1985; Langfield-Smith, 1997; Norris and O'Dwyer, 2004; Ouchi, 1979).[64] Early contributions on values-based control tend to position values-based control as an alternative control approach, suitable for complex and uncertain situations in which formal, bureaucratic forms of control may not enable effective control (e.g. Eisenhardt, 1985; Jaeger, 1983; Ouchi, 1979). More recent contributions have tended to refrain from such mutually exclusive positions, highlighting the complementary nature of values-based and other controls. Contemporary literature on MCSs widely acknowledges that values-based control systems constitute an essential part of a control package (e.g. Malmi and Brown, 2008; Merchant and Van der Stede, 2007; Mundy, 2010; Simons, 1995a; Widener, 2007). They exert powerful influence over other MCSs (Mundy, 2010; Sandelin, 2008; Widener, 2007), and act as complements (Bruining et al., 2004; Mundy, 2010; Simons, 1995a; Widener, 2007) or substitutes to other MCSs in the control package (Sandelin, 2008).

Despite widespread recognition of the significance of values-based control, the concept of values-based control remains ambiguous. MCS researchers have addressed values-based control through a variety of concepts including clan control (Ouchi, 1979, 1980; see e.g. Langfield-Smith, 1995, 1997), cultural control (e.g. Merchant and Van der Stede, 2007; Sandelin, 2008), belief system (Simons, 1995a, 1995b; see e.g. Marginson, 2002; Mundy, 2010; Widener, 2007) and value-based control (Malmi and Brown, 2008). Although these concepts share the assumption that managers can seek to utilize organisational values as a means of influencing organisational members' behaviour, these concepts are only partially overlapping. They are based on different interpretations of the key mechanisms and approaches through which this

[64] The term 'bureaucratic control' refers here to a control approach that is based on the definition of formal rules and procedures, mechanisms for monitoring compliance, and explicit standardised systems of reward and sanction to ensure conformity (based on Ferner, 2000).

influence is mobilised. Hitherto, the MCS literature has made little progress in specifying the concept of values-based control, or in identifying linkages between the applied values-based control concepts. The MCS literature has also been relatively silent in terms of discussing the potential limitations of influencing organisational members' behaviour through values-based control approaches.

This paper elaborates on the concept of values-based control. It seeks to specify the key approaches through which values-based control is mobilised, and to illustrate how these approaches can be applied in practice. It also sheds light on the challenges that surface when organisational members' behaviour is influenced through these approaches, and highlights similarities and differences between the key values-based control concepts applied within the MCS literature. The examination is based on two pillars: first, it relies on a review of extant literature. Second, it draws from an empirical examination of values-based control practices in a large, global organisation with a strong administrative heritage in values-based control. Such an examination - developing a more elaborate understanding of the concept of values-based control - works to the benefit of the literature in values-based control, as well as to the literature on MCSs in general. It helps us to develop a more comprehensive understanding of the nature and implementation of values-based control. It is also beneficial to the development of a more fine-grained understanding of the contextual nature of values-based control. Future studies can build on this elaboration - to gather evidence of what types of values-based control approaches are effective in particular organisational settings. It also provides a basis against which the findings of studies using different values-based control concepts can become positioned and analysed. Finally, a more elaborate understanding of the multiplicity of ways through which values-based control is mobilised can also offer us a better appreciation of how values-based control systems function as part of broader control packages.

This paper contributes to the literatures on values-based control and MCS in two ways. First, it contributes *conceptually* by proposing a new conceptualisation of values-based control. This proposed framework is broader than the traditional values-based control concepts - clan control, cultural control, belief system and value-based control - applied within the MCS literature. This new conceptualisation acknowledges that organisational members can engage in desirable values-related behaviour by not only relying on their intrinsic motivation (e.g. Meglino and Ravlin, 1998; Ouchi, 1979), but by also relying on their perceptions of the benefits related to assuming such behaviour (e.g. Ogbonna and Harris, 1998; Wiener, 1982; Willmott, 1993). It portrays values-based control as comprising an array of complementary values-based control approaches - selection, acculturation, communication and incentivisation. These differ in the extent to which they seek to exert direct influence on organisational members' behaviour. It argues that the conventional conception of values-based control as socio-ideological control - operating through organisational members' internal beliefs about what types of behaviour are desirable - may provide only a partial view of the nature of values-based control (e.g. Langfield-Smith, 1995; Norris and O'Dwyer, 2004; Ouchi, 1979; Simons, 1995a). Furthermore, the proposed framework suggests that values-based control may take more formal and bureaucratic forms than generally acknowledged. Second, the paper contributes also *empirically* by illustrating how values-based control can be mobilised through the formal incentivisation of organisational members' values-related behaviour. Although some recent studies have reported observations of attempts to incentivize desirable values-related behaviour (Doz and Kosonen, 2007, p. 110; Lenzioni, 2002, Mundy, 2010), these studies have provided very little visibility into how such formal incentivisation can be implemented in practice.

The remainder of the paper is structured as follows. The following three sections focus on a discussion about the nature and implementation of values-based control. The discussion starts by addressing the nature of values, paying attention to the distinctive features of individual and organisational level values. The subsequent section analyses similarities and differences between key values-based control concepts, and identifies the key approaches that these concepts suggest for mobilising values-based control. The next section addresses challenges relating to these approaches, and proposes a new, broader conceptualisation of values-based control. The paper then proceeds to illustrate how the identified values-based control approaches can be applied in practice. In the final section, the paper's theoretical implications are discussed and its implications for future research on values-based control, and MCS in general, will be laid out.

2. The nature of values: individual and organisational level perspectives

The concept of 'value' occupies a prominent place in scientific discourse, across various social science disciplines. The nature of values has been examined at societal, organisational and individual levels - and across a diversity of disciplines including anthropology, political science, psychology and management science. As a consequence, it is not surprising that there is no consensus about how to conceptualise and measure values across levels of analysis, ranging from the individual to the organisational, social and cultural levels. (Meglino and Ravlin, 1998; Murphy and Davey, 2002; Rokeach and Bald-Rokeach, 1989) Despite inconsistencies in the definition of values, certain conceptualisations have gained a fair degree of acceptance, in particular within the organisational behaviour research. Rokeach' (1973, p.5) definition of value as 'an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence' has been particularly influential. (See e.g. Kirkhaug, 2009; Meglino and Ravlin, 1998; Ravlin, 1995; Wiener, 1988) Rokeach's (1973) conceptualisation encompasses two types of values that can be used to describe a person: terminal values are self-sufficient end-states that a person strives to achieve – such as comfortable life and wisdom. By contrast, instrumental values are the modes of behaviour – such as honesty, loyalty and helpfulness – that facilitate the attainment of terminal values.

Within the MCS and organisational behaviour literatures, values have generally been conceptualised in terms of instrumental values (see Meglino and Ravlin, 1998; Merchant and Van der Stede, 2007; Simons, 1995a, 1995b). This more limited conceptualisation – portraying values as *desirable modes of behaviour* - has been argued to be more pertinent for research in organisations, as organisational values tend to relate to modes of behaviour which are perceived to be relevant for the effective functioning of an organisation (Meglino and Ravlin, 1998). This narrower conceptualisation is adopted also in this study: 'values' refer to the "enduring beliefs about how an individual should or ought to behave within a broad range of situations" (Meglino and Ravlin, 1998; Ravlin, 1995). This conceptualisation is general in the sense that it applies to the examination of values both at individual and organisational levels.[65]

[65] Whether organisations like individuals have the competency to possess values has been under some scholarly debate within the organisational behaviour literature (see e.g. Meglino and Ravlin, 1998 cf. Meglino, 1997; Pruzan, 2002). I adopt the widely

Two features in this conceptualisation deserve further consideration. First, values are conceived as having an enduring character. At the individual level, the enduring nature of values arises mainly from the fact that each value is initially learned in isolation from other values in an absolute fashion. As an individual matures, he/she integrates his/her values into an organised system of values wherein each value is ordered in priority with respect to other values. The specific values an individual holds tend to stay stable over time: a change in an individual's values typically entails a reordering of priorities among existing values. As values are learned early in life, and occupy a central position in an individual's cognitive structure, they are difficult to change during adulthood. (Ravlin, 1995; Rokeach, 1973) At an organisational level, the enduring nature of values arises from organisational values becoming embedded in - and being reinforced by - corporate rites, rituals, artefacts and practices (Pratt and Beaulieu, 1992; Schein, 1985).

A second feature that deserves further attention is the normative nature of values. At an individual level, values specify an individual's personal beliefs: how he or she "should" or "ought" to behave. An individual's values do not necessarily reflect how he or she desires to behave. Rather, they describe his or her internalised interpretations about socially desirable ways to fulfil his or her needs. (Meglino and Ravlin, 1998, p. 345; Rokeach, 1973) These interpretations have been shaped by institutional forces – such as family, school, religious society and work organisation – which have acted upon him or her (Ravlin, 1995; Rokeach, 1973). Thus, at an organisational level, organisational values create bounds and limits on individual behaviour. Organisational values are often explicitly articulated because they serve the normative function of guiding organisational members in how to behave over a range of situations. (Schein, 1985) These two features – the enduring and normative nature of values – have implications for the feasibility of values-based control. This will be discussed in the subsequent sections.

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acknowledged position within the MCS and organisational culture literatures according to which values are considered to also reside at an organisational level (e.g. Langfield-Smith, 1995; Schein, 1985; Simons, 1995a). I also adopt the widely acknowledged position within the MCS literature, and do not seek to make a clear distinction between management-espoused organisational values, and those enacted by organisational members (see e.g. Malmi and Brown, 2008; Merchant and Van der Stede, 2007; Simons, 1995a, 1995b). In this paper, the term 'organisational values' refers primarily to the explicitly articulated values that guide organisational members in how to behave over a range of situations (see e.g. Schein, 1985; Simons, 1995a, 1995b). I acknowledge, however, that organisations vary in the extent and intensity to which these officially articulated organisational values are shared by organisational members (see e.g. Wiener, 1988; Sørensen, 2002).

3. Values-based control: analysis of key concepts

The normative nature of values (Ravlin, 1995; Rokeach, 1973) implies that managers may seek to utilize organisational values as a means of influencing organisational members' behaviour. Managers may seek to achieve value congruence between the organisation and organisational members. Internalised organisational values can serve as normative guidelines for guiding organisational members' behaviour (see e.g. Langfield-Smith, 1995; Malmi and Brown, 2008; Norris and O'Dwyer, 2004, Ouchi, 1979). Managers may also seek to explicate organisational values in such terms that they guide organisational members' behaviour also when organisational members do not strongly subscribe to these values (see e.g. Malmi and Brown, 2008; Simons, 1995a; Welch and Welch, 2006). As noted earlier in the introduction section, we use a generic term *values-based control* to refer to any attempts by managers to utilize organisational values as a means of influencing organisational members' behaviour. This enables us to examine the concept of values-based control broadly, acknowledging that values-based control may not always take a purely socio-ideological form whereby managers would seek to influence organisational members' behaviour through influencing their mind-sets. It can also take a more technocratic form, and seek to exert more direct influence on organisational members' behaviour.[66] This broad definition also acknowledges that organisational members can be motivated to engage in values-related behaviour through different mechanisms. Some organisational members may engage in values-related behaviour based on their intrinsic motivation to do so (see e.g. Meglino and Ravlin, 1998; Ouchi, 1979). Some other organisational members may, on the other hand, engage in such behaviour based on their perceptions of the benefits relating to such behaviour (Ogbonna and Harris, 1998; Wiener, 1982; Willmott, 1993).

The literature on values-based control generally portrays values-based control as socio-ideological. It claims that values influence organisational members' behaviour through their grip on internal beliefs concerning what types of behaviour are desirable (see e.g. Langfield-Smith, 1995; Ouchi, 1979; Simons, 1995a). Key values-based control concepts differ, however, considerably in the extent to which they pay attention to the mechanisms

[66] I draw on Alvesson and Kärreman (2004) to distinguish between 'socio-ideological control' that seeks to influence organisational members' behaviour through influencing their mind-sets, and 'technocratic control' that seeks to exert direct influence over organisational members' behaviour.

through which such influence on organisational members' mind-sets can be exerted. They also differ in their interpretations of the key approaches through which values-based control is mobilised, as well as the key organisational actors involved in mobilising it. Therefore, the following discussion seeks to highlight key similarities and differences between these concepts. It goes out to identify the key values-based control approaches that these concepts suggest for mobilising values-based control. The key values-based control concepts addressed in the following include *clan control* (Ouchi, 1979, 1980), *cultural control* (e.g. Harris and Ogbonna, 2011; Merchant and Van der Stede, 2007; Sandelin, 2008), *belief system* (Simons, 1995a, 1995b) and *value-based control* (Malmi and Brown, 2008).

The notion that organisational values may constitute an essential control mechanism was initially introduced by Ouchi (1977, 1979, 1980). He claimed that a values-based control approach referred to as *clan control* could provide an effective, alternative control mechanism – especially in situations in which effective control through the monitoring of behaviour, or the outputs of that behaviour, could not be feasible due to excessive complexity and uncertainty. In such situations effective control could be achieved by creating strong commitment to an organisation's values and goals. Ouchi's (ibid.) conception of values-based control is essentially socio-ideological: it focuses on the processes through which organisational members' values could become aligned with those of the organisation. According to Ouchi (ibid.), the selection of individuals with congruent values, and their acculturation into an organisation's values through training, ceremonies and rituals, could serve as key approaches for developing such value congruence. Although Ouchi (1979, p. 854) himself portrayed clan control as a subtle, almost invisible control mechanism, many of the key organisational processes through which he claimed clan control to be mobilised are, in actuality, quite formal processes (see e.g. Eisenhardt, 1985; Snell, 1992).

Despite the fact that Ouchi (1979, 1980) portrayed clan control as one of three alternative control mechanisms[67], his description of clan control suggests only partial control: clan control's effectiveness is heavily dependent on

[67] Malmi and Brown's (2008) recent MCS conceptualisation posits clan control as a subgroup level control construct, highlighting that clan control would typically emerge within professions, or bounded organisational parts, such as specific organisational units. We would refrain from limiting the concept of clan control to a subgroup level. Although Wilkins and Ouchi (1983) comment on that clan control is more likely to emerge and function at a subgroup level, Ouchi's (1977, 1979, 1980) general discussion about clan control suggests that he considered it to be essentially an organisational level concept. The fact that he refers to clan type of control as 'one of the organisational ideals' also supports this argument (Ouchi and Jaeger, 1978).

organisational members' individual commitment to an organisation's goals and values, as well as on mutual, social reinforcement by organisational members. The way Ouchi (1979, 1980) portrays clan control suggests further that he himself considered organisational values to be beyond managers' control: organisational values evolve over time and become embedded in an organisation's traditions. Some other researchers have interpreted clan control as involving also attempts to promote top managers' definitions of key organisational values (see e.g. Sullivan, 1983).

The term *cultural control* is sometimes applied as almost a synonym to clan control. It suggests managers' attempts to promote individual commitment to an organisation's values and goals among organisational members (see e.g. Jaeger and Baliga, 1985; Wilkins and Ouchi, 1983). A more generally acknowledged conceptualisation is to use the term cultural control to refer to managers' attempts to shape organisational culture, i.e. to influence the values and beliefs shared by organisational members (see e.g. Harris and Ogbonna, 2011; Murphy and Davey, 2002; Sandelin, 2008).[68,69] Hence, the concept of cultural control is similar to the concept of clan control. It also refers to managers' attempts to get organisational members to subscribe to an organisation's values and objectives – the main difference being that it pays more attention to influencing the values and beliefs of an organisation as a whole. An implicit assumption behind the concept of cultural control is that a strong organisational culture – i.e. to a large extent shared organisational values (Sørensen, 2002; Wiener, 1988) – is beneficial to an organisation (see e.g. Deal and Kennedy, 1982; Flamholtz, 2001; Peters and Waterman, 1982). Although the emphasis is on influencing *shared* values, top managers are generally considered to have the legitimacy and the capacity to produce definitions of organisational values (e.g. Deal and Kennedy, 1982; Harris and

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[68] Researchers on organisational culture generally agree that shared values and beliefs constitute an essential element of the concept of organisational culture: culture is, indeed, often defined *as* shared values and beliefs (see e.g. Henri, 2006; Pratt and Beaulieu, 1992; Van de Steen, 2010; Wiener, 1988). Many prominent writers comment, however, on that the concept of culture comprises of a family of concepts, including, for example, symbol, language, ideology, belief, ritual and myth (Pettigrew, 1979); and that it involves several levels including underlying assumptions, values, and physical artefacts (Schein, 1985).

[69] Some MCS researchers have interpreted cultural control as referring to managers' attempts to use organisational culture *as* control (see Berry et al., 2009; Langfield-Smith, 1995). Although seemingly different from the conceptualisation which views cultural control as an attempt to control culture, we argue that the difference between these two interpretations is not as significant as it would seem at first. For example, Malmi and Brown's (2008) recent discussion of the term cultural control *as* control is clearly based on the assumption that managers seek to shape organisational culture in order to make it more compatible with their organisation's objectives.

Ogbonna, 2011). As a consequence, the communication of official values through formal documents such as values statements and corporate credos is considered to be essential for mobilising cultural control - beside such approaches as employee selection and acculturation that are also highlighted by the concept of clan control (see e.g. Harris and Ogbonna, 2011; Murphy and Davey, 2002).

Within the MCS literature, Merchant and Van der Stede (2007) have proposed a slightly different conceptualisation of cultural control. They also consider the shaping organisational culture as a central objective of cultural control, but for them cultural control is essentially about triggering mutual monitoring among organisational members (Merchant and Van der Stede, 2007, p. 85). This is reflected in the processes and systems which they see as being significant for the mobilisation of cultural control - attempts to develop individual commitment to an organisation's values and goals through selection and training are excluded from their concept of cultural control.[70] Within the more generic literature on cultural control, the development of individual commitment, mutual reinforcement by organisational members and top management direction are all considered essential for an effective mobilisation of cultural control (see e.g. Ogbonna and Harris, 1998, 2002; Ogbonna and Wilkinson, 2003).

The concept of *belief system* (Simons, 1995a, 1995b) represents a different interpretation of the nature and implementation of values-based control. Although Simons' (ibid.) term 'belief system' would seem to imply that he considers these systems as influencing organisational members' individual beliefs, his discussion about the concept suggests that he considers belief systems as capable of exerting also more direct influence on organisational members' behaviour. For him, belief systems are essentially about defining and communicating top managers' definitions of organisational values – as well as about informing organisational members about "what constitutes acceptable behaviour", over a broad range of different circumstances (Simons, 1995b, p. 83). As the emphasis is on the formal communication of organisational values, formal documents, such as values statements and organisational credos are considered to be the key systems for mobilising values-based control through a belief system (Simons, 1995a, 1995b; Widener, 2007). Less formal means, such

[70] Attempts to develop individual commitment to an organisation's values and goals through, for example, selection and training, are included in Merchant and Van der Stede's (2007) 'personnel control' concept. Their concept of 'personnel control' is, however, not limited to developing individual commitment to values and goals. It includes also attempts to develop personnel's capabilities and resources through, for example, job design.

as internal business magazines and posters, are also considered to be of significance in informing organisational members (Bruining et al., 2004; Mundy, 2010). The concept of belief system is hence less socio-ideological than the concepts of clan control and cultural control. It emphasises formal communication of official organisational values. It pays less attention to the processes through which organisational members' values can be aligned with those of the organisation. It differs from the concepts of clan control and cultural control also in its very hierarchical orientation: a belief system pays little attention to creating individual commitment to the officially defined organisational values, or to triggering mutual reinforcement by organisational members.

Malmi and Brown's (2008) *value-based control* concept seeks to integrate these perspectives.[71] It identifies the selection and acculturation of employees, and the communication of organisational values as the key approaches for mobilising values-based control. It also acknowledges that values-based control does not influence organisational members' behaviour solely through the creation of value congruence between the organisation and organisational members. The mere explication of organisational values can suffice to generate desired values-related behaviour among some organisational members. Malmi and Brown's (ibid.) discussion of the concept of value-based control is too concise to make too extensive interpretations of their view in regard to the key organisational actors involved in mobilising value-based control. Their discussion seems to indicate, however, that they place less emphasis to triggering mutual reinforcement by organisational members as compared to the concepts of clan control and cultural control.

Table 1 summarizes the discussion about the similarities and differences between the key values-based control concepts. It highlights the similarities between the concepts of clan control and cultural control. Both concepts emphasise the approaches through which managers seek to align organisational members' individual values with those of the organisation. As

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[71] Malmi and Brown's (2008) term 'value-based control' is very similar to the term 'value*s*-based control' applied in this paper. Our decision to use the latter term is based on that it better enables us to distinguish the control approach discussed in this paper from the term 'value-based management' that is commonly used within the management accounting literature to refer to a management approach that emphasizes maximizing shareholder value creation (See e.g. Ittner and Larcker, 2001; Malmi and Ikäheimo, 2003). Within the general management literature the terms 'value-based management' (see e.g. Brytting and Trollestad, 2000) and 'values-based management" (see e.g. Andersson, 1997) and 'values-driven management" (see e.g. Driscoll and Hoffman, 1999) have all been used to refer to a management approach whereby organisational values are mobilised to influence organisational members' mind-sets and/or behaviour.

the concept of cultural control also focuses on shaping organisational culture – i.e. influencing the organisational values that are shared by organisational members – it pays also attention to the communication of officially defined organisational values. Both these concepts consider the development of individual commitment and the mutual reinforcement by organisational members as being essential for the effective mobilisation of values-based control. Top management direction is more explicit and highlighted within the concept of cultural control. The concept of a belief system represents a different interpretation of the nature and implementation of values-based control. It emphasises the formal communication of officially defined organisational values. Although it also seeks to develop subscription to specific organisational values, it exerts also more direct influence on organisational members' behaviour by informing organisational members about the types of values-related behaviour that are acceptable within the organisation. It differs from the concepts of clan control and cultural control also in its very hierarchical orientation; placing strong emphasis on top management direction in the mobilisation of values-based control. Finally, the concept of value-based control seeks to integrate these perspectives. It acknowledges that values-based control may operate either through creating value congruence, or through exerting more direct influence on organisational members' behaviour. It identifies the selection and acculturation of individuals, as well as the communication of official organisational values as the key processes for mobilising values-based control. Finally, it considers top management direction, and the development of individual level commitment as essential for the effective mobilisation of values-based control, and pays less attention to the generation of mutual reinforcement by organisational members.

	Clan control (Ouchi, 1979, 1980)	**Cultural control** (e.g. Harris and Ogbonna, 2011; Merchant and Van der Stede, 2007; Sandelin, 2008)[72]	**Belief system** (Simons, 1995a, 1995b)	**Value-based control** (Malmi and Brown, 2008)
Key approaches	• selection • acculturation	• selection • acculturation • communication	• communication	• selection • acculturation • communication
Primary objectives	• value congruence	• value congruence/ intended organisational culture	• value congruence/ values-related behaviour	• value congruence/ values-related behaviour
Actors involved	• (top management direction) • individual level commitment • mutual enforcement	• top management direction • individual level commitment • mutual enforcement	• top management direction	• top management direction • individual level commitment

Table 1. Comparison of key values-based control concepts applied within the MCS literature

Table 1 also highlights the key approaches that these concepts suggest for mobilising values-based control: these include the selection of individuals with congruent values, the acculturation of individuals into an organisation's values, and the communication of official organisational values. The following section addresses the limitations of these approaches, and adds a fourth, more instrumental values-based control approach, which managers can use to

[72] Within the MCS literature the term 'cultural control' has been applied, inter alia, by Merchant and Van der Stede (2007) and Sandelin (2008). The interpretation of the concept of 'cultural control' presented in Table 1 draws also on the more generic literature on 'cultural control' (e.g. Harris and Ogbonna, 2011). As a consequence, it is not identical to Merchant and Van der Stede's (2007) or Sandelin's (2008) interpretation of the term.

motivate values-related behaviour also when organisational members do not strongly subscribe to the organisational values.

4. Conceptualizing values-based control as comprising of an array of complementary values-based control approaches

The identified values-based control approaches differ in the extent to which they seek to exert direct influence on organisational members' behaviour. The first two approaches – the selection of individuals with congruent values and the acculturation of individuals into an organisation's values - operate through creating value congruence between the organisation and organisational members. The aim is to align organisational members' values with those of the organisation, whereby the internalised organisational values can serve as normative guidelines for guiding organisational members' behaviour. (Langfield-Smith, 1995; Malmi and Brown, 2008; Ouchi, 1979; Ravlin, 1995) The third approach – the communication of official organisational values – seeks, however, to exert also more direct influence on organisational members' behaviour by informing organisational members about the kinds of behaviour which are acceptable within that organisation (Malmi and Brown, 2008; Simons, 1995a, 1995b).

None of these approaches for mobilising values-based control is, however, unproblematic. Mobilising values-based control through the *selection* of individuals with congruent values is problematic because individual values are only partially visible to the outside. The analysis is likely to focus on the most visible part of individual values – namely, individuals' values-related behaviour. This provides only partial visibility to an individual's deeply-held values. (Rokeach, 1973; Schein, 1985; Welch and Welch, 2006) Mobilizing values-based control through the *acculturation* of individuals into an organisation's values is, on the other hand, problematic due to the enduring nature of individual values. As values are learned early in life, and occupy a central position in an individual's cognitive structure, they are difficult to change during adulthood (Ravlin, 1995; Rokeach, 1973). This limits managers' ability to align organisational members' values with those of the organisation. Individuals are also typically under the simultaneous influence of several societal institutions – such as family, work organisation and religious society – which further limits the efficacy of such managerial efforts (Ravlin, 1995; Rokeach, 1973). Finally, managers' attempt to achieve value congruence or to motivate organisational members to engage in desirable values-related behaviour through the communication of official organisational values is also problematic. It is unlikely to generate strong commitment to the official values, nor to provide organisational members with adequate motivation to engage in values-related behaviour unless organisational members perceive there to be sufficient incentives related to engaging in such behaviour (Ogbonna and Harris, 1998; Wiener, 1982; Willmott, 1993). Official organisational values are also typically defined in such general terms that they are unable to provide specific guidance to organisational members (Simons, 1995a, 1995b).

Hence, the identified three values-based control approaches may not suffice to generate desirable values-related behaviour in organisations. Managers' attempts to select individuals with congruent values, or to acculturate them into an organisation's values, may not be enough to generate value congruence between the organisation and organisational members (see e.g. Meglino and Ravlin, 1998). The communication of official organisational values may, on the other hand, not suffice for motivating organisational members to engage in desirable values-related behaviour unless organisational members perceive sufficient incentives relating to such behaviour (Ogbonna and Harris, 1998; Wiener, 1982; Willmott, 1993). To provide such clear incentives, managers may need to formally incentivize desirable values-related behaviour (Lenzioni, 2002).

Recent observations within the MCS and strategic management literatures indicate that some companies are moving to *formally incentivizing* organisational members' values-related behaviour (Doz and Kosonen, 2007, p. 110; Lenzioni, 2002, Mundy, 2010). They are integrating the evaluation of organisational members' values-related behaviour into their formal appraisal and performance measurement process (Doz and Kosonen, 2007, p. 110; Lenzioni, 2002; Mundy, 2010). They are linking the outcome of this evaluation to formal incentives - such as bonuses, stock options, pay rises and career promotions (Doz and Kosonen, 2007, p. 110; Lenzioni, 2002). This enables top management to signal that it considers organisational values to genuinely constitute an essential part of the way it desires the organisation - and individual organisational members - to operate (Lenzioni, 2002; Mundy, 2010). With the formal incentivisation of values-related behaviour top management seeks to reinforce the influence of other values-based control approaches. It provides organisational members with additional motivation to engage in desirable values-related behaviour also when they do not strongly subscribe to the organisational values (Lenzioni, 2002).

The mobilisation of values-based control through the formal *incentivisation* of values-related behaviour is, however, not unproblematic either. It requires, first of all, that desirable values-related behaviour can be specified in such concrete terms that organisational members' behaviour can be evaluated against some pre-defined ideals or standards. This is, however, problematic. Such specifications will need to be applicable over a broad range of situations (Simons, 1995b). These specifications are, hence, likely to be generic in nature – forcing organisational members to make local interpretations of their meaning. The actual evaluation of values-related behaviour is also challenging. Diverging from a performance evaluation against some objective, quantifiable targets, the evaluation of organisational members' values-related behaviour is inherently subjective and sensitive in character. This sets additional demands for the procedural features of the evaluation process (see e.g. Ittner et al., 2003; Prendergast and Topel, 1996), as well as for managers' capability to interpret what types of values-related behaviour are desirable in specific situations. Formal incentivisation of values-related behaviour can also result in unintended consequences - such as impression management, i.e. organisational members' attempts to influence the image others have of them (Bolino, 1999; Bolino et al., 2004); as well as a decrease in an intrinsic motivation to engage in such behaviour (Beckton et al., 2008).

Emerging from this analysis, values-based control appears as an array of values-based control approaches that differ in the extent to which they seek to exert direct influence on organisational members' behaviour. Since all these approaches have inherent limitations, an effective mobilisation of values-based control may require a complementary use of these approaches. The *selection* of individuals with congruent values, and their further *acculturation* into an organisation's values can be used to align organisational members' values with those of the organisation. Since these approaches are unlikely to result in complete value congruence, the *communication* of official values and the formal *incentivisation* of values-related behaviour can be used to inform organisational members about desirable values-related behaviour, and to generate motivation to engage in such behaviour also when organisational members do not strongly subscribe to the organisational values. Without some degree of value alignment generated through the other values-based control approaches, a formal evaluation and incentivisation of values-related behaviour is, on the other hand, likely to be ineffective and artificial. Table 2 summarizes this discussion, and presents a conceptualisation of values-based control as comprising of an array of complementary values-based control approaches.

Next, I draw on an in-depth case study of a large global organisation with a strong administrative heritage in values-based control to illustrate how the four values-based control approaches constituting the concept of values-based control proposed in this paper can be applied in practice. A particular emphasis will be on the fourth values-based control approach - that of formally incentivizing values-related behaviour - which has received much less attention within the values-based control and MCS literatures.[73] Before proceeding into the case analysis, I will briefly address the research approach of the study in the following.

[73] Although some recent studies have reported observations of attempts to incentive desirable values-related behaviour (Doz and Kosonen, 2007; Lenzioni, 2002; Mundy, 2010), these studies have provided very limited visibility into how organisational members' values-related behaviour can in practice be incentivised. For example, in regard to the formal evaluation of values-related behaviour, the available evidence is limited to a notion that values statements (Lenzioni, 2002), or "a list of behaviour and value-driven attributes" (Doz and Kosonen, 2007, p. 110) can be used as a basis for the evaluation.

Values-based control				
	Selection	**Acculturation**	**Communication**	**Incentivisation**
Properties	• analysis of individuals' internal values during the selection process	• organisational members' intentional acculturation into an organisation's values through induction, training and informal socialisation	• communication of official organisational values through formal documents and more informal media	• formal incentivisation of desirable values-related behaviour; • entails formal specification and evaluation
Intended outcome	• individuals with congruent values selected	• organisational members' individual values aligned with organisational values	• official organisational values clarified and promoted	• clear incentives for desirable values-related behaviour established
Primary objective	• value congruence	• value congruence	• value congruence/ desirable values-related behaviour	• desirable values-related behaviour
Challenges	• individual values only partially visible to the outside	• individual values difficult to change • individuals under the simultaneous influence of several societal institutions	• the mere communication of official organisational values unlikely to be sufficient for generating value congruence nor motivating desirable values-related behaviour • organisational values provide only very general guidance; requires local interpretation of their meaning	• desirable values-related behaviour difficult to specify in concrete, but "universal" ways; requires local interpretation of their meaning • evaluation subjective and sensitive in character • may result in unintended consequences such as impression management and decrease of intrinsic motivation

Table 2. Conceptualizing values-based control as comprising of an array of complementary values-based control approaches

5. Research approach

The empirical data that this paper builds upon is based on a broader case study on the strategy formation and implementation related the use of MCSs in a large, global organisation. This broader research project covered a variety of MCS. They included MCSs used for informing managers in their strategy formulation efforts, as well as MCSs - such as strategic performance measurement systems and values-based control systems - used to contribute to that organisational activities and individual organisational members' behaviours would be aligned with the organisation's strategic priorities. The overall research approach was open-ended and empirically sensitive in character. As the research project proceeded, increasing attention was paid to the company's values-based control practices. Initial interviews with company representatives indicated that the company provided a particularly suitable organisational setting for examining the nature and implementation of values-based control. It had a strong administrative heritage in values-based control. And it implemented a wide variety of values-based control approaches - some of which were quite novel, and capable of providing some new theoretical insights.

The case evidence was collected over a period of three years, from June 2006 to June 2009. Theme interviews with corporate and business-level managers formed the basis of the case analysis. Interviewed corporate-level managers represented key corporate functions, such as corporate strategy, HR, and finance and control. This enabled us to develop a comprehensive understanding of top managers' attempts to use values-based control systems, and MCSs in general. Interviews with business managers from several hierarchical levels provided, on the other hand, indication of the extent to which corporate managers' intentions with regard to using values-based control systems, and the MCSs in general, were effective in practice. It also provided insight into how managers at lower levels in the hierarchy reacted to the values-based control approaches imposed on them. Altogether, 22 interviews with an average length of over 70 minutes were conducted (see Appendix A). Of the 22 interviews, 18 were tape recorded and transcribed.[74] When tape recording was not possible, notes were taken. These notes were

[74] Two interviews could not be recorded because the interviewees did not provide permission for recording and two telephone interviews with overseas executives could not be recorded due to technical limitations.

immediately transcribed after the interviews and were sent for validation to the interviewees.

Interviews were open-ended and empirically sensitive in character. Interviewees were first approached with fairly open questions relating to the use of values-based control systems, and MCSs in general. As the project and data collection progressed, I was able to pose more specific questions, probing deeper into initial ideas (Ahrens and Dent, 1998; Ahrens and Chapman, 2006; McKinnon, 1988; Vaivio, 2008). I was also able to draw on numerous public and internal documents. Public documents, such as broker presentations, press releases and material presented at the company website provided general information about the company, its environment, strategy and management practices. They also enabled us to examine how the company communicated publically about its strategy, values, and values-based control practices. Internal documents, such as values statements, planning process descriptions and detailed guidance given to managers related to the evaluation of values-related behaviour, provided a more detailed account about the company's organisational values, and their mobilisation in practice. Finally, continual informal discussions with key informants enabled us to engage in more general discussions regarding the case companies' management approach and their use of MCS. This provided a platform for more detailed questions (See Appendix A for a list of informal discussions).

Consistent with the open-ended, empirically sensitive character of the study, the data analysis commenced during the data gathering phase, and it involved several iterative rounds of reflection between data and theory (Ahrens and Dent, 1998; Ahrens and Chapman, 2006). The data analysis involved searching for emerging themes of significance, reorganising data according to the themes, and using these themes as input to further interviews (Ahrens and Dent, 1998). Internal and public documents were used to elaborate on and confirm issues that arouse in the interviews (Eisenhardt, 1989; Yin, 2003).

6. Mobilising values-based control through an array of complementary values-based control approaches: the Case of ValueComp

This empirical section is divided into three subsections. The first one outlines the organisational context within which values-based control was mobilised at the case company ValueComp.[75] The second subsection describes how the managers at ValueComp sought to create value congruence between the organisation and organisational members through the approaches of selection, acculturation and communication. The third subsection illustrates how the fourth values-based control approach - that of formally incentivizing values-related behaviour - was used to motivate such behaviour also when organisational members' did not strongly subscribe to the organisational values.

6.1. Organisational context: global organisation with a strong administrative heritage in values-based control

The case company ValueComp operated a truly global organisation, with significant business operations in all five continents. Its production and R&D activities were spread across more than ten locations throughout the world. It had sales in over hundred countries. Like most large multinational companies (MNC), ValueComp operated a complex matrix organisation. Its business operations were structured along three global business areas, which were all responsible for distinct sets of products and customer segments. These business areas were supported by two global horizontal organisations which had group-wide responsibility for sales, marketing, purchasing, logistics and technological development. Some of the horizontal organisational were further divided into regional entities. The complex nature of the global organisation contributed to business reporting being often multidimensional in nature: business managers often found themselves in a situation where they had to report to several superiors, some of which could be placed in geographically distant locations. The global and complex nature of the operations was also reflected in general day-to-day work: it was often organised along global project organisations, whereby organisational members from different parts of the world were connected to work towards common project goals on a temporary basis.

To enhance cooperation in such a demanding organisational context, organisational values were used for defining guidelines and boundaries of desirable behaviour. They were constituted a significant part of the overall management approach: for over a decade, a management approach referred to as 'value-based management' had been strongly and consistently promoted by top management. This management approach was based on the premise that

[75] A pseudonym ValueComp is used throughout the paper in order to secure the anonymity of the case company.

the decisions and behaviour of managers and employees should be guided by organisational values. Organisational members were, in general, expected to adopt behaviour consistent with the organisation's values. The comment by the Business Development and Strategy Projects Director for one of the business areas crystallizes this broadly shared conception:

> *"We are very much a values-driven company. This helps people to think what is important, and how they can contribute to the company. We, in a way, expect that people are of the 'company man' type."*

The Corporate Strategy Director commented, for his part, on the role of organisational values as follows:

> *"I think that [organisational] values create a kind of boundary mechanism for individuals who are average or low performers. If you are a high performer, you take other people into account anyway.... These values are commensurable to all individuals. They make this organisation a tolerable place to work."*

The interviewed managers did not seem to object to top managers' attempts to apply 'value-based management'. On the contrary, they tended to consider such attempts as positive. The promotion of organisational values was generally considered to be an essential mechanism for enhancing cooperation. This was considered to be particularly important because the company operated across a variety of national cultures. The Senior Development Manager for Business Improvement Services commented this:

> *"In my view, it is good that our values are promoted. That you cannot adopt a mentality that you can develop a career in our company through treading on other people's toes; through utilizing some iffy business practices, not sharing information with others or not utilising your full potential. These are important messages. If you want to prosper, and help the company to prosper, then you need to pay attention to the way results are made. This is important, because we are a global company; people come from very different national cultures. It is important that we have something in common – this is what we refer to as organisational values, and value-based management."*

The Strategy and Portfolio Manager for one of the sales categories within the largest business area noted for her part:

> *"The fact that organisational values are strongly promoted in our company makes cooperation easier. You can, on a general level, expect other people to behave in a certain way."*

The actual organisational values were quite typical of contemporary organisations: the company had four core values, which related to commitment, cooperation, respect and innovation. The company had recently gone through an extensive process in which the definition and meaning of the organisational values had been re-evaluated. The process had involved a substantial number of organisational members from different parts of the global organisation - with the aim of ensuring that the officially defined organisational values would represent those actually enacted within the organisation.

> *"Our organisational values were recently re-evaluated. We had these value workshops where we involved a significant part of our global organisation in a discussion about the essence of our values. Our present value definitions are, of course, not that different from the previous ones: they were kind of updated to be compatible with the present situation."* (The Business Development and Strategy Projects Director)

> *"When we seek to re-define our values then everyone, the whole organisation is strongly involved...It [organisational values] is not something that is created by the board of directors. Our personnel are strongly involved in the process; that way it is also more natural for the people to subscribe to these values."* (The Corporate Planning and Analysis Director)

Mobilising 'value-based management' entailed, in practice, applying a variety of complementary values-based control approaches. The selection process paid attention to potential candidates' value profiles. Organisational members were further acculturated into the organisational values. Official organisational values were communicated. Finally, the formal incentivisation of values-related behaviour was carried out.

6.2. Developing value congruence through selection, acculturation and communication

Value congruence between the organisation and organisational members was developed through several values-based control approaches. First, the recruitment process paid particular emphasis to selecting individuals whose value profiles would be congruent with the 'ValueComp values'. As the evaluation of individuals' deeply held values would have been very challenging - and was only partially feasible - the evaluation focused on assessing potential candidates' values-related behavioural modes. The evaluation sought to determine whether the potential candidates would be likely to engage in desirable values-related behaviour within the organisation. The Corporate Planning and Analysis Director commented on this briefly:

> *"Values are quite a lot emphasised in our management approach. First in recruitment: when people are recruited, their match to ValueComp values is evaluated quite specifically…"*

The Business Development and Strategy Projects Director explained this further:

> *"We promote values in several ways… it starts even from recruitment. We seek to select individuals with a particular value profile…We expect to see that our organisational values are visible in the person we are recruiting; that she or he has sincere interest in those issues that are relevant to our values. Because organisational values are always, at the end, individual values. Or at least they should be reflected in his or her modes of behaviour….When a group of individuals then work in a project, they will all share the same kind of behavioural modes."*

Once individuals entered the organisation, further efforts were made to acculturate them to the organisational values. Organisational values constituted, first of all, an essential part of organisational members' introduction training. Many of the subsequent training programs did also pay attention to the organisational values. The purpose was not only to strengthen organisational members' awareness of organisational values: the internalisation of these values was also enhanced. Many training programs included practical examples of how a particular organisational value could be "realised" in practice. Instead of a mere communication of official values, the aim was to develop deeper commitment to the organisational values. These values-related trainings were not of minor significance: some of the values-related trainings were obligatory. And they were linked to monetary bonuses. The Strategy and Portfolio Manager observed this:

> *"Our values are also reflected in the training programs. Not necessarily in every training, but in general…I happened to take part in an e-learning course yesterday, and our values were reflected also in that training. Not in a way that there would*

have been explicit linkages to a particular ValueComp value, such as 'this issue relates to this value, and means this' ...In some other training programs the link is more explicit. For example our code of conduct training included several examples of how a ValueComp employee could operate according to the company values – across several different situations. The training provided also examples of what types of behaviour would not be acceptable...When I was working in my previous organisation, this was an obligatory training – it was a general requirement for that you could, at all, be eligible for a bonus. This requirement came down from the top level."

Organisational values were also kept present and visible in everyday organisational life. There was extensive, on-going communication and discussion of their meaning. The purpose was, again, to strengthen organisational members' subscription to the values. Moreover, it would develop their capability to interpret how the ValueComp values could be "realised" in specific situations. Of course, keeping organisational values strongly visible in everyday organisational life also enabled top management to signal that it considered organisational values to be a significant part of the way the organisation, and organisational members, should operate. The Business Development and Strategy Projects Director continued:

"...We have also a lot of discussion and communication about the values, values are present in several ways...for example in our screensavers...We do lot of small things to promote values... We may also have some posters in the main halls...all these contribute to the awareness and internalisation of our values...And of course we have a lot of material in our intranet and internet site...You may search there for more information."

The Corporate Planning and Analysis Director added for her part:

"...Then there is also a lot of internal communication and discussion about values overall...I mean they are quite regularly out there, in the intranet and specific places... so the awareness of the values is kind of maintained all the time..."

The communication of organisational values took several forms. In addition to the posters and screensavers that provided everyday visibility to the ValueComp values, values were also communicated through formal documents, such as the 'Operational Mode Document'. This sought to explicate many of the company's most significant objectives and principles. The communication of organisational values was not, however, limited to defining what the organisational values were. It also included a description of what types of values-related behaviour were considered to be desirable and appropriate. This enabled top management to exert direct influence on organisational members' behaviour. It also contributed to organisational members' values-related behaviour being formally incentivised, as will be described in the following subsection. This was considered to be essential in order to generate values-related behaviour within the organisation: despite all the efforts to develop value congruence between the organisation and organisational members, not all organisational members subscribed to the ValueComp values. Some of the organisational members could not even name all the four ValueComp values. The comment by the Strategy and Portfolio Manager illustrates well her dissatisfaction with the extent to which the ValueComp values had been internalised by many of her fellow colleagues:

"I think that values should really influence your inner self, and the way you behave in general... You do not really need any posters for that... To me values are a mode of behaviour.... But, I know quite a lot of people who wouldn't necessarily be able to even name our values from the top of their minds..."

6.3. Motivating values-related behaviour through formal incentivisation

The fourth values-based control approach – that of formally incentivizing values-related behaviour - was used to provide organisational members with additional motivation to engage in these types of behaviour. The purpose was to encourage desirable values-related behaviour also among such organisational members, who did not strongly subscribe to the ValueComp values. Of course, the formal incentivisation of values-related behaviour also served to inform organisational members about 'value-based management' being genuinely an essential part of the company's management approach. Its influence extended beyond the mere rhetoric's of promoting organisational values. The Corporate Planning and Analysis Director explained why they had decided to establish formal incentives for engaging in values-related behaviour:

"When the evaluation of values-related behaviour is firmly integrated to the formal performance evaluation, then also those individuals, who wouldn't otherwise care that much about organisational values, become interested in values-related behaviour. Those individuals, who don't care about values, are generally interested in financial matters. When the evaluation of values-related behaviour is clearly linked to the incentives, also these individuals develop an interest in the organisational values."

Business Development and Strategy Projects Director remarked, on the other hand:

> *"It [formal evaluation and incentivisation of values-related behaviour] motivates people to engage in behaviour that is consistent with the company's objectives and values...That all little arrows would point to the same direction...and that they would build a bigger arrow together. I think that it is in that sense very similar to other incentive systems that we have."*

How the formal incentivisation was applied in practice suggested that the evaluation of organisational members' values-related behaviour had become an integral part of the annual performance evaluation process. This process encompassed two dimensions: to what extent an individual had been able to reach his or her business targets, and to what extent he or she had demonstrated values-related behaviour, when striving for these targets. Performance in relation to the business targets was evaluated on a bi-annual basis. For individuals in line management positions, the majority of the business targets tended to be derived from their unit's balanced scorecard targets. For other organisational members, the business targets tended to comprise of a mix of locally defined strategic, financial and more immediate, operative targets. On an annual basis, organisational members' performance was then put under a broader examination. Attention was paid both to *what* he or she had been able to reach, as well as to *how* he or she had reached these targets. The evaluation of values-related behaviour was taken seriously: it had significant consequences. Where the bi-annual business target-related evaluation was linked to monetary bonuses, the annual performance evaluation process had broader implications. It was related to merit increases, rises in base salary and opportunities to attend equity programmes and expensive training. The Corporate Planning and Analysis Director explained again:

> *"Values are specifically used in this performance evaluation...Your overall performance is evaluated once a year on two aspects: the 'what' and the 'how'. The 'what' part is obviously a very important input to that evaluation: it relates to how well you have performed in relation to your individual business targets. The 'how' part is then more the kind of compliance with ValueComp values, and how you work....It influences, for example, your equity grants and salary rises."*

The Strategy and Portfolio Manager commented for her part:

"We evaluate both what you reach and how you reach that. The 'how' part is also important there. If you try relentlessly to push your own issues through, without paying attention to others, it is not in accordance with company values. And it will be taken into account in the evaluation. It [evaluating the how] is an essential part of the overall evaluation.... If you on a longer term receive good evaluations – if you perform well and demonstrate behaving in accordance with the company values – then it will help you to move forward in your job grades and base salary."

The formal evaluation and incentivisation of values-related behaviour entailed that organisational members were given descriptions of the types of behaviour that were considered desirable and appropriate. These descriptions were presented separately for each of the four core ValueComp values. There were also slightly modified versions of the descriptions available for managers, in order to take into account their leadership role.[76] These descriptions were, inevitably, presented in rather general terms. They required managers and employees to make local interpretations of their specific meanings. The Cost Management and Business Control Manager explained how he had utilised these descriptions:

"We are given clear documentation for that [desirable and appropriate values-related behaviour]...the PowerPoint presentation provides clear examples of what is "exceptional", "on target" and "improvement required" level behaviour in relation to each value. I have found the guidance helpful when discussing this with my team members. It enables them to clearly see what is generally expected and it helps me to explain what exceptional behaviour, for example, could be in that particular situation."

The Finance Director B commented for her part:

"We have very specific guidelines for evaluating individuals' values-related behaviour. We focus on how that person has performed in his or her working environment – in his or her team, and as an individual."

Managers were, however, not obliged to use these descriptions, resulting in that they were not always followed in practice. Some managers considered these specifications to be oversimplifying. They preferred to base the evaluations on their own judgement. Some managers were, on the other hand,

[76] Although we were able to review these documents in practice, we were unfortunately not given permission to disclose any detailed examples of these descriptions.

even unaware of their existence. The Finance and Control Director for one of the business units within the largest business area commented this rather bluntly:

> *"How the evaluation is conducted in practice depends very much on the manager. We have, of course, supporting material, which you can read in order to prepare yourself for these discussions. All these issues are specified there. But then everyone interprets this material, and uses it as they like... It is impossible to simplify all this into a single format. It is really part of leadership. My opinion is that if you try scrutinizing all this to a single format, it goes down the tube...."*

The Strategy and Portfolio Manager commented for her part:

> *"I think that we should be given more specific guidance, so that we could make sure that values get realised at the operational level. That you could say that ok, these are our values, and this is what I can do to realise each value...During the last evaluation round I accidentally happened to open a document, which provided more specific guidance to evaluating values-related performance."*

The evaluation of individuals' values-related behaviour was, hence, inherently subjective. It entailed making local interpretations of desirable values-related behaviour. Although some issues could be evaluated more objectively, the evaluation involved much subjective judgement. The Business Development and Strategy Projects Director observed:

> *"Evaluation of individuals' values-related behaviour does include subjectivity. It requires in a way an interpretation of how that person can contribute to that value.... Some issues you can judge more objectively. If we think, for example, of our innovation value... if she or he has been able to demonstrate that she or he has brought forward a new innovation, which can be concretely applied to our products, then she or he has concretely operated according to our innovation value. On the subjective side you can gather feedback from people who have worked with that person – from people who have worked in common projects; from his or her colleagues, subordinates and other superiors. You seek to evaluate how that person operates in practice; what operation modes she or he applies."*

The Strategy and Portfolio Manager, on the other hand, commented for her part:

"Yes, in my own performance evaluation we have always addressed also the how part. But it is vaguer, as it is based on qualitative assessment....For example, in my written assessment we have used terms such as 'promotes team spirit', 'takes other people into account' and 'shares information...You need to be somewhat creative to be able to evaluate the how part."

Some managers even conducted the evaluation without much explicit linkage to the defined organisational values. In these cases the evaluation was based more on the managers' individual values. The Finance and Control Director commented again:

"Yes, I do take values into consideration in performance evaluation. But it is subjective...everyone has his/her own values and they are more or less in line with organisational values....I guess I evaluate it more based on how I would behave in such a situation...what I view to be desirable and appropriate. We know that we have targets that we need to reach, and that we can reach those targets in several ways - some of those ways are simply more desirable than others. Then I try to evaluate whether my subordinates have used the more desirable ways, or whether they have used more negative ways that may not in fact confirm to anybody's values... In my opinion, it does not really matter that much what the corporate values are."

In addition to being subjective, the evaluation was also sensitive in nature. It entered into rather personal matters. Categorising someone as not demonstrating values-related behaviour could have had an almost negative connotation, as organisational values were considered to be an essential part of organisational life at ValueComp. Finance Director B observed again:

"If I think of my own managerial work, we have gone through this point by point. But this is often a rather sensitive topic. At the end it would be very hard for anyone to work here unless he had internalised our company values. So these values are quite difficult to evaluate. In principal, if a manager wanted, he could categorise individuals either as that they have behaved in accordance with the company values, or that they have not. So it depends very much on the discussion between a manager and his subordinate."

The Cost Management and Business Control Manager commented for his part:

"When you have known these guys for a long time, it is not always that easy to draw the line... In some cases it is easy to say that your behaviour is exceptional - if the feedback you have received from the people who have worked with that person

has been overflowing…But, in some other cases the evaluation is more challenging. If the guy has worked very hard and got quite good feedback, then it can be de-motivating to evaluate him as 'on target'… What can also be challenging is if somebody has been evaluated as 'exceptional' for several years and you lower his grade to 'on target'. Then you need to have pretty good arguments; otherwise the guy may get very mad and leave the company."

Because the evaluation was subjective and sensitive in nature, it was essential to contribute to the evaluation being perceived as fair by organisational members (Ittner et al., 2003; Prendergast and Topel, 1996). Several features of the process pointed towards this. First, managers sought to gather information about their subordinates' values-related behaviour from different sources - from colleagues, subordinates, and superiors, who had worked with that person during the evaluation period. Some of the interviewed managers also suggested that they paid attention to developing trust in the superior-subordinate relationship by simply "trying to be as righteous and fair" in the evaluation as possible. Emphasis was also paid to increasing the transparency of the evaluation process. Managers were expected to present written feedback about what their subordinates had achieved, what had been good in their work, and where they could still improve. This written feedback was provided both with regard to the business targets, as well as with consideration of the extent to which that person had operated in accordance with the organisational values.

Finally, the fact that the performance evaluation and reward process was oriented more towards enhancing personal development than toward enforcing strict accountability contributed to organisational members not having to feel threatened by the process. They could better accept the fact that their evaluations were to a large extent subjective.[77] As a consequence, the interviewed managers did not seem to feel offended or threatened by their performance being evaluated also with regard to their values-related behaviour. The general attitude seemed to be that evaluating organisational members' performance with regard to their values-related behaviour was essential for the effective functioning of the organisation: it enhanced cooperation, and gave organisational members an incentive to contribute beyond their individual business targets, which were generally determined with

[77] If an individual failed to reach his/her targets, it did not, in general, result in severe consequences. It meant in practice that a personal 'development plan', specifying personal development objectives for the upcoming 30, 60, or 90-day-period, was outlined.

a six-month perspective. The Senior Development Manager for Business Improvement Services commented again:

> *"Well, the reason for that we evaluate both the 'what' and the 'how' is that you need to have both sides... If we measured only very concrete targets, and paid no attention to how they were achieved, it would be a very short-sighted approach. You could perhaps squeeze out results, but in our company it is the organisational values that should guide the way you seek your targets.... This is a much more sustainable and enduring approach. This approach enhances cooperation and the achievement of targets in practice."*

The Cost Management and Business Control Manager noted for his part:

> *"I think that the main reason for that we evaluate also the how part is that the company wants to operate and perform on a long-term perspective; not focus on only short-term performance."*

The formal evaluation and incentivisation of values-related behaviour could, however, have been ineffective and artificial, unless there would have been at least some degree of value congruence between the organisation and organisational members generated through the other values-based control approaches. The fact that the other approaches strengthened organisational members' awareness and internalisation of organisational values contributed to that managers were better prepared to evaluate their subordinates' values-related behaviour. The Finance Director A concluded:

> *"I have found this evaluation to be very easy - I have not perceived it as challenging. This is probably because our values are easy to subscribe to – then they are also easy to use in the evaluation. If they were somehow alien to you, then the evaluation would be more artificial. Our organisational values are visible and present all the time. They provide clear guidelines for us."*

7. Discussion and conclusions

This paper has sought to elaborate on the concept of values-based control - a concept which has remained ambiguous, despite contemporary literature on MCSs regarding such systems as constituting an essential part of the overall MCS package (Malmi and Brown, 2008; Merchant and Van der Stede, 2007; Mundy, 2010; Sandelin, 2008; Simons, 1995a; Widener, 2007). It has sought to specify the key approaches in mobilizing values-based control. And it has tried to illustrate how these approaches can be applied in practice. The examination has been based on a review of extant literature - and on an empirical illustration of values-based control practices in a large, global organisation.

This paper seeks to add a conceptual argument and an empirical illustration to the literatures on values-based control and MCS. First, it proposes a new conceptualisation of values-based control which portrays values-based control as comprising of an array of complementary values-based control approaches. These differ in the extent to which they seek to exert direct influence on organisational members' behaviour. This new conceptualisation is broader than the values-based control concepts generally applied within the MCS literature. It suggests that organisational members can engage in desirable values-related behaviour not only on the basis of their intrinsic motivation (e.g. Meglino and Ravlin, 1998; Ouchi, 1979), but on the basis of their perceptions of the benefits related to assuming such behaviour (e.g. Ogbonna and Harris, 1998; Wiener, 1982; Willmott, 1993). It complements the three values-based control approaches - *selection*, *acculturation and communication* - generally highlighted by the literature on values-based control with a fourth approach - that of formally *incentivizing* organisational members' values-related behaviour. Second, the paper also provides an empirical illustration to the values-based control and MCS literatures by describing in some empirical detail how values-based control can be mobilised through the means of formal incentivisation. Prior studies reporting managers' attempts to incentivize organisational members' values-related behaviour (Doz and Kosonen, 2007, p. 110; Lenzioni, 2002, Mundy, 2010) have provided very little visibility into how the formal incentivisation of values-related behaviour can be implemented in practice.

The new conceptualisation put forward in this paper has implications for the research on values-based control. First, it argues that the general conception to view values-based control as socio-ideological control that operates through influencing organisational members' internal beliefs about what types of behaviour are desirable (e.g. Langfield-Smith, 1995; Norris and O'Dwyer, 2004; Ouchi, 1979; Simons, 1995a) may represent only a partial view of the nature of values-based control. This is because individual values are enduring, and difficult to change during adulthood (Ravlin, 1995; Rokeach, 1973). Managers' attempts to align organisational members' values with those of the organisation are unlikely to result in complete value congruence between the organisation and organisational members (Ogbonna and Harris, 1998; Willmott, 1993). As a consequence, managers cannot presume that organisational members would internalize these values, whereby the organisational values would serve as internalised, normative guidelines for guiding organisational members' behaviour. They may need to exert also more direct influence organisational members' behaviour in order to generate desirable values-related behaviour within the organisation.

Second, it suggests that a common juxtaposition between values-based control and formal, bureaucratic forms of control (see e.g. Eisenhardt, 1985; Langfield-Smith, 1997; Norris and O'Dwyer, 2005; Ouchi, 1979) may not be justifiable. The MCS and values-based control literatures often portray values-based control as an informal and subtle control form, which operates largely outside formal control processes (see e.g. Langfield-Smith, 1997; Merchant and Van der Stede, 2007; Norris and O'Dwyer, 2004; Ouchi, 1979; cf. Alvesson and Kärreman, 2004; Simons, 1995a). The conceptualisation put forward in this paper highlights that many of the processes through which values-based control is mobilised - such as employee selection, training, evaluation and incentivisation - are in fact quite formal organisational processes. It argues further that values-based control can exhibit many of the characteristics of conventional bureaucratic control systems following cybernetic logic: when values-based control is mobilised through the formal incentivisation of values-related behaviour, it entails that some standards or ideals for desirable values-related behaviour are specified; and that organisational members' values-related behaviour is monitored, evaluated and rewarded based on these specifications. Finally, the conceptualisation put forward in this paper also highlights the complementary nature of values-based control approaches. It contends that all the identified values-based control approaches have inherent limitations. It argues that an effective mobilisation of values-based control can necessitate a complementary use of these approaches.

Further empirical investigations are needed to assess whether the conceptualisation proposed in this paper is helpful in explaining the nature and implementation of values-based control in organisations. All the four identified values-based control approaches are not likely to be pertinent, or even necessary, in all organisational contexts. Small and geographically confined organisations may be able to mobilize values-based control solely through such values-based control approaches that operate through creating value congruence between the organisation and organisational members. Large, global organisations that operate across a multiplicity of national cultures may, on the other hand, not be able to base their values-based control solely on creating value congruence. They may need to exert also more direct influence on organisational members' behaviour, through specifying - and potentially incentivizing - desirable values-related behaviour within their organisations. Future studies could provide insight into the contextual nature of these practices, as well as into their relationships with other MCSs in a control package.

Further empirical examinations could also seek to shed more light on how organisational members react to managers' attempts to monitor and evaluate their values-related behaviours. Such a control approach intrudes into very personal and sensitive domains. It can trigger resistance and anxiety among organisational members. This study suggests that certain procedural features - such as an attempt to strengthen the transparency of the evaluation process - can enhance organisational members' approval for such evaluation. Further studies could tell us more about the procedural features of acting managers seeking to strengthen their capability to impose such personal, almost intimate control.

Appendix A: Interviews and informal discussions

INTERVIEWS			
With Whom	**Level**	**Date**	**Duration (min)**
Corporate planning & analysis director, former strategic planning director for the largest business area	corporate	21 June 2006	120
Corporate planning & analysis director, former strategic planning director for the largest business area	corporate	10 July 2006	90
Marketing planning director for the largest business area	business area	10 August 2006	90
Corporate planning & analysis director with finance & control background	corporate	14 August 2006	90
Vice president, rewards & benefits and competence & performance management director (joint telephone interview through conference call)	corporate	23 August 2006	90
Corporate planning & analysis director, former strategic planning director for the largest business area	corporate	13 September 2006	90
Head of finance & control	corporate	21 September 2006	60
Vice president, business improvement services and senior development manager, business improvement services	corporate	13 October 2006	90
Corporate strategy director	corporate	23 October 2006	90
Senior development manager, business improvement services	corporate	27 October 2006	60
Vice president, business improvement services	corporate	3 November 2006	60
Corporate strategy director	corporate	29 November 2006	60
Competence & performance management director	corporate	30 November 2006	90
director, business development & strategy projects, R&D for the largest business area	business area	7 January 2008	90
Corporate planning & analysis director	corporate	14 January 2008	30
Director, F&C, business unit x within the second largest business area	business unit	14 January 2008	90
Director HR, executive development, talent and performance management, HR development	corporate	22 January 2008	90

Strategy & portfolio manager for one of the sales categories	business unit	14 March 2008	60
Cost management and business control director for purchasing at the largest business area	business unit	15 March 2008	30
Former senior manager, third largest business area	business area	11 June 2009	30
Finance director I for a major horizontal organisation (telephone interview)	business area	15 June 2009	30
Finance director II for a major horizontal organisation	business area	17 June 2009	40

INFORMAL DISCUSSIONS			
With Whom	**Level**	**Date**	**Duration (min)**
Corporate planning & analysis director	corporate	23 May 2006	60
Corporate planning & analysis director	corporate	9 June 2006	60
Corporate planning & analysis director	corporate	27 October 2006	60
Corporate planning & analysis director	corporate	19 January 2007	30
Senior manager, strategy & business development for the largest business area	business area	2 April 2006	30
Senior manager, strategy & business development for the largest business area	business area	20 April 2006	30
Senior manager, strategy & business development for the largest business area	business area	28 September 2007	60
Senior manager, strategy & business development for the largest business area	business area	22 June 2009	30

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