

Culture and management control interdependence: An analysis of control choices that complement the delegation of authority in Western cultural regions

1. Introduction

A significant amount of research has investigated the extent to which choices of management control (MC) practices are affected by national and cultural settings (e.g., Newman & Nollen, 1996; Ueno & Sekaran, 1992; Van der Stede, 2003; Williams & Seaman, 2001). The general contention is that individuals with different cultural backgrounds vary in their preferences for, and responses to, MC practices (Bhaskaran & Sukumaran, 2007; Chow, Shields, & Wu, 1999; Schneider, 1988). This implies that MC practices that are found to be beneficial in one cultural setting may be ineffective or even dysfunctional in another (Chow, Kato, & Shields, 1994). While prior research reveals variation in the type and use of certain MC practices between nations, other studies show insignificant and inconsistent results, or suggest that there is convergence towards certain global best practices (Chow et al., 1999; Granlund & Lukka, 1998; Jansen, Merchant, & Van der Stede, 2009; Van der Stede, 2003). As such, the literature remains at an early stage in providing an understanding of whether and how culture influences specific MC practices (Jansen et al., 2009).

At the same time, MC literature has shifted attention from examining MC practices in isolation towards attempting to uncover how they operate as systems of interrelated practices (Grabner & Moers, 2013). Much of the empirical research in this area examines agency theory predictions that the delegation of authority is interrelated with the choice of performance measures and incentive contracting (Bouwens & Van Lent, 2007; Indjejikian & Matějka, 2012; Milgrom & Roberts, 1995; Moers, 2006; Nagar, 2002). More recently, researchers have investigated how delegation is related to other MC practices, such as social surveillance, planning procedures, employee selection, value statements, and non-financial rewards such as recognition (e.g., Abernethy, Bouwens, & van Lent, 2010; Abernethy, Dekker, & Schulz, 2015; Campbell, 2012; Kachelmeier, Thornock, & Williamson, 2016; Lourenço, 2016; Widener, Shackell, & Demers, 2008).

We build on these two streams of literature to investigate the influence of cultural regions on the interdependence between the delegation of authority and other MC practices. In particular, we assess whether one of the central contentions of agency theory, that delegation and incentive contracting are jointly determined, holds across cultural settings. It has been argued that agency theory reflects an Anglo-American bias towards values for individual responsibility and achievement and the strong symbolic association between money and success (Chiang & Birtch, 2006; Schuler & Rogovsky, 1998; Tosi & Greckhamer, 2004). This implies that the predictions of agency theory may have little validity

or practical utility in other cultural contexts (Pennings, 1993). We therefore consider alternate MC practices that might complement the delegation of authority for firms operating in different cultural regions.

To identify distinct cultural regions, we draw on the *Global Leadership and Organizational Behavior Effectiveness Research* (GLOBE) study, which defines societal cultures on the basis of religion, language, geography, ethnicity, and work-related values and attitudes (Gupta & Hanges, 2004). We select this framework as it builds upon and extends the work of Hofstede (1980), which has provided the foundation for most comparative research in the MC literature. The GLOBE study also places emphasis on cultural region as the unit of analysis. While most comparative MC research examines cross-national variation, we focus on cultural regions, as there is “abundant empirical evidence that cultural differences may be more region- than country-specific” (Beugelsdijk, Kostova, & Roth, 2017, p. 35). In doing so, we are better able to control for national and institutional differences to provide a more direct assessment as to the influence of variations in cultural values and preferences on MC practice choices (Baskerville, 2003; Beugelsdijk et al., 2017; Kirkman, Lowe, & Gibson, 2017; Tosi & Greckhamer, 2004).

Specifically, our study focuses on MC practice choices in three Western cultural regions: Anglo (Australia, English Canada), Germanic (Austria, non-Walloon Belgium, Germany), and Nordic (Denmark, Finland, Norway, Sweden). We focus on these cultural regions, as although they are distinct, they share greater similarity with each other than to other cultural regions (House, Hanges, Javidan, Dorfman, & Gupta, 2004). This allows for a stricter test for the influence of cultural region on the interdependence between delegation and incentive contracting, as the predictions of agency theory would likely be most applicable to other Western cultures that share the closest similarity to, and have been most influenced by, Anglo values and preferences.

We test expected associations using survey data collected through structured interviews with top managers in 584 strategic business units (SBUs) in nine countries across the three cultural regions. The number of observations, as well as the method of data collection by interviews instead of postal or web-based surveys, increases the reliability of our findings (Anseel, Lievens, Schollaert, & Choragwicka, 2010; Lillis & Mundy, 2005). Additionally, to ensure that there is a similar distribution of SBUs in terms of both industry and size from each country and region we use a stratified sampling approach. We also control for a wide range of SBU characteristics and contextual factors, including

country effects, to reveal variations in MC practices that are due to differences in the cultural traits of each region.

Our study contributes to the literature by demonstrating the influence of cultural region on the interdependencies between MC practices. While prior research has found that the emphasis and effectiveness of certain MC practices vary across national settings, this is the first study to show that cultural region influences MC practice interdependence. Specifically, we find that the interdependence between delegation and incentive contracting is restricted to the Anglo cultural region, while in the Germanic and Nordic regions they function as independent practices. Instead, our results show that delegation and strategic planning participation are complements in these cultural regions, and additionally in the Nordic region, we find support for a complementary association between delegation and value-based selection processes. However, we also find that delegation and action planning participation are complements in all three cultural regions. These findings add to the existing literature by revealing which MC practice interdependencies are culturally dependent, and which may reflect more universally applicable best practices, at least within the Western cultural regions we examine (Jansen et al., 2009; Long & Shields, 2005). Our findings also suggest that caution needs to be taken in making cross-cultural generalisations about the nature of interdependency between MC practices, and that the theories used to support these associations need to be adapted to reflect different cultural contexts (Jansen et al., 2009).

The remainder of this study is structured as follows. The next section outlines the general characteristics of the Anglo, Germanic, and Nordic cultural regions, and outlines theory to explain the interdependence between the delegation of authority and other MC practices. Section three describes the method of data collection and measurement of variables, while section four presents the results of the empirical analysis. The final section discusses the implications of the results, the limitations of this study, and suggestions for future research.

2. Theory development

2.1. Cultural regions

Culture refers to the values, beliefs, preferences, and assumptions that provide the basis for interaction and shared understandings among group members, and which differentiate one group of people from another (Kirkman et al., 2017). Prior research investigating the association between MC practices and culture has focused more specifically on national culture. It is argued that national culture is acquired, and becomes deeply ingrained, during childhood such that cultural values and

preferences are relatively resistant to change (Hofstede, 1980; Newman & Nollen, 1996). There is, however, a substantial amount of evidence demonstrating that countries cluster into relatively stable and discrete supra-national regions (Kirkman et al., 2017; Taras, Steel, & Kirkman, 2016). As explained by Beugelsdijk et al. (2017, p. 35), “cultural values exhibit marked discrete jumps at the boundaries of these supra-national cultural zones, which are more pronounced than the differences at the country levels”.

In this study, we draw on the GLOBE classification (House et al., 2004). While building heavily on the work of Hofstede (1980), the GLOBE study emphasises the explanatory potential of cultural regions over national cultures.¹ From an extensive empirical analysis, in which 160 scholars from 59 countries surveyed 17,300 middle managers, the GLOBE study identified ten cultural regions, which share close similarity to other empirical categorisations (e.g., Hotho, 2014; Ronen & Shenkar, 2013).² Furthermore, the GLOBE study extends Hofstede (1980) by refining and extending the cultural dimensions underpinning the cultural region classification. House et al. (2004) define nine cultural dimensions, eight of which are relevant to understanding cross-cultural variation in MC practices.³ Definitions of these eight dimensions are detailed in Table 1.

<Insert Table 1 about here>

In this study, we examine three Western cultural regions: Anglo, Germanic, and Nordic. The Anglo region is characterised by lower uncertainty avoidance and future orientation than Germanic and Nordic cultures, while performance orientation is higher relative to all GLOBE cultural regions, apart from Confucian Asia. The performance orientation value is also high in the Germanic region, along with assertiveness, uncertainty avoidance, and future orientation. Germanic has the lowest humane orientation score of all GLOBE regions, while in comparison to Anglo and Nordic, the region has lower institutional collectivism. Conversely, the Nordic region has the highest institutional collectivism, and lowest assertiveness, of all GLOBE regions, as well as the highest uncertainty avoidance and the lowest

¹ The GLOBE study asked respondents about both societal practices, referring to “things as they are”, as well as societal values, which relate to “as things should be”. In our study we refer to cultural region differences between societal practices, as choices about MC practices will be influenced more by perceptions about how things are in practice (House et al., 2004).

² The ten clusters are Anglo (e.g., Australia, Canada, United States, United Kingdom), Confucian Asia (e.g., China, South Korea), Eastern Europe (e.g., Hungary, Poland), Germanic Europe (e.g., Germany, Austria), Latin America (e.g., Brazil, Bolivia), Latin Europe (e.g., Italy, Spain), Middle East (e.g., Egypt, Turkey), Northern Europe (e.g., Denmark, Finland), Sub-Sahara Africa (e.g., Nigeria, Zambia), and Southern Asia (e.g., Indonesia, Thailand).

³ Gender egalitarianism is excluded as we could not find prior literature that draws upon this dimension to explain cross-cultural variation in MC practices.

in-group collectivism and power distance. Future orientation is also relatively high in the Nordic and Germanic regions. Table 2 reports the cultural dimension scores for the countries included in our study, as well as the average score of each cultural region, as reported by House et al. (2004).

<Insert Table 2 about here>

As is evident from Table 2, cultural regions are not distinct with respect to all cultural dimensions (Gupta & Hanges, 2004). This suggests that while certain MC practices may operate interdependently in only one cultural region, other interdependencies might be expected to hold across multiple regions. For example, the Germanic and Nordic regions are similar with respect to uncertainty avoidance and future orientation, but vary in terms of assertiveness, performance orientation, power distance, and institutional collectivism. As we argue below, these similarities and differences influence MC practice interdependencies in different ways, such that certain MC practices are expected to be jointly determined in both regions (i.e. delegation and planning participation), while the associations between other MC practices will vary (i.e. delegation and value-based input controls).

2.2. Delegation of authority and complementary MC practices

2.2.1. Delegation and incentive contracting

Incentive contracting refers to the allocation of financial rewards to individuals based on the achievement of pre-determined targets (Abernethy et al., 2015). A central contention of agency theory is that incentive contracting is an effective mechanism to induce subordinates to exert effort towards tasks that are aligned with organizational objectives (Jensen & Meckling, 1992). This is particularly important when decision-making authority has been delegated to subordinates. Delegation is a cost-effective response in contexts where knowledge about the optimal course of action is located at lower levels of the hierarchy and the cost of knowledge transfer is high, such as firms facing high environmental uncertainty or the presence of growth opportunities (Bushman, Indjejikian, & Penno, 2000; Holthausen, Larcker, & Sloan, 1995; Prendergast, 2002). To prevent subordinates from using their autonomy and discretion opportunistically, firms make use of performance-contingent pay to ensure that their incentives are aligned with the best interests of the firm (Lazear, 2000; Prendergast, 2002). This implies that the choices to delegate decision-making authority and to allocate performance-based incentives are complementary (Holmstrom & Milgrom, 1994; Roberts, 2004). If subordinates do not have sufficient autonomy to make relevant decisions, then they will be unable to maximise performance on the measures that they are being held accountable for. Conversely, the allocation of decision-making authority without performance-based

incentives increases the risk of moral hazard and the likelihood of actions being taken that deviate from the objectives of firms.

Underlying this expectation is the assumption that incentives have a universal effect on people's motivation and performance (Pennings, 1993). This implies that the interdependency between delegation and incentive contracting should be culturally independent. However, there is increasing evidence to suggest that economic theories, such as agency theory, are biased towards Anglo values and preferences. Hofstede (1983) conjectured that economic theories are rooted in individualism and achievement values and should be interpreted as an expression of US culture, and therefore may have limited validity in societies that exhibit different cultural traits (Pennings, 1993).

Empirical research since Hofstede's (1983) contention has provided some support by demonstrating that the propensity to use incentive contracting varies significantly between national settings (e.g., Bloom & Van Reenen, 2010; Chiang & Birtch, 2006; Jansen et al., 2009; Merchant, Van der Stede, Lin & Yu, 2011; Newman & Nollen, 1996; Schuler & Rogovsky, 1998; Tosi & Greckhamer, 2004). While this research generally finds that firms in the US and other Anglo countries place greater emphasis on incentive contracting than those in other national contexts, this does not provide direct evidence on whether, or to what extent, delegation and incentive contracts are interdependent across cultural settings. Additionally, many of these studies make cross-national, rather than cross-cultural, comparisons, meaning that the evidence for the impact of cultural differences is mostly indicative rather than directly tested (Tosi & Greckhamer, 2004). The few studies that explicitly examine whether delegation and incentive contracting are jointly determined are also conducted in single national settings (e.g., Abernethy et al., 2015; Indjejikian & Matějka, 2012; Nagar, 2002).⁴ As such, there remains little empirical evidence concerning the effect of cultural values and preferences on the interdependence between delegation and incentive contracting.

We expect that delegation and incentive contracting act as complements for firms in the Anglo cultural region. Performance orientation is relatively high, while in-group collectivism is relatively low, in comparison to all GLOBE regions, which indicates an emphasis on individual aspirations and initiative

⁴ We are concerned with the interdependence between delegation and the emphasis on incentive contracting. There are also studies that provide evidence on the interdependency between delegation and the choice of performance measures for performance evaluation or incentive determination (e.g., Abernethy, Bouwens, & van Lent, 2004; Bouwens & van Lent, 2007; Moers, 2006). Additionally, a few studies report a significant association between delegation and incentive contracting emphasis (e.g., Foss & Laursen, 2005; Widener et al., 2008), but do not provide evidence on whether they are jointly determined (see Grabner & Moers, 2013). However, as these studies use data from single national contexts, the ability to draw conclusions about how cultural values influence these associations is limited.

and a preference for valuing results and performance over social relationships (House et al., 2004).⁵ These cultural traits are also consistent with research demonstrating that individualistic countries, such as the US, prefer rewards to be allocated on the basis of the equity rule, whereby they are determined in proportion to individual contribution (Chen, 1995; Deutsch, 1985). Incentive compensation is therefore more likely to be valued by, and induce greater effort in, individuals embedded in Anglo societies (Chiang & Birtch, 2012). Uncertainty avoidance is also low compared with the Nordic and Germanic regions, meaning that individuals are more willing to accept greater risk and perceive uncertain situations as an opportunity for individual initiative and achievement. Individuals will prefer greater autonomy and discretion as they are able to exercise greater control over their own actions (Harrison, McKinnon, Panchapakesan, & Leung, 1994). As the delegation of authority and incentive contracting are both congruent with Anglo cultural values, the agency theory prediction that delegation and incentive contracting act as complements is expected to hold.

The Germanic cultural region has similar values for performance orientation and in-group collectivism as compared with the Anglo region. Moreover, high assertiveness implies that performance-based rewards and material gain are strongly valued (House et al., 2004). Despite these commonalities, we expect incentive contracting to be less effective at resolving the goal alignment problems induced by delegation in the Germanic cultural region for two reasons. First, there is a high level of uncertainty avoidance. Individuals with greater risk-aversion are less comfortable with having higher levels of variable pay, and have a greater preference for fixed compensation which provides a stronger sense of stability and certainty (Chiang & Birtch, 2012; Chow et al., 1999; Jansen et al., 2009). Second, the Germanic region has a relatively higher orientation toward the future. Individuals in future-oriented societies tend to be less motivated by extrinsic rewards (House et al., 2004), and favour fixed remuneration over incentives based on performance (Hofstede & Soeters, 2002). This suggests that although personal achievement is expected to be rewarded, individuals in the Germanic cultural region will favour more permanent changes to compensation, such as increases to fixed pay or promotions (Chiang & Birtch, 2006). As such, incentive contracting will be less effective at ensuring

⁵ Associated with these cultural dimensions are beliefs concerning the role of corporations in society (Jansen et al., 2009). Anglo-American cultures conceive the societal role of organizations in terms of the shareholder-oriented or outsider model (García-Castro, Aguilera, & Ariño, 2013). This model is characterised by stock market capitalisation, maximisation of shareholder wealth and monitoring of top managers by means of market-based incentives. In the Germanic and Confucian Asian cultural regions, the societal role of organizations is more closely aligned with the insider, or stakeholder-oriented, model. This reflects a stronger role of financial institutions, denser interorganizational networks, and stronger collective bargaining, which encourage organizations to take a longer-term perspective and reduce the link between managerial incentives and short-term profitability.

that the actions of subordinates with higher levels of decision-making authority are aligned to the goals of the firm.

Incentive contracting is also unlikely to act as a complement to delegation for firms in the Nordic cultural region. Like Germanic societies, the Nordic cultural region has relatively high uncertainty avoidance and future orientation. Additionally, Nordic firms score low on assertiveness and performance orientation. Prior research has shown that countries with a preference for more feminine values (which are associated with lower assertiveness and performance orientation), such as Finland and Sweden, place greater value on intrinsic rewards and interpersonal relationships than performance-based financial rewards (Chiang & Birtch, 2007; Gomez-Mejia & Welbourne, 1991). Employees in Nordic countries may even see incentive contracting as potentially detrimental for generating cooperative behaviour (Chiang & Birtch, 2012; Merchant, Chow, & Wu, 1995; Newman & Nollen, 1996). Overall, incentive contracting and delegation are not expected to operate as complementary practices in Nordic firms. Hence, our first hypothesis is:

H1: Delegation of authority and incentive contracting operate as complements for firms in the Anglo cultural region but are independent in the Germanic and Nordic cultural regions.

2.2.2. Delegation and planning participation

Although both delegation and participation relate to decision making, they are distinct practices (Ashmos & McDaniel, 1996; Leana, 1987; Locke & Schweiger, 1979).⁶ Participation refers to joint decision making by two or more members, such as between a superior and subordinate. Delegation, on the other hand, refers to the transfer of responsibility or authority for a decision from a manager to a subordinate. The theoretical rationale for delegation is also quite different from participation in that it focuses on individual autonomy and self-determination rather than on engendering collaboration (Amundsen & Martinsen, 2014; Leana, 1987). Thus, participation and delegation affect individual behaviours through different motivational mechanisms. While a significant amount of prior research has investigated the determinants and consequences of delegation and participation separately, few studies have considered how they are related (for an exception see Gul, Tsui, Fong, & Kwok, 1995).

⁶ As distinct practices, delegation and participation can be combined in different ways. For example, a firm with high delegation may have little or no participation by middle managers in the development of strategic plans, and vice versa.

In this study, we consider participation in planning processes as a practice that may complement delegation in certain cultural regions. Planning is most closely associated with the cultural dimension of uncertainty avoidance. Societies that are high in uncertainty avoidance place a greater emphasis on the structuring of activities, standardised rules and procedures, and well-defined and detailed plans to help “employees reduce uncertainty and cope with their discomfort with unknown situations.” (Newman & Nollen, 1996, p. 756). The Germanic management approach is especially associated with an emphasis on planning. Guenther (2013), in a review of MC frameworks developed by Germanic academics, illustrates that despite differences in conceptualisations, they all share the common attribute of highlighting the importance of planning and monitoring (see also Wagenhofer, 2006). Empirical research is supportive, demonstrating the central role of planning in Germanic firms (Ahrens, 1997; Ahrens & Chapman, 1999, 2000; Schäffer & Weber, 2015; Stoffel, 1995).⁷ As the Nordic cultural region has a similar level of uncertainty avoidance, it is expected that planning processes will also be a prominent feature in Nordic firms. Consistent with this, prior studies report that Nordic managers place a high emphasis on careful planning and establishing order and stability (Lindell & Arvonon, 1997; Schramm-Nielsen, Lawrence, & Sivesind, 2004).

Lower power distance is associated with the expectation that subordinates are involved in decision making, and that relevant information will be widely dispersed among organizational members (Bachmann, Engelen, & Schwens, 2016; Hofstede, 1984; House et al., 2004). This is consistent with descriptions of the Nordic management approach as being democratic and consensus-seeking, and placing an emphasis on collaboration and relational trust (Andreasson & Lundqvist, 2018; Grenness, 2011; Lindell & Arvonon, 1997; Perlitz & Seger, 2004; Schramm-Nielsen et al., 2004). Similarly, Germanic firms are characterised by “consultative decision making, solidarity, hierarchy as a means of convenience, and a stress on expert power” (Perlitz & Seger, 2004, p 14).⁸ Tixier (1994) also writes that in the German model of management “not only are employees consulted, but decision making is frequently collective [...] and a decision from the top obtained without a consensus is not considered legitimate” (p. 10). This suggests that firms in both Germanic and Nordic societies favour planning processes that are participative.

⁷ Some prior literature has suggested that firms in high uncertainty avoidance settings will de-emphasise strategic planning (Hoffman, 2007; Hofstede, 1984; Hofstede, Hofstede, & Minkov, 2010). Contrary to this, empirical studies have shown the importance of strategic planning to German firms (Hahn, 2006; Rütth, 1989; Stoffel, 1995) and that for Germanic firms strategic planning is an effective mechanism to cope with uncertainty (Kreder & Zeller, 1988; Perlitz & Seger, 2004).

⁸ Although power distance in the Germanic cultural region is higher than the Nordic cultural region, it is below the average for GLOBE cultural regions.

We posit that in the Germanic and Nordic cultural regions, planning participation will complement the delegation of authority. Developing clear and detailed plans provides a means for the firm to reduce uncertainty around the future consequences of current actions, facilitating more decisive, timely, and congruent decision making (Schreyögg & Steinmann, 1987). Although planning can be used to specify desired activities and behaviours, it can also be used as a coordinative device by articulating and communicating goals and objectives. By making employees aware of how their roles and tasks relate to accomplishing organizational objectives, subordinate participation in the planning process attenuates positional bias or “sub-goal pursuit” (March & Simon, 1958). Furthermore, Ketokivi and Castañer (2004) argue that a consistent understanding of objectives is a critical precondition to not only implement intended plans, but also for ensuring that autonomous actions are congruent with the broader goals of the organization. Planning participation therefore increases the benefits of delegation by strengthening the alignment between subordinate decision making and the objectives of the firm (Bachmann et al., 2016). Likewise, delegation is expected to enhance the returns from planning participation in both Germanic and Nordic firms. Subordinates that receive delegated authority are more willing to share private knowledge in order to reduce uncertainty regarding the basis on which future actions are taken (Bachmann et al., 2016; Newman & Nollen, 1996). This reduces information asymmetry, as well as uncertainty, for both parties, and allows managers to clarify objectives if actions are observed to deviate too far from expectations. Greater consensus and clarity around the strategic and operational goals of the firm is therefore expected.

In the Anglo cultural region, participation in planning is less likely to operate as a complement to delegation. Uncertainty avoidance is lower relative to the Nordic and Germanic regions, meaning that individuals are more willing to accept greater risk and perceive uncertain situations as an opportunity for individual initiative and achievement (House et al., 2004). For this type of cultural disposition, delegation does not require involvement in planning processes to offset the increased uncertainty placed upon subordinates. The structure and certainty generated through planning processes may even impede the autonomous search for novel means of dealing with uncertainty, negating some of the benefits of delegation (Bachmann et al., 2016). The above arguments lead to our second hypothesis:

H2: Delegation of authority and subordinate participation in planning operate as complements for firms in the Germanic and the Nordic cultural region but are independent in the Anglo cultural region.

2.2.3. Delegation and value-based input controls

Theories from economics and organizational behaviour literature suggest that value-based input controls may be preferred as an alternative to incentive contracting in situations where contracting on outcomes is difficult (Campbell, 2012; Merchant, 1985; Ouchi, 1979). This entails situations where the performance measures available upon which to contract are unreliable (Campbell, 2012; Moers, 2006).⁹ We argue that societal values also affect the difficulty of incentive contracting, and increase the viability of value-based input controls, such as selection and socialisation, as mechanisms to achieve goal-congruent behaviour.

Out of the cultural regions investigated in this study, firms in Nordic societies are most likely to benefit from value-based input controls. In comparison to the Anglo and Germanic regions, assertiveness, performance orientation, and power distance are all relatively low, and institutional collectivism is high. Individuals in societies with these traits place greater value on relational-based employment exchanges through strong collegial ties, emphasise solidarity, cooperation and shared understandings, prefer informal and frequent communication, and take actions that are in the best interests of the group (Chiang & Birtch, 2012; Pennings, 1993; Schuler & Rogovsky, 1998). This suggests that in Nordic societies, contracting based on individual performance outcomes may not be effective. Additionally, as individuals value autonomy, flexibility, and coordination through mutual adjustment, MC practices that attempt to specify or overly constrain the actions of subordinates are unlikely to be well-received (Schramm-Nielsen et al., 2004). Rather, to align individual and organizational objectives, managers in Nordic firms place greater emphasis on value-based input controls such as employee selection and socialisation.

Selection refers to the emphasis placed on screening individuals prior to entering the firm as well as assessing the suitability of employees before placement into certain positions (Chatman, 1991). Although selection processes are often used to identify candidates with the necessary skills and competencies for a role, they can also be used to select those whose preferences, beliefs, and values are aligned with the organization (Gottschalg & Zollo, 2007). In Nordic firms, selection based on value alignment is likely to be particularly effective when used jointly with delegated decision making. As incentive contracting is difficult, Nordic firms are more likely to make use of intensive selection processes to identify individuals that have values and preferences that are closely aligned to those of the wider organization. This reduces the need to monitor the outcomes or activities of subordinates

⁹ Agency theory models that incorporate selection predict that firms will use selection processes to identify agents that are less opportunistic and have greater intrinsic motivation to carry out tasks aligned with organizational interests when the viability of contracting measures declines (Prendergast, 2008).

as values provide a basis upon which to make decisions even when facing uncertainty (Chatman, 1991). Furthermore, the more individuals perceive that their own identity is reflected in the values and purpose of the organization, the closer more personal and collective interests align with one another (Colvin & Boswell, 2007). Delegation is also likely to increase the benefits from selection processes, as it reinforces preferences for autonomy and relational trust, and more efficient coordination through mutual adjustments, based on a shared consensus as to what actions are in the best interests of the collective.

Socialisation refers to the process through which individuals internalise the values, beliefs, expected behaviours, and social norms of the organization (Chatman, 1991; Louis, 1980). Mentoring, and orientation and induction programmes can be used to acclimatise new managers to acceptable behaviours and norms (Chatman, 1991; Kraus, Kennergren, & von Unge, 2017). Similarly, social events and functions, as well as training and development processes, may be used to encourage greater social cohesion and identification with organizational values and objectives (Chatman, 1991; Harrison & Carroll, 1991). Like selection practices, socialisation is expected to increase the likelihood that subordinates with delegated authority act in the best interests of the collective, especially in Nordic firms where other forms of MC are less culturally amenable. Delegation strengthens the effects of socialisation by encouraging interaction between organizational members, which serves to reinforce shared norms and values (Ecker, van Triest, & Williams, 2013).

Value-based input controls and delegation are not expected to function interdependently in either Anglo or Germanic regions. In contrast to the Nordic region, individuals in the Anglo and Germanic regions are more likely to view employment as a transactional arrangement, emphasise results over relationships, value personal aspirations and achievement over the interests of the group, and perceive others as opportunistic (Chiang & Birtch, 2012; House et al., 2004). While these cultural traits are amenable to incentive contracting, they reduce the relative effectiveness of value-based MC practices to act as a complement to delegation. Furthermore, selection processes in cultures characterised by these traits will tend to be based on individual performance potential, with greater weight given to more objective criteria such as the knowledge, skills and technical abilities of candidates, rather than interpersonal competencies and organizational value alignment (Aycan, 2005; Stone, Stone-Romero, & Lukaszewski, 2007).¹⁰ Socialisation processes in Anglo and Germanic firms are

¹⁰ Interestingly, the field study by Campbell (2012) on how selection based on alignment with organizational objectives operates interdependently with delegation was conducted in a US firm. While this firm faced an environment that made contracting on outcomes particularly problematic, our arguments are based on the

also more likely to reinforce preferences for individual achievement and performance rather than group identification and cohesiveness. For example, research suggests that individuals from Anglo cultures prefer training and development that focuses on individualised learning, competitive learning environments, and task completion (Aycan, 2000; McIntyre, 1996), which will be less effective at developing shared norms and values than training centred on group-based learning that is conducted in cooperative learning environments. From the preceding arguments we formulate the following hypothesis:

H3: Delegation of authority and value-based input controls (i.e. selection based on values and socialisation) operate as complements for firms in the Nordic cultural region but are independent in the Anglo and Germanic cultural regions.

3. Method

3.1. Data collection

This study uses data from a survey conducted in eleven countries, of which nine are included in the analysis.¹¹ The same survey instrument was used in all countries (Schaffer & Riordan, 2003). The survey instrument was originally developed in English and then translated into the local language. The survey was subsequently back-translated by an independent researcher (Harkness, 2003) to ensure consistency in meaning (van de Vijver & Leung, 1997). The survey instrument underwent extensive pre-testing in each country with academics in the MC discipline as well as practitioners that are representative of the target population. Sample information for each country is detailed in Table 3.

<Insert Table 3 about here>

The survey population consists of private for-profit companies that have more than 250 employees. This minimum criterion was established to ensure that the MC variables of interest would be observed. Firms were selected for inclusion through a stratified sampling approach (Cochran, 1977). Samples were stratified by industry (manufacturing, service and wholesale) and size (medium, defined as firms with 250 to 1,000 employees, and large, defined as firms with 1,000 or more employees). For

expectation that the cultural context of Anglo firms will be *on average* more amenable to incentive contracting, while the cultural traits of the Germanic and Nordic regions make incentive contracting more difficult.

¹¹ The survey was also conducted in Italy and Poland. Within the GLOBE study, Italy is part of the Latin Europe cluster and Poland part of the Eastern Europe cluster. With only one country per cultural region, and a lower number of observations than in the three cultural regions used in the analysis, we excluded observations from these two countries. Consistent with the GLOBE study, 6 firms from the French-speaking part of Belgium and 12 firms from the French-speaking part of Canada were also excluded.

European countries, the sample was drawn from the ORBIS database, Dun and Bradstreet was used for the Australian sample, and Scott's National database for the Canadian sample.

The unit of analysis is the strategic business unit (SBU), which is defined as a relatively independent entity that has a unique market context (in relation to other SBUs of the firm) and competitive strategy. Studying SBUs should reveal a more homogeneous sample than examining MC practices at the company level (Kruis, Speklé, & Widener, 2016), as each business unit is likely to face unique competitive and contextual situations when compared with other business units of the firm. In some cases, firms operated as single independent businesses. Following prior literature, SBUs and independent firms were considered to be empirically comparable (e.g., Chenhall & Langfield-Smith, 1998; Henri, 2006). Target respondents are CEOs and managing directors of SBUs. If they were unable to be interviewed, we asked them to nominate another member of the top management team who had detailed knowledge of the SBU's MC practices and operating environment. Almost all interviews took place with a single interviewee. Respondent titles and average interview durations by country are displayed in Table 4.

<Insert Table 4 about here>

Data collection took place from November 2009 to March 2013. Within individual countries, the data collection period lasted between 8 and 17 months, with a mean of 14 months. Due to the detailed and comprehensive nature of the survey instrument, data were collected through structured interviews. This increases the validity of survey responses as any ambiguities can be clarified with the respondent. Furthermore, respondents were asked to briefly discuss the reasoning behind scores to each item, allowing the interviewer to assess any potential misinterpretation of the questions or response categories. Enderich, Brandau, and Hoffjan (2011) warn that such ambiguities may be particularly important in cross-country studies due to culture-specific perceptions of identical phenomena. Minimizing ambiguity and ensuring respondents answered each question with explicit reasoning should, therefore, provide a more valid and reliable set of data than otherwise would have been the case had data been obtained from the more typical mail- or internet-based approaches.

In total, 2,199 firms were invited (via telephone or email) to participate in the study, with 694 firms agreeing to participate. We eliminated SBUs with shared headquarters and those with headquarters

in a different cultural region. We also removed nine cases where there were significant missing data.¹² Omitting these cases left a usable sample of 584 responses. Structured interviews were conducted face-to-face (70%) or by telephone (30%). Where possible, interviews were audio-recorded. Most of the interviews were conducted by one or more of the authors (77%), although some were conducted by research students who were trained to collect the data (23%). At the start of the interview, participants were informed in general terms about the purpose and structure of the interview. To ensure consistency and reliability of collected data, interviewers were provided with a comprehensive lexicon outlining concrete definitions and illustrations of the MC practices and dimensions being assessed by each question.¹³

3.2. Variable measurement

The survey instrument used previously validated measures where possible. In instances where existing instruments needed to be adapted or new measures created, we followed contemporary measurement guidelines (Bedford & Speklé, 2018; MacKenzie, Podsakoff, & Podsakoff, 2011). Descriptive statistics for the full sample, and for each cultural region, are presented in Table 5.

<Insert Table 5 about here>

The dimensionality, validity, and reliability of first-order reflectively measured constructs were assessed through confirmatory factor analysis (CFA), Cronbach's Alphas, average variance extracted (AVE) and composite reliability (CR) (Bedford & Speklé, 2018). For formative constructs, we checked item weights on the first principal component and variance inflation factors (VIFs) (Petter, Straub, & Rai, 2007). Item weights on formative constructs are positive and have weights above the recommended minimum of 0.30 (Hair, Hult, Ringle, & Sarstedt, 2017; see Appendix A). VIFs are calculated to assess multicollinearity. The maximum VIF of 2.28 is below the general threshold of 5 (Hair et al., 2017). Correlations are reported in Table 6.

<Insert Table 6 about here>

¹² Given the length of the survey, respondents were able to complete questions relating to firm context in their own time. In nine cases, there were significant blocks of responses missing, and we were not able to obtain responses through follow-up procedures. These cases were omitted. Additionally, there was a very small number of missing responses, representing less than 0.3% of the collected data. These missing responses were imputed using the expectations-maximisation algorithm. We also conducted the analysis after removing any cases with missing data, and find no substantive effect on our results.

¹³ We regularly conversed with one another both prior to and during, the implementation of the survey instrument. Semi-annual, face-to-face meetings were also organized, where we discussed survey development and implementation.

Delegation of authority (DEL) is a formatively measured composite that is assessed through 13 items representing key strategic, business and operational decision areas (Bedford & Malmi, 2015). Items were primarily derived from the scales of Khandwalla (1973) and Gordon and Narayanan (1984), which have been employed extensively in the literature (e.g., Abernethy et al., 2004; Moers, 2006). *Incentive contracting (INC)* is measured using four items adapted from Chalos and O'Connor (2004) and Shields and Young (1993). Consistent with prior literature on incentive contracting, we use a reflective measurement model. Unidimensionality and convergent validity are supported by items loading >0.50 on a single factor, although the AVE is marginally below the recommended threshold (AVE = 0.496). Scores for Cronbach's alpha (0.78) and composite reliability (0.79) provide evidence for internal consistency. The square root of the AVE is also higher than the bicomrelation with other variables, supporting discriminant validity.

Prior literature suggests that there are two main forms of planning within organizations; strategic planning and action planning (De Baerdemaeker & Bruggeman, 2015; Malmi & Brown, 2008). Measures for *strategic planning participation (SPP)* and *action planning participation (APP)* were purpose developed. Following Brews and Hunt (1999), we distinguished between participation in planning ends and means, where "ends relate to what an organization desires to achieve, while means relate to how an organization intends achieving these ends" (p. 891). To measure *SPP* and *APP*, respondents were asked to select the description that best represented the extent of subordinate participation in their SBU for both ends and means (see Appendix A). *Selection* is measured through a single item which asks how much importance is placed on values in recruitment decisions (Bedford & Malmi, 2015; Snell, 1992). *Socialisation* is assessed using the three-item measure of Bedford and Malmi (2015). The items represent the primary means available to managers to encourage organizational socialisation as identified in the literature (Chatman, 1991; Harrison & Carroll, 1991).

A wide range of variables are included to control for firm-level contextual determinants of the MC practices. We include four dimensions of a firm's external environment. Following Bedford and Malmi (2015), *environmental change* and *environmental predictability* are measured as formative composites based on five dimensions of the SBU's external environment.¹⁴ *Environmental complexity*

¹⁴ Six items were included in the survey instrument. One item relating to the economic dimension was dropped, as the principal component weight on this item was negative for the environmental predictability measure. Although the item weight was positive for the environmental change measure, we dropped the item from both measures to keep the conceptual domain of the constructs consistent. However, whether the items are dropped or retained makes no substantive difference to the results reported in Section 4.

represents the diversity of factors relevant to SBU operations (Dess & Beard, 1984), and is assessed using the two-item formative measure from Bedford and Malmi (2015). *Environmental hostility* reflects the degree of threat imposed by the environment on the firm (Miller & Friesen, 1983). The construct is also measured formatively using two items from Bedford and Malmi (2015). *Strategy* is assessed by asking one question reflecting the emphasis on a low-cost strategy and two items related to product innovation (Chenhall & Langfield-Smith, 1998; Ittner, Larcker, & Randall, 2003).

Firm size is measured as the natural log of the number of employees. *Firm complexity* is assessed by summing the number of primary and support functions that respondents identified as being located within the SBU from a list of 10 functions. The degree of *internationalisation* is assessed by taking the natural log of the scores to a question asking respondents to indicate the number of countries in which the SBU conducts operational activities. We control for *ownership type* through dummy variables which categorise firms by the major owner (family, government, institutional, venture capitalist, or other). *SOX compliance* is a dummy variable that takes the value of 1 if the firm has full or partial compliance with SOX regulations and 0 otherwise. *Stock exchange listing* is also a dummy variable, coded as 1 if the SBU is part of an entity listed on a stock exchange. We also control for *industry* and *country* fixed effects by including dummy variables representing single-digit NACE codes and nation dummy variables.

4. Results

To assess our hypotheses, we follow the procedure outlined by Grabner and Moers (2013) for estimating demand functions. Demand functions, which examine the association between a MC practice and a set of determinants (i.e. contextual variables), are appropriate when the focus is on the choices made by firms. We focus on MC practice choices, rather than outcomes, for two reasons. First, as cultural traits are relatively stable, we expect that firms have had sufficient time to select MC practice combinations that, on average, do not deviate significantly from optimality. Second, recent evidence suggests that even when firms do deviate from optimality, tests using the demand function remain relatively robust (Masschelein & Moers, 2018).

To test for complementarity, we follow prior literature and estimate conditional correlations between pairs of MC practices (Grabner, 2014; Indjejikian & Matějka, 2012). Conditional correlations are calculated using regression residuals. To obtain the residuals we run seemingly unrelated regressions (SUR) to simultaneously estimate the influence of the set of contextual determinants on each MC

practice (Abernethy et al., 2015). We use the residuals of these equations to assess whether the MC practices pairs are interdependent. The results of the SUR analysis are shown in Table 7.

<Insert Table 7 about here>

The conditional correlations are reported in Table 8. Our first hypothesis stated that delegation and incentive contracting were complements for firms in the Anglo cultural region. We find support for H1, with a positive and significant correlation between the residuals for delegation and incentive contracting in the Anglo cultural region ($r = 0.43, p < 0.01$), while the conditional correlations for both the Germanic and Nordic regions are insignificant. Additionally, we compare the correlation for the Anglo cultural region with the correlations reported for delegation and incentive contracting in the Germanic and Nordic cultural regions. Using the Fisher transformation, we find that the correlation for firms in the Anglo cultural region is significantly different from those reported for the Germanic and Nordic regions ($p < 0.01$). This difference implies that delegation and incentive contracting are complements only in the Anglo cultural region, and are independent practices in the Germanic and Nordic regions.

<Insert Table 8 about here>

H2 predicted that delegation and planning participation are complementary practices in the Germanic and Nordic cultural regions, but are independent practices for Anglo firms. The conditional correlation results shown in Table 8 mostly support H2. For the Germanic region there are positive and significant correlations between delegation and strategic planning participation ($r = 0.32, p < 0.01$) as well as between delegation and action planning participation ($r = 0.36, p < 0.01$). Results for the Nordic sample also reveal a positive and significant correlation between delegation and both strategic ($r = 0.19, p < 0.01$) and action planning participation ($r = 0.23, p < 0.01$). With regards to the Anglo cultural region, the correlation between delegation and strategic planning participation is insignificant ($r = 0.12, n.s.$). However, there is a positive and significant association between delegation and action planning participation ($r = 0.34, p < 0.01$). As to this association, we examine differences between the correlations of each region but find no significant results. The evidence mostly supports H2, although delegation and action planning participation appear to be complementary practices in all regions.

H3 stated that selection and socialisation complement the delegation of authority for firms in the Nordic cultural region, but not in the Anglo or Germanic regions. The test results for H3 provide partial

support, with a positive and significant association between the residuals for delegation and selection ($r = 0.12, p < 0.05$), while the correlation between delegation and socialisation is insignificant ($r = 0.02, n.s.$). Correlations between delegation and both value-based input controls are insignificant in the Anglo and Germanic cultural regions. We test for differences between the conditional correlations of delegation and selection, finding a significant difference between the Anglo and Nordic regions ($p < 0.10$). This provides further support for the conjecture that the MC practices which complement delegation vary between cultural regions. There is, however, no significant difference between the Nordic and Germanic regions. Overall, our results provide some support for H3.

5. Discussion and conclusion

This study aimed to examine whether interdependencies between MC practices are conditional on cultural regions. While the MC literature has made some progress towards addressing the extent and nature of interrelatedness between various MC practices (Grabner & Moers, 2013), there has been limited investigation into how context influences MC practice interdependence (see however Bedford, 2015; Bedford, Malmi, & Sandelin, 2016; Grabner, 2014). The findings of this study indicate that cultural region is an important factor associated with whether and how MC practices form interdependent systems.

We find that delegation and incentive contracting are complementary MC practices for firms in the Anglo cultural region. Our evidence suggests, however, that this is not the case for firms in the Germanic and Nordic cultural regions. These findings lend support to the arguments of those who have raised concerns about the universal applicability of standard agency theory (Chiang & Birtch, 2012; Hofstede, 1983; Pennings, 1993). As we see variation between cultures in factors such as the orientation towards group or individual concerns, sensitivity to risk, and preferences for how rewards are allocated, the types of control problems a firm faces and the effectiveness of different solutions are likely to be at least partly dependent on the cultural region in which the firm operates (Johnson & Droege, 2004).

Our results suggest that when greater decision-making authority is delegated to subordinates, the trade-off between the costs and benefits of using incentive contracting to mitigate problems such as goal alignment vary between cultural regions (Johnson & Droege, 2004). Instead of incentive contracting, we find that in the Germanic and Nordic culture regions, participation in strategic and action planning operate as complements to delegation. Our results also show that delegation and selection based on values, but not socialisation, are interdependent in firms from the Nordic cultural

region. This is in line with our predictions based on differences in cultural traits as well as prior literature characterizing management and leadership styles in these regions.

We find, though, that there may be certain MC practice combinations that are not significantly affected by variations in cultural values and preferences. Our results indicate that delegation and action planning participation are jointly determined in all cultural regions. This suggests that the combination of these two MC practices may form part of a set of “best practices” that are applicable across, at least, the Western cultural regions examined in this study. Overall, our study implies that at least some degree of caution should be taken when making cross-cultural generalisations about not only the relative effectiveness of individual MC practices, such as the design of incentive contracts (Jansen et al., 2009), but also the extent to which they may function as either complements or substitutes.

Our study extends cross-cultural MC research by examining MC practice choices between three Western cultural regions. Prior studies have been conducted mostly at a cross-national level. In contrast, we study differences in MC practices between cultural regions instead of between nations, and examine regions (i.e. Germanic and Nordic) that have not been the focus of much empirical analysis. Prior cross-cultural research attributes various institutional factors, such as the legal system, formalisation of employment contracts, degree of unionisation, and taxation, among others, as determinants of MC practice variation (e.g., Jansen et al., 2009). While institutional factors are not separate from culture, and each is likely to influence the other, studying supra-national regions allows for better control of country-level institutional differences, providing a cleaner setting to address the impact of culture. Hence, we show that despite Western cultures being quite close to each other in many respects, there remain important differences that influence the choice of MC practices and their interdependence.

This study is likely to be valuable also for those trying to explain variation in MC practices to specific cultural traits. Although prior research demonstrates associations between a wide variety of MC practices and different dimensions of culture, the field has yet to generate much consensus around which dimensions are consistently associated with particular MC practices, and which MC practices are more likely to be universally beneficial (Chow et al., 1999; Granlund & Lukka, 1998). As Jansen et al. (2009) and Long and Shields (2005) comment, we remain at an early stage in our understanding of the nature and causes of cross-cultural variation in the design and use of MC practices. Our study

suggests, though, that accounting for potential interdependencies between MC practices may help future research to address inconsistencies observed in prior literature.

This study is not without limitations. First, we relied on a single respondent from each firm, and their views on MC practices are subjective. Reliance on a single respondent may induce common method bias. While we attempted to minimise the likelihood of such bias through careful design of the survey instrument, it cannot be entirely ruled out (MacKenzie & Podsakoff, 2012). Additionally, for most of the constructs in this study, subjective instruments are the only way to gain insights into how controls are designed and used within firms. Second, although our full sample is relatively large compared to most survey-based studies in MC research, the lower number of responses in the Anglo sample reduces the power of hypothesis tests for this cultural region. In particular, conclusions about non-significant findings need to be subjected to further research. Third, there was a time lag between the collection of data sets for some countries. The main MC practices observed in this study are unlikely to have systematically varied over this period, and our control of country-level effects should reduce this concern. Fourth, we examine only six MC practices. The choice of these practices was based on theoretical expectations that they would be effective in complementing delegation of authority in particular cultural regions. Yet there are other MC practices, such as the characteristics of performance measures and other forms of incentives (e.g. implicit rewards such as promotions and discretionary bonuses), that may be related to the MC practices investigated in this study. Finally, we examine only three Western cultural regions. These regions were chosen because comparisons between them have been largely absent from prior empirical MC research and they would be an interesting setting to examine the limits of agency theory predictions.

This leaves extensive opportunities for future research. Examining the associations found in this study across other cultural regions, and assessing the design and use of a wider range of MC practices, are certainly needed. The MC practice interdependencies observed in this study may also allude to control archetypes. That is, MC practices that are interdependent in one cultural region, but not another, may form a core part of the control archetype that is most prominent in that cultural region. More research is needed to develop and test these ideas further. Overall, much more research is required to build a comprehensive understanding of how the choice of MC practices varies across cultural regions and to develop more generalisable MC theories.

References

- Abernethy, M. A., Bouwens, J., & van Lent, L. (2004). Determinants of control system design in divisionalized firms. *The Accounting Review*, 79(3), 545-570.
- Abernethy, M. A., Bouwens, J., & van Lent, L. (2010). Leadership and control system design. *Management Accounting Research*, 21(1), 2-16.
- Abernethy, M. A., Dekker, H. C., & Schulz, A. K.-D. (2015). Are employee selection and incentive contracts complements or substitutes? *Journal of Accounting Research*, 53(4), 633-668.
- Ahrens, T. (1997). Talking accounting: an ethnography of management knowledge in British and German brewers. *Accounting, Organizations and Society*, 22(7), 617-637.
- Ahrens, T., & Chapman, C. S. (1999). The role of management accountants in Britain and Germany. *Management Accounting: Magazine for Chartered Management Accountants*, 77(5), 42-43.
- Ahrens, T., & Chapman, C. S. (2000). Occupational identity of management accountants in Britain and Germany. *European Accounting Review*, 9(4), 477-498.
- Amundsen, S., & Martinsen, Ø. L. (2014). Empowering leadership: construct clarification, conceptualization, and validation of a new scale. *Leadership Quarterly*, 25(3), 487-511.
- Andreasson, U., & Lundqvist, M. (2018). *Nordiskt ledarskap*. Copenhagen, Denmark: Nordiska Ministerrådet.
- Anseel, F., Lievens, F., Schollaert, E., & Choragwicka, B. (2010). Response rates in organizational science, 1995-2008: a meta-analytic review and guidelines for survey researchers. *Journal of Business and Psychology*, 25(3), 335-349.
- Ashmos, D. P., & McDaniel Jr., R. R. (1996). Understanding the participation of critical task specialists in strategic decision making. *Decision Sciences*, 27(1), 103-121.
- Aycan, Z. (2005). The interplay between cultural and institutional/structural contingencies in human resource management practices. *International Journal of Human Resource Management*, 16(7), 1083-1119.
- Bachmann, J.-T., Engelen, A., & Schwens, C. (2016). Toward a better understanding of the association between strategic planning and entrepreneurial orientation - The moderating role of national culture. *Journal of International Management*, 22(4), 297-315.
- Baskerville, R. F. (2003). Hofstede never studied culture. *Accounting, Organizations and Society*, 28(1), 1-14.
- Bedford, D. S. (2015). Management control systems across different modes of innovation: implications for firm performance. *Management Accounting Research*, 28, 12-30.
- Bedford, D. S., & Malmi, T. (2015). Configurations of control: an exploratory analysis. *Management Accounting Research*, 27, 2-26.
- Bedford, D. S., Malmi, T., & Sandelin, M. (2016). Management control effectiveness and strategy: an empirical analysis of packages and systems. *Accounting, Organizations and Society*, 51, 12-28.
- Bedford, D. S., & Speklé, R. F. (2018). Construct validity in survey-based management accounting and control research. *Journal of Management Accounting Research*, 30(2), 23-58.
- Beugelsdijk, S., Kostova, T., & Roth, K. (2017). An overview of Hofstede-inspired country-level culture research in international business since 2006. *Journal of International Business Studies*, 48(1), 30-47.
- Bhaskaran, S., & Sukumaran, N. (2007). National culture, business culture and management practices: consequential relationships? *Cross Cultural Management: An International Journal*, 14(1), 54-67.
- Bloom, N., & Van Reenen, J. (2010). Why do management practices differ across firms and countries? *Journal of Economic Perspectives*, 24(1), 203-224.
- Bouwens, J., & Van Lent, L. (2007). Assessing the performance of business unit managers. *Journal of Accounting Research*, 45(4), 667-697.
- Brews, P. J., & Hunt, M. R. (1999). Learning to plan and planning to learn: resolving the planning school/learning school debate. *Strategic Management Journal*, 20(10), 889-913.
- Bushman, R. M., Indjejikian, R. J., & Penno, M. C. (2000). Private predecision information, performance

- measure congruity and the value of delegation. *Contemporary Accounting Research*, 17(4), 561-587.
- Campbell, D. (2012). Employee selection as a control system. *Journal of Accounting Research*, 50(4), 931-966.
- Chalos, P., & O'Connor, N. G. (2004). Determinants of the use of various control mechanisms in US-Chinese joint ventures. *Accounting, Organizations and Society*, 29(7), 591-608.
- Chatman, J. A. (1991). Matching people and organizations: selection and socialization in public accounting firms. *Administrative Science Quarterly*, 36(3), 459-484.
- Chen, C. C. (1995). New trends in rewards allocation preferences: a Sino-U.S. comparison. *Academy of Management Journal*, 38(2), 408-428.
- Chenhall, R. H., & Langfield-Smith, K. (1998). The relationship between strategic priorities, management techniques and management accounting: an empirical investigation using a systems approach. *Accounting, Organizations and Society*, 23(3), 243-264.
- Chiang, F. F. T., & Birtch, T. A. (2006). An empirical examination of reward preferences within and across national settings. *Management International Review*, 46(5), 573-596.
- Chiang, F. F. T., & Birtch, T. A. (2007). The transferability of management practices: examining cross-national differences in reward preferences. *Human Relations*, 60(9), 1293-1330.
- Chiang, F. F. T., & Birtch, T. A. (2012). The performance implications of financial and non-financial rewards: an Asian Nordic comparison. *Journal of Management Studies*, 49(3), 538-570.
- Chow, C. W., Kato, Y., & Shields, M. D. (1994). National culture and the preference for management controls: an exploratory study of the firm-labor market interface. *Accounting, Organizations and Society*, 19(4-5), 381-400.
- Chow, C. W., Shields, M. D., & Wu, A. (1999). The importance of national culture in the design of and preference for management controls for multi-national operations. *Accounting, Organizations and Society*, 24(5-6), 441-461.
- Cochran, W. G. (1977). *Sampling techniques* (3rd ed.). New York, NY: John Wiley & Sons.
- Colvin, A. J. S., & Boswell, W. R. (2007). The problem of action and interest alignment: beyond job requirements and incentive compensation. *Human Resource Management Review*, 17(1), 38-51.
- De Baerdemaeker, J., & Bruggeman, W. (2015). The impact of participation in strategic planning on managers' creation of budgetary slack: the mediating role of autonomous motivation and affective organisational commitment. *Management Accounting Review*, 29, 1-12.
- Dess, G. G., & Beard, D. W. (1984). Dimensions of organizational task environments. *Administrative Science Quarterly*, 29(1), 52-73.
- Deutsch, M. (1985). *Distributive justice: a social-psychological perspective*. New Haven and London: Yale University Press.
- Ecker, B., van Triest, S., & Williams, C. (2013). Management control and the decentralization of R&D. *Journal of Management*, 39(4), 906-927.
- Endenich, C., Brandau, M., & Hoffjan, A. (2011). Two decades of research on comparative management accounting - Achievements and future directions. *Australian Accounting Review*, 21(4), 365-382.
- Foss, N. J., & Laursen, K. (2005). Performance pay, delegation and multitasking under uncertainty and innovativeness: an empirical investigation. *Journal of Economic Behavior and Organization*, 58(2), 246-276.
- García-Castro, R., Aguilera, R. V., & Ariño, M. A. (2013). Bundles of firm corporate governance practices: a fuzzy set analysis. *Corporate Governance: An International Review*, 21(4), 390-407.
- Gomez-Mejia, L. R., & Welbourne, T. (1991). Compensation strategies in a global context. *Human Resource Planning*, 14(1), 29-41.
- Gordon, L. A., & Narayanan, V. K. (1984). Management accounting systems, perceived environmental uncertainty and organization structure: an empirical investigation. *Accounting, Organizations and Society*, 9(1), 33-47.
- Gottschalg, O., & Zollo, M. (2007). Interest alignment and competitive advantage. *Academy of*

- Management Review*, 32(2), 418-437.
- Grabner, I. (2014). Incentive system design in creativity-dependent firms. *The Accounting Review*, 89(5), 1729-1750.
- Grabner, I., & Moers, F. (2013). Management control as a system or a package? Conceptual and empirical issues. *Accounting, Organizations and Society*, 38(6-7), 407-419.
- Granlund, M., & Lukka, K. (1998). It's a small world of management accounting practices. *Journal of Management Accounting Research*, 10, 153-179.
- Grenness, T. (2011). Will the 'Scandinavian leadership model' survive the forces of globalisation? A swot analysis. *International Journal of Business and Globalisation*, 7(3), 332-350.
- Guenther, T. W. (2013). Conceptualisations of 'controlling' in German-speaking countries: analysis and comparison with Anglo-American management control frameworks. *Journal of Management Control*, 23(4), 269-290.
- Gul, F. A., Tsui, J. S. L., Fong, S. C. C. & Kwok, H. Y. L. (1995). Decentralisation as a moderating factor in the budgetary participation-performance relationship: some Hong Kong evidence. *Accounting and Business Research*, 25(98), 107-113.
- Gupta, V., & Hanges, P. J. (2004). Regional and climate clustering of societal cultures. In R. J. House, P. J. Hanges, M. Javidan, P. W. Dorfman, & V. Gupta (Eds.), *Culture, leadership, and organizations: the GLOBE study of 62 societies* (pp. 178-218). Thousand Oaks, CA: Sage Publications.
- Hahn, D. (2006). Stand und Entwicklungstendenzen der strategischen Planung. In D. Hahn, & B. Taylor (Eds.), *Strategische Unternehmensplanung - Strategische Unternehmensführung: Stand und Entwicklungstendenzen* (pp. 3-28). Berlin, Germany: Springer.
- Hair Jr., J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Harkness, J. A. (2003). Questionnaire translation. In J. A. Harkness, F. J. R. Van de Vijver, & P. P. Mohler (Eds.), *Cross-cultural survey methods* (pp. 35-56). Hoboken, NJ: John Wiley & Sons.
- Harrison, G. L., McKinnon, J. L., Panchapakesan, S., & Leung, M. (1994). The influence of culture on organizational design and planning and control in Australia and the United States compared with Singapore and Hong Kong. *Journal of International Financial Management and Accounting*, 5(3), 242-261.
- Harrison, J. R., & Carroll, G. R. (1991). Keeping the faith: a model of cultural transmission in formal organizations. *Administrative Science Quarterly*, 36(4), 552-582.
- Henri, J.-F. (2006). Management control systems and strategy: a resource-based perspective. *Accounting, Organizations and Society*, 31(6), 529-558.
- Hoffman, R. C. (2007). The strategic planning process and performance relationship: does culture matter? *Journal of Business Strategies*, 24(1), 27-48.
- Hofstede, G. (1980). *Culture's consequences: international differences in work-related values*. Newbury Park, CA: Sage Publications.
- Hofstede, G. (1983). The cultural relativity of organizational practices and theories. *Journal of International Business Studies*, 14(2), 75-89.
- Hofstede, G. (1984). Cultural dimensions in management and planning. *Asia Pacific Journal of Management*, 1(2), 81-99.
- Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and organizations: software of the mind: international cooperation and its importance for survival* (3rd ed.). New York, NY: McGraw-Hill.
- Hofstede, G., & Soeters, J. (2002). Consensus societies with their own character: national cultures in Japan and the Netherlands. *Comparative Sociology*, 1(1), 1-16.
- Holmstrom, B., & Milgrom, P. (1994). The firm as an incentive system. *American Economic Review*, 84(4), 972-991.
- Holthausen, R. W., Larcker, D. F., & Sloan, R. G. (1995). Annual bonus schemes and the manipulation of earnings. *Journal of Accounting and Economics*, 19(1), 29-74.
- Hotho, J., J. (2014). From typology to taxonomy: a configurational analysis of national business systems and their explanatory power. *Organization Studies*, 35(5), 671-702.

- House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., & Gupta, V. (2004). *Culture, leadership, and organizations: the GLOBE study of 62 societies*. Thousand Oaks, CA: Sage Publications.
- Indjejikian, R. J., & Matějka, M. (2012). Accounting decentralization and performance evaluation of business unit managers. *The Accounting Review*, *87*(1), 261-290.
- Ittner, C. D., Larcker, D. F., & Randall, T. (2003). Performance implications of strategic performance measurement in financial services firms. *Accounting, Organizations and Society*, *28*(7-8), 715-741.
- Jansen, E. P., Merchant, K. A., & Van der Stede, W. A. (2009). National differences in incentive compensation practices: the differing roles of financial performance measurement in the United States and the Netherlands. *Accounting, Organizations and Society*, *34*(1), 58-84.
- Jensen, M. C., & Meckling, W. (1992). Specific and general knowledge, and organizational structure. In L. Werin, & H. Wijkander (Eds.), *Contract economics* (pp. 251-274). Oxford, UK: Blackwell.
- Johnson, N. B., & Droege, S. (2004). Reflections on the generalization of agency theory: cross-cultural considerations. *Human Resources Management Review*, *14*(3), 325-335.
- Kachelmeier, S. J., Thornock, T. A., & Williamson, M. G. (2016). Communicated values as informal controls: promoting quality while undermining productivity? *Contemporary Accounting Research*, *33*(4), 1411-1434.
- Ketokivi, M., & Castañer, X. (2004). Strategic planning as an integrative device. *Administrative Science Quarterly*, *49*(3), 337-365.
- Khandwalla, P. N. (1973). Effect of competition on the structure of top management control. *Academy of Management Journal*, *16*(2), 285-295.
- Kirkman, B. L., Lowe, K. B., & Gibson, C. B. (2017). A retrospective on Culture's Consequences: the 35-year journey. *Journal of International Business Studies*, *48*(1), 12-29.
- Kraus, K., Kennergren, C. & von Unge, A. (2017). The interplay between ideological control and formal management control systems - A case study of a non-governmental organisation. *Accounting, Organizations and Society*, *63*, 42-59.
- Kreder, M., & Zeller, M. (1988). Control in German and U.S. Companies. *Management International Review*, *28*(3), 58-66.
- Kruis, A.-M., Speklé, R. F., & Widener, S. K. (2016). The levers of control framework: an exploratory analysis of balance. *Management Accounting Research*, *32*, 27-44.
- Lazear, E. P. (2000). The power of incentives. *American Economic Review*, *90*(2), 410-414.
- Leana, C. R. (1987). Power relinquishment versus power sharing: theoretical clarification and empirical comparison of delegation and participation. *Journal of Applied Psychology*, *72*(2), 228-233.
- Lillis, A. M., & Mundy, J. (2005). Cross-sectional field studies in management accounting research - Closing the gaps between surveys and case studies. *Journal of Management Accounting Research*, *17*, 119-141.
- Lindell, M., & Arvonen, J. (1997). The Nordic management style in a European context. *International Studies of Management and Organization*, *26*(3), 73-91.
- Locke, E. A. & Schweiger, D. M. (1979). Participation in decision-making: one more look. In B. M. Staw (Ed.), *Research in organizational behavior: an annual series of analytical essays and critical reviews*, vol. 1. (pp. 265-339). Greenwich, CT: Jai Press.
- Long, R. J., & Shields, J. L. (2005). Performance pay in Canadian and Australian firms: a comparative study. *International Journal of Human Resource Management*, *16*(10), 1783-1811.
- Louis, M. R. (1980). Surprise and sense making: what newcomers experience in entering unfamiliar organizational settings. *Administrative Science Quarterly*, *25*(2), 226-251.
- Lourenço, S. M. (2016). Monetary incentives, feedback, and recognition - Complements or substitutes? Evidence from a field experiment in a retail services company. *The Accounting Review*, *91*(1), 279-297.
- MacKenzie, S. B., & Podsakoff, P. M. (2012). Common method bias in marketing: causes, mechanisms, and procedural remedies. *Journal of Retailing*, *88*(4), 542-555.
- MacKenzie, S. B., Podsakoff, P. M., & Podsakoff, N. P. (2011). Construct measurement and validation

- procedures in MIS and behavioral research: integrating new and existing techniques. *MIS Quarterly*, 35(2), 293-334.
- Malmi, T., & Brown, D. A. (2008). Management control systems as a package - Opportunities, challenges and research directions. *Management Accounting Research*, 19(4), 287-300.
- March, J. G., & Simon, H. A. (1958). *Organizations*. New York, NY: John Wiley & Sons.
- Masschelein, S., & Moers, F. (2018, October). Statistical methods for accounting systems. Working paper presented at the 2018 AOS Conference on Management Control as System or Package, Maastricht, The Netherlands.
- McIntyre, T. (1996). Does the way we teach create behavior disorders in culturally different students? *Education and Treatment of Children*, 19(3), 354-370.
- Merchant, K. A. (1985). *Control in business organizations*. Cambridge, MA: Ballinger Publishing Company.
- Merchant, K. A., Chow, C. W., & Wu, A. (1995). Measurement, evaluation and reward of profit center managers: a cross-cultural field study. *Accounting, Organizations and Society*, 20(7-8), 619-638.
- Merchant, K. A., Van der Stede, W. A., Lin, T. W., & Yu, Z. (2011). Performance measurement and incentive compensation: an empirical analysis and comparison of Chinese and Western firms' practices. *European Accounting Review*, 20(4), 639-667.
- Milgrom, P., & Roberts, J. (1995). Complementarities and fit: strategy, structure, and organizational change in manufacturing. *Journal of Accounting and Economics*, 19(2-3), 179-208.
- Miller, D., & Friesen, P. H. (1983). Strategy-making and environment: the third link. *Strategic Management Journal*, 4(3), 221-235.
- Moers, F. (2006). Performance measure properties and delegation. *The Accounting Review*, 81(4), 897-924.
- Nagar, V. (2002). Delegation and incentive compensation. *The Accounting Review*, 77(2), 379-395.
- Newman, K. L., & Nollen, S. D. (1996). Culture and congruence: the fit between management practices and national culture. *Journal of International Business Studies*, 27(4), 753-779.
- Ouchi, W. G. (1979). A conceptual framework for the design of organizational control mechanisms. *Management Science*, 25(9), 833-848.
- Pennings, J. M. (1993). Executive reward systems: a cross-national comparison. *Journal of Management Studies*, 30(2), 261-280.
- Perlitz, M., & Seger, F. (2004). European cultures and management styles. *International Journal of Asian Management*, 3(1), 1-26.
- Petter, S., Straub, D., & Rai, A. (2007). Specifying formative constructs in information systems research. *MIS Quarterly*, 31(4), 623-656.
- Prendergast, C. (2002). The tenuous trade-off between risk and incentives. *Journal of Political Economy*, 110(5), 1071-1102.
- Prendergast, C. (2008). Intrinsic motivation and incentives. *American Economic Review: Papers and Proceedings*, 98(2), 201-205.
- Roberts, J., (2004). *The modern firm: organizational design for performance and growth*. Oxford, UK: Oxford University Press.
- Ronen, S., & Shenkar, O. (2013). Mapping world cultures: cluster formation, sources and implications. *Journal of International Business Studies*, 44(9), 867-897.
- Rüth, D. (1989). *Planungssysteme der Industrie: Einflußgrößen und Gestaltungsparameter*. Wiesbaden, Germany: Deutscher Universitäts-Verlag.
- Schaffer, B. S., Riordan, C. M. (2003). A review of cross-cultural methodologies for organizational research: a best practices approach. *Organizational Research Methods*, 6(2), 169-215.
- Schäffer, U., & Weber, J. (2015). Controlling im Wandel - Die Veränderung eines Berufsbilds im Spiegel der zweiten WHU-Zukunftsstudie. *Controlling*, 27(3), 185-191.
- Schneider, S. C. (1988). National vs. corporate culture: implications for human resource management. *Human Resource Management*, 27(2), 231-246.
- Schramm-Nielsen, J., Lawrence, P., & Sivesind, K. H. (2004). *Management in Scandinavia: culture,*

- context and change*. Cheltenham, UK: Edward Elgar Publishing.
- Schreyögg, G., & Steinmann, H. (1987). Strategic control: a new perspective. *Academy of Management Review*, 12(1), 91-103.
- Schuler, R. S., & Rogovsky, N. (1998). Understanding compensation practice variations across firms: the impact of national culture. *Journal of International Business Studies*, 29(1), 159-177.
- Shields, M. D., & Young, S. M. (1993). Antecedents and consequences of participative budgeting: evidence on the effects of asymmetrical information. *Journal of Management Accounting Research*, 5, 265-280.
- Snell, S. A. (1992). Control theory in strategic human resource management: the mediating effect of administrative information. *Academy of Management Journal*, 35(2), 292-327.
- Stoffel, K. (1995). *Controllingship im internationalen Vergleich*. Wiesbaden, Germany: Gabler.
- Stone, D. L., Stone-Romero, E. F., & Lukaszewski, K. M. (2007). The impact of cultural values on the acceptance and effectiveness of human resource management policies and practices. *Human Resource Management Review*, 17(2), 152-165.
- Taras, V., Steel, P., & Kirkman, B. L. (2016). Does country equate with culture? Beyond geography in the search for cultural boundaries. *Management International Review*, 56(4), 455-487.
- Tixier, M. (1994). Management and communication styles in Europe: can they be compared and matched? *Employee Relations*, 16(1), 8-26.
- Tosi, H. L., & Greckhamer, T. (2004). Culture and CEO Compensation. *Organization Science*, 15(6), 657-670.
- Ueno, S., & Sekaran, U. (1992). The influence of culture on budget control practices in the USA and Japan: an Empirical Study. *Journal of International Business Studies*, 23(4), 659-674.
- Van der Stede, W. A. (2003). The effect of national culture on management control and incentive system design in multi-business firms: evidence of intracorporate isomorphism. *European Accounting Review*, 12(2), 263-285.
- van de Vijver, F. J. R., & Leung, K. (1997). *Methods and data analysis for cross-cultural research*. Thousand Oaks, CA: Sage Publications.
- Wagenhofer, A. (2006). Management accounting research in German-speaking countries. *Journal of Management Accounting Research*, 18, 1-19.
- Widener, S. K., Shackell, M. B., & Demers, E. A. (2008). The juxtaposition of social surveillance controls with traditional organizational design components. *Contemporary Accounting Research*, 25(2), 605-638.
- Williams, J. J., & Seaman, A. E. (2001). Predicting change in management accounting systems: national culture and industry effects. *Accounting, Organizations and Society*, 26(4-5), 443-460.

Table 1
Definitions of GLOBE cultural dimensions

Cultural dimension	Definition
Assertiveness	The degree to which individuals in organizations or societies are assertive, confrontational, and aggressive in social relationships.
Power distance	The degree to which members of an organization or society expect and agree that power should be stratified and concentrated at higher levels of an organization or government.
Institutional collectivism	The degree to which organizational and societal institutional practices encourage and reward collective distribution of resources and collective action.
In-group collectivism	The degree to which individuals express pride, loyalty, and cohesiveness in their organizations or families.
Uncertainty avoidance	The extent to which members of an organization or society strive to avoid uncertainty by relying on established social norms, rituals, and bureaucratic practices.
Future orientation	The extent to which individuals in organizations or societies engage in future-oriented behaviours such as planning, investing in the future, and delaying individual or collective gratification.
Humane orientation	The degree to which a collective encourages and rewards individuals for being fair, altruistic, generous, caring, and kind to others.
Performance orientation	The degree to which a collective encourages and rewards group members for performance improvement and excellence.

Table 2Country scores and cultural region means for GLOBE dimensions^a

Region/country	AS	PD	IC	IGC	UA	FO	HO	PO
Anglo (A)								
Australia	4.28	4.74	4.29	4.17	4.39	4.09	4.28	4.36
Canada	4.05	4.82	4.38	4.26	4.58	4.44	4.49	4.49
Mean (sample) ^b	4.17	4.78	4.34	4.22	4.49	4.27	4.39	4.43
Mean (all countries) ^b	4.14	4.97	4.46	4.30	<u>4.42</u>	<u>4.08</u>	4.20	4.37
Germanic Europe (G)								
Austria	4.62	4.95	4.30	4.85	5.16	4.46	3.72	4.44
Belgium ^c	–	–	–	–	–	–	–	–
Germany	4.57	5.28	3.76	4.08	5.21	4.23	3.21	4.23
Mean (sample) ^b	4.60	5.12	4.03	4.47	5.19	4.35	3.47	4.34
Mean (all countries) ^b	4.55	4.95	<u>4.03</u>	4.21	5.12	4.40	<u>3.55</u>	4.41
Nordic Europe (N)								
Denmark	3.80	3.89	4.80	3.53	5.22	4.44	4.44	4.22
Finland	3.81	4.89	4.63	4.07	5.02	4.24	3.96	3.81
Norway ^c	–	–	–	–	–	–	–	–
Sweden	3.38	4.85	5.22	3.66	5.32	4.39	4.10	3.72
Mean (sample) ^b	3.66	4.54	4.88	3.75	5.19	4.36		3.92
Mean (all countries) ^b	<u>3.66</u>	<u>4.54</u>	4.88	<u>3.75</u>	5.19	4.36	4.17	<u>3.92</u>
Difference (sample countries)	G>A>N	G>A>N	N>A>G	G>A>N	N,G>A	G,N>A	A,N>G	A,G>N

^a All scores are at the societal level as reported by House et al. (2004). AS = Assertiveness, PD = Power distance, IC = Institutional collectivism, IGC = In-group collectivism, UA = Uncertainty avoidance, FO = Future orientation, HO = Humane orientation, PO = Performance orientation.

^b Mean (sample) is the average score for the cultural region based on sample countries, while mean (all countries) is the average score based on all countries reported in the GLOBE study. Scores range from 1 = very low to 7 = very high. The highest mean scores for each dimension across the three cultural regions are in bold. The lowest mean scores are underlined.

^c Not included in the GLOBE study.

Table 3

Sample response rates and distribution of industry and size by country

Region/country	Sample size	Responses	Response rate	Responses used ^a	Employees		Industry ^b		
					<1000	≥1000	Manu.	Serv.	Wholes.
Anglo									
Australia	422	50	12%	50	35	15	14	26	10
Canada	200	52	26%	39	19	20	33	6	0
	622	102	16%	89	54	35	47	32	10
Germanic									
Austria	223	51	23%	42	23	19	25	15	2
Belgium	113	50	44%	40	29	11	25	12	3
Germany	392	87	22%	76	51	25	38	30	8
	728	188	26%	158	103	55	88	57	13
Nordic									
Denmark	163	120	74%	109	67	42	50	43	16
Finland	183	96	52%	80	43	37	29	33	18
Norway	87	68	78%	58	44	14	26	27	5
Sweden	416	120	29%	90	59	31	32	42	16
	849	404	48%	337	212	125	137	145	55
Total	2199	694	32%	584	368	216	272	234	78

^a Where multiple SBUs belonging to the same group were interviewed, only one observation was retained. All SBUs where the headquarters are not located in the same region were removed.

^b Manu. = manufacturing, Serv. = service, Wholes. = wholesale.

Table 4
Respondent positions by country

Region/country	CEO	CFO	COO	Other ^a	Total	Average interview duration (minutes) ^b
Anglo						
Australia	5	30	0	15	50	75
Canada	8	12	17	2	39	63
	13	42	17	17	89	70
Germanic						
Austria	23	6	1	12	42	115
Belgium	35	3	2	0	40	82
Germany	35	13	0	28	76	115
	93	22	3	40	158	107
Nordic						
Denmark	22	83	1	3	109	180
Finland	30	6	2	42	80	145
Norway	9	27	2	20	58	73
Sweden	22	54	0	14	90	120
	83	170	5	79	337	137
Total	189	234	25	136	584	119

^a Other respondent job titles included business unit controllers, SBU general managers, business area manager, country manager, head of strategy, head of corporate development, head of HR, head of sales/marketing, and head of operations.

^b Average interview duration shows country means. Region and total means are weighted averages.

Table 5

Descriptive statistics for the full sample and cultural regions

	Full sample (<i>n</i> =584)		Anglo (<i>n</i> =89)		Germanic (<i>n</i> =158)		Nordic (<i>n</i> =337)	
	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev
Delegation of authority (DEL)	3.66	1.02	4.35	1.36	3.53	0.86	3.53	0.91
Incentive contracting (INC)	5.16	1.52	5.52	1.11	5.09	1.23	5.10	1.72
Strategic planning participation (SPP)	2.50	1.06	3.22	1.32	2.54	0.91	2.29	0.96
Action planning participation (APP)	2.35	0.82	2.46	0.80	2.41	0.75	2.30	0.85
Selection (SEL)	4.60	1.82	4.38	1.98	4.28	2.04	4.81	1.64
Socialisation (SOC)	4.57	1.12	4.98	1.01	4.46	1.20	4.52	1.08
Environmental change (ENVCHG)	3.87	0.98	4.26	0.90	3.71	0.87	3.84	1.03
Environmental predictability (ENVPRED)	3.48	0.96	3.40	0.70	3.27	0.90	3.61	1.03
Environmental complexity (ENVCOM)	3.80	1.32	4.11	1.37	3.80	1.37	3.71	1.28
Environmental hostility (ENVHOS)	4.74	1.00	4.68	0.88	5.00	0.90	4.64	1.06
Strategy low cost (COST)	3.12	1.83	3.87	1.70	2.57	1.70	3.18	1.85
Strategy innovation (INNOV)	4.41	1.34	4.58	1.17	4.56	1.28	4.30	1.40
Firm size (SIZE)	6.61	1.16	6.64	0.89	6.65	1.20	6.58	1.20
Firm complexity (COMP)	6.53	2.82	7.19	2.12	7.78	2.28	5.76	2.96
Internationalisation (INT)	1.56	0.98	1.67	1.01	1.63	0.89	1.50	1.02
Family ownership (OWNFAM)	0.39	0.49	0.29	0.46	0.51	0.50	0.35	0.48
Government ownership (OWNGOV)	0.07	0.26	0.01	0.11	0.09	0.29	0.08	0.28
Institutional ownership (OWNINST)	0.23	0.42	0.35	0.48	0.15	0.36	0.24	0.43
Venture ownership (OWNVENT)	0.09	0.29	0.04	0.21	0.06	0.24	0.11	0.32
SOX compliance (SOX)	0.24	0.43	0.22	0.42	0.46	0.50	0.14	0.35
Stock exchange listing (LIST)	0.42	0.49	0.39	0.49	0.41	0.49	0.43	0.50

Table 6
Correlation matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
(1) Delegation of authority (DEL)	1.00																				
(2) Incentive contracting (INC)	0.19	1.00																			
(3) Strategic planning participation (SPP)	0.40	0.13	1.00																		
(4) Action planning participation (APP)	0.30	0.14	0.20	1.00																	
(5) Selection (SEL)	0.15	0.12	0.07	0.10	1.00																
(6) Socialisation (SOC)	0.14	0.15	0.19	0.04	0.20	1.00															
(7) Environmental change (ENVCHG)	0.09	0.05	0.04	-0.02	0.02	0.12	1.00														
(8) Environmental predictability (ENVPRED)	-0.05	-0.04	-0.09	-0.01	-0.05	-0.03	0.4	1.00													
(9) Environmental complexity (ENVCOM)	0.10	0.05	0.11	0.07	0.08	0.07	0.18	0.05	1.00												
(10) Environmental hostility (ENVHOS)	0.00	0.12	0.01	-0.02	0.03	0.00	0.10	0.00	0.15	1.00											
(11) Strategy low cost (COST)	0.12	-0.01	-0.01	-0.05	0.04	-0.10	-0.02	-0.03	0.03	0.06	1.00										
(12) Strategy innovation (INNOV)	0.07	0.10	0.11	0.04	0.03	0.20	0.11	-0.04	0.15	0.08	-0.14	1.00									
(13) Firm size (SIZE)	0.20	0.16	0.13	0.08	0.02	0.06	0.02	0.02	0.04	-0.00	0.05	0.14	1.00								
(14) Firm complexity (COMP)	0.11	-0.04	0.20	0.03	0.02	0.06	-0.08	-0.03	0.06	-0.04	-0.01	0.12	0.08	1.00							
(15) Internationalisation (INT)	0.27	0.15	0.18	0.11	0.03	-0.02	0.00	-0.01	0.04	-0.03	-0.01	0.16	0.25	0.19	1.00						
(16) Family ownership (OWNFAM)	-0.05	-0.06	-0.03	-0.01	-0.06	-0.07	-0.04	-0.03	0.03	0.10	-0.06	0.05	-0.09	0.09	0.06	1.00					
(17) Government ownership (OWNGOV)	0.05	-0.08	0.00	-0.02	0.04	0.06	0.05	0.08	0.01	-0.12	-0.08	0.01	0.10	-0.11	-0.09	-0.22	1.00				
(18) Institutional ownership (OWNINST)	-0.04	0.10	0.02	0.01	0.09	-0.01	0.06	0.01	0.00	0.00	-0.02	0.08	-0.02	-0.04	0.00	-0.44	-0.15	1.00			
(19) Venture ownership (OWNVENT)	-0.02	0.10	-0.05	-0.08	-0.07	-0.04	-0.04	-0.01	-0.04	0.02	0.06	-0.06	0.03	-0.02	0.01	-0.25	-0.09	-0.17	1.00		
(20) SOX compliance (SOX)	-0.14	0.04	0.00	0.02	-0.11	-0.00	-0.02	0.02	0.01	0.04	-0.11	0.15	0.10	0.10	0.02	-0.09	0.03	0.10	-0.01	1.00	
(21) Stock exchange listing (LIST)	0.05	0.14	-0.06	0.06	0.10	-0.03	-0.03	0.03	-0.05	0.06	-0.03	0.10	0.08	-0.09	0.16	-0.19	-0.01	0.39	-0.11	0.17	1.00

All correlations above 0.09 are significant at $p < 0.05$.

Table 7Seemingly unrelated regression results ($n = 584$)

	Delegation of authority (DEL)	Incentive contracting (INC)	Strategic planning participation (SPP)	Action planning participation (APP)	Selection (SEL)	Socialisation (SOC)
Environmental change (ENVCHG)	-0.016 (0.039)	-0.001 (0.071)	-0.007 (0.047)	-0.051 (0.041)	0.093 (0.079)	0.063 (0.052)
Environmental predictability (ENVPRED)	-0.004 (0.041)	-0.009 (0.073)	0.002 (0.048)	0.036 (0.042)	0.085 (0.081)	-0.071 (0.054)
Environmental complexity (ENVCOM)	0.007 (0.026)	0.019 (0.047)	0.017 (0.031)	0.030 (0.027)	0.078 (0.052)	0.007 (0.035)
Environmental hostility (ENVHOS)	0.030 (0.035)	0.150** (0.063)	0.032 (0.041)	-0.027 (0.036)	0.078 (0.069)	0.017 (0.046)
Strategy low cost (COST)	-0.029 (0.020)	-0.048 (0.036)	-0.076*** (0.024)	-0.036* (0.020)	0.046 (0.040)	-0.095*** (0.026)
Strategy innovation (INNOV)	-0.009 (0.026)	0.043 (0.048)	0.005 (0.031)	-0.008 (0.027)	0.070 (0.053)	0.146*** (0.035)
Firm size (SIZE)	0.120*** (0.030)	0.159*** (0.054)	0.071** (0.036)	0.051 (0.031)	0.037 (0.060)	0.027 (0.040)
Firm complexity (COMP)	0.014 (0.014)	-0.022 (0.025)	0.048*** (0.016)	-0.002 (0.014)	0.007 (0.028)	0.014 (0.018)
Internationalisation (INT)	0.064 (0.039)	0.092 (0.071)	0.052 (0.047)	0.037 (0.041)	0.109 (0.079)	-0.102* (0.052)
Family ownership (OWNFAM)	-0.168* (0.092)	0.059 (0.166)	-0.095 (0.109)	-0.083 (0.094)	0.002 (0.183)	-0.180 (0.122)
Government ownership (OWNGOV)	0.178 (0.144)	-0.264 (0.261)	0.100 (0.171)	-0.187 (0.148)	0.395 (0.289)	0.190 (0.192)
Institutional ownership (OWNINST)	-0.326*** (0.103)	0.233 (0.186)	-0.043 (0.122)	-0.137 (0.106)	0.035 (0.206)	-0.198 (0.137)
Venture ownership (OWNVENT)	0.033 (0.131)	0.739*** (0.237)	-0.123 (0.156)	-0.225* (0.135)	0.275 (0.262)	-0.150 (0.174)

SOX compliance (SOX)	-0.104 (0.092)	0.288* (0.166)	0.045 (0.109)	-0.002 (0.091)	0.360* (0.184)	0.130 (0.122)
Stock exchange listing (LIST)	0.178** (0.077)	0.272* (0.140)	-0.128 (0.092)	0.064 (0.080)	0.048 (0.155)	-0.035 (0.103)
Industry fixed effects	YES	YES	YES	YES	YES	YES
Country fixed effects	YES	YES	YES	YES	YES	YES
Adjusted R^2	0.399	0.116	0.208	0.01	0.243	0.109
Chi-square	443.82	115.31	196.47	39.89	231.82	109.8

Standardised coefficients reported. Standard errors in parentheses.

*, **, and *** indicate significance at $p < 0.10$, $p < 0.05$, and $p < 0.01$ respectively.

Table 8

Conditional correlations between the delegation of authority and other MC practices

	Anglo (A)	Germanic (G)	Nordic (N)
Incentive contracting (INC)	0.427***	0.014	0.007
Strategic planning participation (SPP)	0.148	0.323***	0.191***
Action planning participation (APP)	0.343***	0.358***	0.233***
Selection (SEL)	-0.075	0.016	0.123**
Socialisation (SOC)	0.052	-0.000	0.017

*, **, and *** indicate significance at $p < 0.10$, $p < 0.05$, and $p < 0.01$ respectively.

Appendix A

Questionnaire items and factor loadings

Construct	Items	Anchors	CFA loadings / PCA weights
<i>MC practices</i>			
Delegation of authority	Compare the degree of influence that SBU top management has to that of subordinates on the following decisions:	N/A, SBU top management has all influence/Subordinates have all influence	
	Establishment of new businesses		0.67
	Development of new products / services		0.61
	Extension / enlargement investments		0.68
	Replacement investments		0.61
	Project / programme financing		0.68
	Product / service pricing		0.68
	Distribution channel choice		0.66
	Choosing and contracting customers		0.59
	Choosing and contracting suppliers		0.55
	Prioritizing activities		0.58
	Compensation policy and rewards within the BU		0.65
	Hiring and firing employees within the BU		0.52
Work process arrangements within the BU	0.51		
Incentive contracting	Indicate to what extent:	Not at all/Very high extent	
	We evaluate performance on the basis of quantitative metrics		0.74
	We use predetermined criteria in evaluation and rewarding		0.72
	Financial rewards increase as subordinates' performance exceeds targets		0.55
	Rewarding is financial (bonuses, share-based rewards)		0.78
Strategic planning participation (ends / means)	Indicate who participates in the formation of your SBU's strategic ends / means	Top management of SBU with corporate management / Only top management of the SBU / Only SBU management, including one level of managers below SBU top management / Only SBU management, including two levels of managers below SBU top management / More than two levels of managers below SBU top management	n.a.

Action planning participation (ends / means)	Indicate how short-term targets are set in your SBU	Top management sets targets and passes them to subordinates / Top management sets targets, but revises them in negotiations with subordinates / Targets setting is a quite long, iterative negotiation process between organizational levels / Subordinates set targets autonomously, but they are subject to top management acceptance / Subordinates set targets autonomously with little, if any, management involvement	n.a.
Selection	Are psychological tests and values of importance when recruiting for managerial positions?		n.a.
Socialisation	Are training and development processes used to reinforce SBU objectives, expectations and norms?		0.78
	Are social events and functions used to develop and maintain commitment to the SBU?		0.70
	Are mentoring, orientation and induction programmes used to acclimatize new managers to acceptable behaviours, routines and norms?		0.75
<i>Environment</i>			
Environmental change	Over the past three years: how many changes have occurred that have had a material impact on the nature of your business?	Very few changes / Very many changes	
	Customers		0.61
	Suppliers		0.58
	Competitors		0.65
	Technological		0.61
	Regulatory		0.54
Environmental predictability	Economic*		0.25
	Over the past three years: how many changes have occurred that have had a material impact on the nature of your business?	Very unpredictable / Very predictable	
	Customers		0.53
	Suppliers		0.71
	Competitors		0.65
	Technological		0.68
	Regulatory		0.50
Economic*		-0.09	

Environmental complexity	How diverse are the product/service requirements of your customers to each other?	Very similar/Very diverse	0.80
	How diverse are the strategies and tactics of your key competitors to each other?	Very similar/Very diverse	0.80
Environmental hostility	How intense is the competition for your main products/services?	Not intense at all/Very high intensity	0.74
	How difficult is it to obtain the necessary inputs for your business?	Not difficult at all/very high difficulty	0.74
<i>Strategy</i>	Indicate to what extent you agree with the following:	Not at all/Very high extent	
Low cost	We compete by the lowest price		n.a.
Innovation	Our success depends on product/service novelty		0.88
	Our success is driven by product innovations		0.88
<i>Other firm characteristics</i>			
Firm size	What is the number of employees in your SBU?	Number of employees	n.a.
Firm complexity	Please indicate which functions are fully controlled by your SBU, i.e. these functions are not part of shared resource pools with other SBUs in your organization	Main functions: R&D, inbound logistics, operations, outbound logistics, marketing and sales and after-sales service Support functions: IT, HRM, accounting and finance and procurement	n.a.
Internationalisation	In how many countries does your SBU have operations?	Number of countries	n.a.
Ownership	Who is the most significant owner of your organization?	Family, government, institutional, venture capitalists, other	n.a.
SOX compliance	Does your SBU comply with the SOX?	No, partially and yes	n.a.
Stock exchange listing	Is your SBU part of a publicly quoted company?	No and yes	n.a.

* Item dropped from the analysis