Inner struggle or identity fit – control configurations that improve management accountants' sense of their identity

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Abstract

Purpose – This study aims to investigate which configurations of organizational-level and group-level management controls support an identity fit for management accountants in the management accounting profession. It aims to complement recent qualitative management accounting research. This stream just begun to use role and identity theory to investigate role expectations, conflicts and coping strategies of management accountants when they struggle with their work identity.

Design/methodology/approach – Based on configuration theory, this study uses a fuzzy-set qualitative comparative analysis to indicate all possible configurations of formal and informal management controls that improve management accountants' sense of their identity in an organization. The analyses are based on the results of a cross-sectional survey of 277 management accountants from Germany, Austria, Switzerland and Liechtenstein.

Findings – The results show that a strong group culture and high psychological safety at the group level are relevant conditions for a high identity fit. Further, the configurations differ regarding the career stages of management accountants.

Originality/value – This study contributes to work identity research of management accountants and to research on formal and informal control configurations as a control package. It is of particular importance for various professions that are affected by role change, as from the findings on management accountants' identity fit, implications can also be made for other organizational functions that need to engage in identity work.

Keywords Management accountant, Identity fit, Formal and informal controls, Configuration theory, Fuzzy set qualitative comparative analysis

Paper type Research paper

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1. Introduction

There is a lively practical and scientific discourse about the changing role of management accountants from a traditional bookkeeping and reporting function to become a finance business partner with a consulting focus and changing characteristics such as deeper business knowledge and higher information technology skills (Byrne and Pierce, 2007; Goretzki *et al.*, 2013; Järvenpää, 2007). In theory, this change is seen as a positive development of the profession (Byrne and Pierce, 2007; Hartmann and Maas, 2011). However, in practice, the business partner role often remains fragile, and management accountants find themselves uncertain of their organizational identity, which leads to identity conflicts on individual level (Byrne and Pierce, 2018; Lepistö *et al.*, 2018; Morales and Lambert, 2013). This study, therefore, investigates how certain management control configurations can improve management accountants' sense of their identity, supporting their effective positioning and role behavior. A growing number of studies in the management accounting research stream have started to investigate efforts of the management accountant to overcome identity conflicts (Byrne and Pierce, 2018; Goretzki and Messner, 2019; Morales and Lambert, 2013). This study adds to the findings of prior literature and focuses on an enduring realization of an identity fit perceived by management accountants.

Most of the previous studies restricted their focus of analysis on single dimensions of responses to the identity conflict and do not reflect the variety of factors in interaction that might support an identity fit. Therefore, we apply configuration theory (Ragin, 2014; Ragin and Fiss, 2008) to identify which combinations of formal (organizational level) and informal (group level) management controls help to enhance an aspired identity fit of management accountants in order to be able to shape their role effectively. In doing so, we follow calls of identity literature for gaining a better understanding of multilevel mechanisms for the identity reconstruction in the organizational context (Ashforth *et al.*, 2011; Chreim *et al.*, 2007; Dutton *et al.*, 2010; Horton *et al.*, 2014; Lok, 2010).

This quantitative and set theoretic approach (Ragin, 2008) is different from prior, mostly qualitative studies, which can be classified into two directions. Some studies observe individual sensemaking activities to reframe the own identity (e.g. Heinzelmann, 2018; Morales, 2019; Morales and Lambert, 2013; Puyou, 2018). Other studies focus on institutional work to gain legitimacy for the desired identity in the organization (e.g. Goretzki *et al.*, 2017; Goretzki and Messner, 2019; Goretzki *et al.*, 2013). Individual sensemaking with reframing strategies, however, does not provide avenues for actual change; instead, individuals accept their identity and play down the undesirable features while focusing on the aspirational aspects of their work (Goretzki and Messner, 2019; Morales and Lambert, 2013). Identity research suggests that gaining legitimacy is the most important step to enhance an identity fit (Creed *et al.*, 2002). To support this legitimization, diverse mechanisms at the organizational and group level might be relevant.

This study investigates the interactions of formal management controls like diagnostic, interactive, boundary and beliefs controls, the organizational structure as well as job clarity with informal management controls like group culture, leader-member relationship quality and psychological safety. These different mechanisms have been found to be relevant independently and may also contribute to an identity fit in a configuration.

We use fuzzy set qualitative comparative analysis (fsQCA) within a large-scale sample of 277 management accountants from Germany, Switzerland [1], Liechtenstein and Austria. In doing so, we introduce a novel method of analysis in the research stream on management accountants' identity, as most of the previous studies rely on case study data (Goretzki *et al.*, 2013;

Lepistö *et al.*, 2018; Morales and Lambert, 2013) or draw conceptional relationships that have not been tested empirically (Horton and Wanderley, 2018).

In general, configuration theory premises that multiple combinations of antecedent conditions are equally effective in leading to an outcome of interest (Greckhamer *et al.*, 2018; Pappas and Woodside, 2021). In this case, different configurations of formal and informal controls as a control package may support the identity fit of management accountants in the process of identity work. Configuration approaches such as fsQCA have become increasingly popular in various research areas in recent years (e.g. Bedford *et al.*, 2016; Frambach *et al.*, 2016; Greckhamer, 2011; Pappas and Woodside, 2021). Qualitative comparative analysis (QCA) is used to identify logically simplified statements that describe different configurations of conditions and their relation to specific outcomes of interest (Ragin, 2008). The advantage using QCA is that it does not require researchers to prespecify which solution is examined. Instead, QCA allows making comparisons across a much larger number of configurations than would be possible using traditional quantitative methods, such as interactions in regression-based analyses (Erkens and Van der Stede, 2015; Fiss, 2011; Greckhamer *et al.*, 2013). However, QCA studies are not necessarily generalizable. Our results are based on the set of management accountants who were willing to participate in our conduced survey.

This study shows five equally effective ways to support an identity fit for management accountants:

(1) Within the overall sample, the results show high emphasis on informal controls, as several solutions present a combination of a strong group culture and high psychological safety as especially relevant to supporting an identity fit. As such, this research adds to the literature, where a strong group culture and supportive and trustworthy relationships are seen as highly effective in influencing employees' perceptions that they are able to self-express at work (Edmondson, 1999; Kahn, 1990; May *et al.*, 2004) and complement prior findings from qualitative research on management accounts' identity work (Goretzki *et al.*, 2013; Järvenpää, 2007; Lepistö *et al.*, 2018);

(2) The data also indicate combinations of high job clarity and high leader-member relationship quality to facilitate an identity fit. Identity conflicts often occur when management accountants have only limited clarity on how new practices are aligned with their understandings of their inner self (Goretzki *et al.*, 2013; Järvinen, 2009; Morales and Lambert, 2013). Besides, individuals feel safer to try out new ways of doing things, discuss mistakes and learn from these behaviors if they are in supportive leader-member relationships (Edmondson, 2004; May *et al.*, 2004). Prior case study research already highlighted the eminent role of supervisors of management accountants as a key promoter in enhancing an identity fit (Goretzki and Messner, 2019; Goretzki *et al.*, 2013; van der Steen, 2022). Therefore, this study offers directions to include more informal controls in management accounting research (Evans and Tucker, 2015; Ferreira and Otley, 2009; Pfister and Lukka, 2019);

(3) This study shows further that formal management controls (present or absent) are usually peripheral conditions. However, supplementary analyses explain the initial need of formal controls on organizational level for the realization of an identity fit on the first place, which can be strengthened by the interplay with informal controls on group level. This result adds to research of Pfister and Lukka (2019),

who found that informal controls can stretch the positive outcomes of formal controls in a control package.

Next, this study finds differences in the configurations of controls regarding different career stages in the finance function. We conduct these subsample analyses as the primary activities of management accountants are found to differ depending on their hierarchical job positions (Horton *et al.*, 2020), which may influence the configurations of management controls for an identity fit. Junior management accountants are usually more involved in simpler tasks that are undertaken repeatedly on operational level without much involvement in strategic accounting decisions. Senior management accountants are usually responsible for the implementation of the accounting strategy and communicate with both lower and higher career stages. The high ranked functions (like the CFO) are involved in strategic-level decisions and are responsible for the whole accounting department (Goretzki and Messner, 2019; Horton *et al.*, 2020):

(4) To support the identity fit for junior management accountants, a combination of organizational-level as well as group-level mechanisms is required. Particularly, a combination of interactive controls, an organic organizational structure and a strong group culture support the identity fit.

(5) In case of senior management accountants and the leading functions, only informal controls and the absence of certain formal controls like boundary controls and, respectively, diagnostic controls are supportive core combinations to facilitate a high identity fit.

These results are of important practical relevance in developing individual control packages for each career stage that benefit the specific needs of the different job responsibilities and attitudes (Horton *et al.*, 2020).

With these findings, this study goes beyond previous research in several important ways. We identify which combinations of conditions support a high identity fit. The results address the fact that support mechanisms for an identity fit do not work in isolation but are rather an interplay on organizational and group-level formal and informal control configurations as a control package (Evans and Tucker, 2015; Ferreira and Otley, 2009; Gerdin *et al.*, 2019; Malmi and Brown, 2008; Pfister and Lukka, 2019). The study further complements prior case study research by discussing the importance of positive relationships between management accountants and other organizational members to strengthen the management accountants' identity, especially the relationships to general managers (Byrne and Pierce, 2018; Morales and Lambert, 2013) and their supervisors (Goretzki *et al.*, 2013; Taylor and Scapens, 2016). The use of fsQCA allows to show causal relationships within a large-N sample, as most of the former studies rely on case study data (Goretzki *et al.*, 2013; Lepistö *et al.*, 2018; Morales and Lambert, 2013) or draw conceptional relationships (Horton and Wanderley, 2018). This research is also of particular importance for various professions that are affected by role change. From the findings on management accountants' identity fit, implications can also be made for other organizational functions that need to engage in identity work.

The remainder of the paper is organized as follows. The section "Conceptional Background and Theory Development" provides an overview of the current state of research regarding management accountants' identity fit and suggestions of support mechanisms. The section "Method" discusses the research method and measurement of the variables. The analyses and results are presented in the "Results" section. Finally, discussions of the result, limitations and further research avenues are provided in the section "Discussion and Conclusion."

2. Conceptional background and theory development

2.1 Management accountants' work roles

Management accountants' organizational roles are commonly observed as performing a service function that entails information analysis and decision support (Horngren *et al.*, 2015). In most countries, their professional role is not officially regulated by professional associations but rather shaped within the organization or based on the occupational identity (Ahrens and Chapman, 2000).1F Lately, related to current megatrends such as digitalization and the implications of AI, many academic studies as well as practitioners have noted changing organizational roles for management accountants (Byrne and Pierce, 2007; Goretzki *et al.*, 2013; Horton and Wanderley, 2018; Järvenpää, 2007), often referring to a business partner role (Burns and Baldvinsdottir, 2005; Goretzki *et al.*, 2013; Morales and Lambert, 2013).

Research usually distinguishes between the traditional "bean counter" role and the more modern business partner role (Burns and Baldvinsdottir, 2005; Goretzki *et al.*, 2013; Morales and Lambert, 2013). The "bean counter" role is typically associated with cost control, data accumulation, financial data analysis and reporting, as well as controlling operational managers with reference to their key financial objectives. On the other hand, the business partner role is associated with the assimilation of accounting information with indicators of nonfinancial performance to create value, facilitate greater efficiency or business improvement (Horton and Wanderley, 2018). Likewise, as widely noted in the literature, this typology displays two extremes (Horton and Wanderley, 2018; Wolf *et al.*, 2020). In practice, management accountants' roles are often more complex. They usually operate in hybrid roles with dual or multiple functions, and their level of business involvement reflects multiple points on a continuum between lower and higher involvement (Horton and Wanderley, 2018). Some prior studies focus on business unit management accountants, who focus increasingly on strategic decision-making (Rouwelaar *et al.*, 2018; Zoni and Merchant, 2007). These management accountants usually operate in more senior positions (Roozen and Steens, 2006). Management accountants in junior positions are usually higher involved operational-level tasks (Goretzki and Messner, 2019; Horton *et al.*, 2020).

Theoretically, a general change to more business orientation is seen as a positive development, i.e. for managerial decision making (Byrne and Pierce, 2007; Goretzki *et al.*, 2013; Hartmann and Maas, 2011; Wolf *et al.*, 2015) or strategy formation (Erhart *et al.*, 2017), as the intensified interaction between management accountants and general managers contributes to a proper interpretation and evaluation of financial information (Byrne and Pierce, 2007; Hartmann and Maas, 2011). At the same time, the role change can cause conflicts (Beehr and Newman, 1978; Katz and Kahn, 1978; Rizzo *et al.*, 1970). On the one hand, the commitment of management accountants to meet the new role requirements leads to increasing new competencies often without reducing old ones (Rouwelaar *et al.*, 2021), and management accountants may not feel able to fulfill the new perceived expectations (Goretzki *et al.*, 2013; Wolf *et al.*, 2020). They may find themselves uncertain of their roles and their identity (Byrne and Pierce, 2007; Morales and Lambert, 2013; Puyou, 2018; Wolf *et al.*, 2020), e.g. perceive a role conflict between supporting business-unit management processes and maintaining loyalty to financial compliance structures (Byrne and Pierce, 2018; Lambert and Sponem, 2012). Further, Goretzki and Messner (2019) display that the business partner role often remains fragile and often leaves management accountants with an insecure feeling of still not being there.

On the other hand, in their traditional "bean counter" role, management accountants are often stigmatized by a negative image compared to other professions in an organization for their focus on costs and their seemingly suppression of innovation and creativity (Byrne and

Pierce, 2007; Hiller *et al.*, 2014). More business orientation might improve their image due to their involvement in value contribution (Wolf *et al.*, 2020). Nevertheless, in a setup of a business partner role, which is usually seen as "clean/good and prestigious," management accountants frequently struggle in positioning themselves in such a role. According to Morales and Lambert (2013), in such a setup, the following paradox can happen: the more management accountants interact with general management (following the business partner role), the more "dirty work" is considered to be done by them. "Dirty work is the tasks considered demeaning and shameful because they contradict what the occupation normatively defines as its pride and virtue, and therefore threaten to shatter the fragile image the occupation puts forward for itself and its members" (Morales and Lambert, 2013, p. 229). Thus, the self-understanding as a business partner leads to a role conflict where management accountants cannot fulfill their aspiration and self-understanding of being a business partner (Byrne and Pierce, 2007, 2018), as they are switching between the business partner role and their traditional role, with routine tasks (seen as "dirty work") that are not in line with the new role model (Hiller *et al.*, 2014; Morales and Lambert, 2013; Parker and Warren, 2017). To overcome these conflicts, management accountants initiate change efforts in a particular direction to gain a match between their strengths, personality and work preferences with their current roles, i.e. an identity fit (Horton *et al.*, 2014; May *et al.*, 2004).

Generally, roles can be described as the outward specifications or expectations related to a position, and roles are closely connected to a person's identity (Chreim *et al.*, 2007). The identity influences individual attitudes and behaviors (Ashforth and Mael, 1989; Chreim *et al.*, 2007; Horton and Wanderley, 2018) and represents the answer to the question "Who am I?" (Pratt and Foreman, 2000). An identity fit refers to the match between an individual's values and skillsets and the requirements of a job (Kristof, 1996; May *et al.*, 2004). When tasks and responsibilities match individual competencies, employees are more satisfied and engaged with their jobs (Kristof-Brown *et al.*, 2005; May *et al.*, 2004). Identity conflicts occur when the values, beliefs, norms and demands associated with one identity, conflict with those of another identity (Ashforth and Mael, 1989). This is the case when an individual's conceptualization of his or her professional role identity conflicts with an organization's collective vision of what this role entails (Goretzki *et al.*, 2013; Horton and Wanderley, 2018) or with the expectations from colleagues, superiors or managers. The roles are not only closely connected to a person's identity (Chreim *et al.*, 2007), but also to the personal characteristics (Rouwelaar *et al.*, 2018) and the expectations of the general management (Byrne and Pierce, 2007). Thus, the management accountant is not only struggling with him/herself but must also fulfill to the high expectations of other persons as well as the organization. This discrepancy can result in low self-esteem (Taylor and Scapens, 2016). Hence, in conflicting situations, the continuous rethinking of identities by individuals is necessary. Such processes depend on individual competencies and characteristics to attain a fit (Abrahamsson *et al.*, 2011; Ahrens and Chapman, 2000; Horton and Wanderley, 2018; Morales and Lambert, 2013). Additionally, research has indicated that organizational logics and interactions with other actors are key factors in institutionalizing new desired identities by legitimizing the external image of the identity (Chreim *et al.*, 2007; Goretzki *et al.*, 2013; Granlund and Lukka, 1998; Heinzelmann, 2018). Individuals show stronger identification with positive and prestigious work identities that fulfil their basic needs for self-esteem and self-enhancement (Dutton *et al.*, 1994).

2.2 Identity fit support mechanisms

This study aims to investigate which different configurations of formal and informal controls can improve the identity fit of management accountants [2]. Management controls

include all devices and systems that managers use to make sure that the behaviors of their employees are consistent with the organization's objectives (Malmi and Brown, 2008). Management accounting research begun to identify mechanisms that initiate identity work to foster an identity fit (Goretzki and Messner, 2019; Goretzki *et al.*, 2013; Hiller *et al.*, 2014; Järvenpää, 2007; Taylor and Scapens, 2016).

Hiller *et al.* (2014) suggest that general managers can influence the prestige of professional groups in an organization by providing more resources or more rights or by showing that they care about their opinion. Järvenpää (2007) observed several interventions by other actors that aim to support the institutionalization of the desired management accountants' identity, such as the introduction of new accounting systems and accounting innovations, human resource management, the introduction of official value statements, as well as storytelling. Additionally, the existence of trusting relationships creates a sense of psychological safety that, in turn, reduces perceived image risk (Ashford *et al.*, 1998). In this regard, a trusting relationship with superiors is found to be helpful to strengthen management accountants aspired identities (Byrne and Pierce, 2018), especially when superiors are seen as role models (Goretzki *et al.*, 2013; van der Steen, 2022).

Some scholars see the use of formal and informal controls as a package to be effective for behavioral outcomes where both control categories are used simultaneously within an organization (Bedford *et al.*, 2016; Evans and Tucker, 2015; Ferreira and Otley, 2009; Gerdin *et al.*, 2019; Malmi and Brown, 2008). Informal controls are even able to stretch positive outcomes of formal control systems (Pfister and Lukka, 2019).

We apply the package perspective of the use of management controls (Bedford, 2020; Malmi and Brown, 2008). The controls used in this study are organizational-level (formal) and group-level (informal) controls, which can be applied loosely connected, as Malmi and Brown (2008) argue that there are diverse tools, systems and practices that managers have available to formally and informally direct employees. In doing so, the determined typology of controls (as the one presented in this study) cannot be too narrow, as there is a risk that some controls may go unnoticed and existing links to other controls may obscure the research findings (Malmi and Brown, 2008, p. 295). A detailed overview of the selected management controls with evidence to be positively related to an identity fit from prior literature is shown in Table 1.

Formal controls on organizational level are adopted from the levers of control framework from Simons (1994, 1995), referred to as diagnostic, interactive, boundary and beliefs systems, that have already been studied in diverse management accounting contexts (Müller-Stewens *et al.*, 2020; Speklé *et al.*, 2017; Widener, 2007). We also regard the organizational structure as well as job clarity as formal controls. These controls have been referred to as administrative controls by Malmi and Brown (2008) and are also mechanisms that managers can use and alter in the process of control. Informal controls on group level are less well-defined practices, social relationships, links or loose connections between individuals that facilitate free-flowing, open and flexible communication, structures and decision processes (Chenhall *et al.*, 2010). Recent management control research begun to examine informal controls that incorporate formal management controls (Evans and Tucker, 2015; Pfister and Lukka, 2019). We include group culture, leader-member relationship quality and psychological safety as those informal mechanisms that rely especially on leadership practices.

The package perspective builds upon configuration theory, which assumes that multiple combinations of antecedent conditions are equally effective in achieving a desired outcome (Bedford, 2020; Ragin, 2008). We propose that specific configurations of the management controls support an identity fit. Whereas formal controls help to gain acceptance of the

Table 1.
Identity-fit support mechanisms

Support mechanism	Explanation	Authors
Organizational level		
Diagnostic control use	Diagnostic controls guide behaviors and provide feedback to facilitate employee learning (single loop). They are intended to give employees structure that influence feelings of competence. Thereby, the use of diagnostic controls reduces role ambiguity by setting clear goals	Marginson *et al.* (2014), Speklé *et al.* (2017), Simons (1995)
Interactive control use	Interactive control use expands opportunity-seeking and learning throughout the organization and helps to reduce role ambiguity through face-to-face interactions (double loop) and encourage discussion and debate	Byrne and Pierce (2018), Marginson *et al.* (2014), Simons (1995), Widener (2007)
Boundary control use	Boundary controls provide structure and set requirements on management accountants behavior to focus the attention to critical operations which prevent overloaded expectations regarding their role	Adler and Chen (2011), Byrne and Pierce (2018)
Beliefs control use	Beliefs controls signal core values to management accountants, in order to inspire and motivate them to take initiative in searching for opportunities, making decisions and devising solutions to problems consistent with the organization's values and encourage self-determination	Deci (1971), Mundy (2010), Simons (1995)
Organizational structure	Continuum from mechanic to organic structures whereas mechanistic structures are characterized by centralized decision making and authority. Organic structures are characterized by decentralized decision making, flexibility and self-determination	Bedford *et al.* (2016), Covin *et al.* (2001), Deci (1971), Lepistö *et al.* (2018)
Job clarity	Clear expectations about tasks have an important impact on individual identities. A balance towards the desired identity is mostly regulated by upper echelons that need to clarify and legitimize the tasks of the management accountant	Byrne and Pierce (2018), Gartenberg *et al.* (2019), Goretzki *et al.* (2013), Järvinen (2009)
Group level		
Group culture	Co-worker related norms are most effective to influence employees' actions. The culture within organizational groups is especially important as norms within groups tend to govern behavior, attitudes and the emotional dimensions of work	Byrne and Pierce (2007), Kahn (1990), Lepistö *et al.* (2018), May *et al.* (2004)

(*continued*)

Support mechanism	Explanation	Authors
Leader-member relationship quality (LMX)	Individuals feel safer to engage themselves more fully, try out novel ways of doing things, discuss mistakes and learn from these behaviors when they are in supportive relationship with their supervisors	Byrne and Pierce (2018), Goretzki and Messner (2019), May *et al.* (2004)
Psychological safety	Psychological safety is defined as the feeling to be able to show oneself without fear of negative consequences to self-image, status, or career (in a group)	Ashford *et al.* (1998), Edmondson (1999), Kahn (1990), May *et al.* (2004), Morales and Lambert (2013)

Source: Authors' own création

Table 1.

image of management accountants in the organization, informal controls encourage identity work on group level. This is because the perception of an identity fit takes place primarily through interaction with other organizational members, especially superiors (Goretzki and Messner, 2019; Parker and Warren, 2017; van der Steen, 2022). We further assume that the support mechanisms have interaction effects, which is illustrated by the circular arrows between the controls on the two different levels in the identity fit process model illustrated in Figure 1.

3. Method

3.1 Data and method

FsQCA is used to determine which configurations of mechanisms contribute to an identity fit for management accountants. QCA, which was first introduced by Charles Ragin in 1989, is a method of analyzing multiple cases to identify "recipes" of causal conditions associated with case membership in an outcome set (Ragin, 2008).

Data for this study was collected with a cross-sectional survey. We selected randomly (by the use of a random number generator) 2,500 firms out of 16,844 for profit firms from the database Orbis (van Dijk, 2020) that met our selection criteria. Our selected firms are situated in Germany, the German speaking part of Switzerland, Liechtenstein and Austria. These countries have been chosen as they share a common language and similar cultural and institutional backgrounds, which prevents potential biases caused by different cultural characteristics or distinct institutional settings (Hartmann, 2005). All firms are included with a minimum of 100 employees and EUR 10m in revenues. Public administrations, banks and insurance companies are excluded, as these firms follow different business models than industry or service organizations. Randomly, one management accountant per firm was contacted via a personal message on a career network website [3]. We used the online questionnaire tool Unipark, and the survey was distributed by e-mail [4]. Data was collected from April to August 2020. In total, 295 surveys (11.8%)3F returned. Of the completed surveys, 18 came from nonprofit firms and were excluded from this study. This leaves 277 usable observations. 76% of the participants are male, 24% are female, 65% are below the age of 40 years and 35% are 40 years old or older. Further, 33% are in a leading position, and 67% are nonleading management accountants. Demographic information is displayed in Table 2. We further performed the common checks for nonresponse bias and common method bias without any findings indicating a limited robustness of the sample or the survey method.

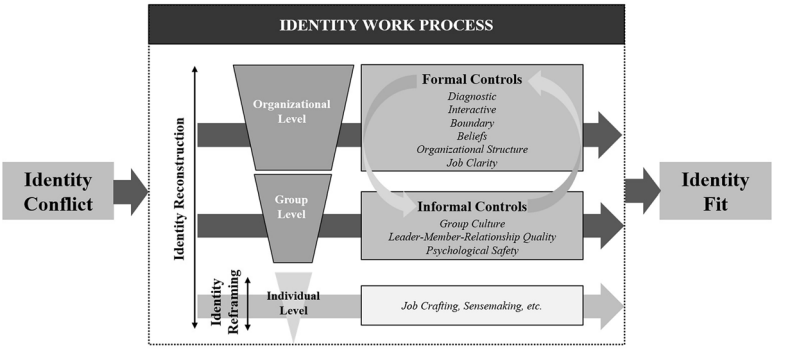

Figure 1.
Identity fit process model

Source: Authors' own creation

	n	%
Panel A: Number of employees		
100–250	52	18.77
250–499	75	27.08
500–999	44	15.88
1,000–2,499	46	16.61
2,500 +	60	21.66
Total	277	100.00
Panel B: industry description		
Consumer goods	20	7.22
Machinery and plant engineering	29	10.47
Chemicals and allied products	15	5.42
Electrical engineering and equipment	14	5.05
Automotive manufacturing	29	10.47
Metal production and fabricated metal products	16	5.78
Other manufacturing industry	30	10.83
Construction	6	2.17
Retail	24	8.66
Transportation and communications services	10	3.61
Other services media and IT	22	7.94
Other	62	22.38
Total	277	100.00
Ownership		
Family-owned firms	102	36.82
Non-family firms	175	63.18
Total	277	100.00

	n	%	Mean	Min.	Max.	SD
Panel C: sample statistics						
Gender						
Male	210	75.81				
Female	67	24.19				
Total	277	100.00				
Age						
20–30	56	20.22				
30–40	123	44.40				
40–50	64	23.10				
50–60	33	11.91				
60+	1	0.36				
Total	277	100.00				
Tenure						
Years in the current function	–	–	8.33	1	30	6.81
Years in the current company	–	–	5.64	1	35	5.71
Years with the current manager/superior	–	–	3.35	1	22	3.12
Total	–	–	–	–	–	–
Leading function (head of controlling and CFOs)	92	33.21		(Thereof 21 senior MAs)		
Non-leading function (junior and senior MAs)	185	66.78				
Total	277	100.00				

Notes: Percentages may not add up to 100% due to rounding errors
Source: Authors' own creation

Table 2.
Demographic data

3.2 Construct measurement

The variables for this study are based on previously validated, reliable constructs. Each variable has been measured using multiple items. Refinements were made in case of reverse coded items, which have been rephrased, in order to reduce complexity of the questionnaire following suggestions of Dillman *et al.* (2014). The items are measured on established and validated seven-point Likert scales. All scales were anchored by 1 "strongly disagree" to 7 "strongly agree" unless reported otherwise. Means are used to create all constructs that are further used for the fsQCA analyses. As fsQCA does not test for the robustness of the measures, we empirically establish construct validity using the tests suggested by Hair *et al.* (2014). The validity of reflective constructs is assessed through factor analysis, correlation analysis and Cronbach's alpha. The factor analysis is conducted with maximum-likelihood extraction and oblique rotation to provide support for unidimensionality for each construct. All Cronbach's alpha coefficients (ranging from 0.64 to 0.95) were higher than the minimal recommended value of 0.60, thus showing high internal consistency and reliability (Hair *et al.*, 2014). Descriptive statistics and construct validity for all reflective multi-item constructs are shown in Table 3.

The validity of formative constructs is assessed through principal component analysis (PCA) and variance inflation factors (VIFs). PCA reveals all weights are positive and above 0.20. Multicollinearity is examined through calculation of VIFs. The highest VIF is 4.96, which is below the general tolerance of 10 (Hair *et al.*, 2014).

To apply fsQCA, several steps have to be conducted. First, constructs have to be coded into conditions. For example, "identity fit" is a construct that can be coded into the condition "high identity fit," as the presence of the condition "high identity fit" is of interest in this study. Similarly, we code the rest of the variables (Pappas and Woodside, 2021). Further, nine conditions that may explain high identity fit are used in this study [5].

Second, the conditions need to be transformed into calibrated sets (fuzzy sets) regarding three thresholds of membership:

(1) full membership (1);

(2) full nonmembership (0); and

(3) the crossover point (0.5).

The crossover point is the point of maximum ambiguity (i.e. fuzziness) in the assessment of whether a case is more in or out of a set (Fiss *et al.*, 2013; Ragin, 2008). This study applies the direct method of calibration (Ragin, 2008). The direct method uses the three thresholds specified based upon theoretical and/or empirical knowledge to rescale the interval coded conditions into fuzzy scores. A 0.001 constant has been added to all fuzzy scores to avoid theoretical difficulties of analyzing sets with membership scores of exactly 0.5 (Fiss, 2011; Greckhamer, 2016). For Likert scales, previous studies often used the endpoints of the scale to indicate the membership, i.e. 7 (full membership), 1 (full nonmembership) and the midpoint 4 (crossover point) as thresholds (e.g. Fiss, 2011; Greckhamer, 2016). We followed the practice unless we found evidence to change the calibration parameters (Bedford *et al.*, 2016; Greckhamer *et al.*, 2018; Pappas and Woodside, 2021).

Identity fit: Identity fit (IDFIT) is the match between an individual's self-concept and his/her organizational role. It is measured through a reflective measurement model that was derived from May *et al.* (2004). Factor analysis shows loadings >0.85 of all items on a single factor (Var. 79%, $\alpha = 0.94$).

Diagnostic systems: To measure diagnostic control use (DIAG), five items are used through a reflective measurement model. It is conceptualized as the extent of the top management

Table 3. Descriptive statistics and construct validity of reflective constructs[a,b,c,d,e]

	n	Min.	Max.	Mean	SD	Load-ing	Cronbach's alpha
IDFIT	277	−2.69	1.49	0.00	1.00	(0.79)	0.94
Job fits self-image	277	1	7	4.97	1.47	*0.89*	
Job gives favored identity	277	1	7	5.10	1.41	*0.89*	
Work is satisfying	277	1	7	4.80	1.55	*0.92*	
Job fits future self-image	277	1	7	4.49	1.63	*0.85*	
DIAG	277	−3.21	1.33	0.00	1.00	(0.78)	0.95
Identification of critical performance variables	277	1	7	5.14	1.45	*0.85*	
target setting for critical performance variables	277	1	7	5.22	1.41	*0.89*	
Monitor progress toward critical performance targets	277	1	7	5.21	1.38	*0.93*	
Provide information to correct deviations from present performance targets	277	1	7	5.27	1.48	*0.86*	
Review key areas of performance	277	1	7	5.38	1.38	*0.88*	
STRUC	277	−1.96	2.08	0.00	1.00	(0.48)	0.80
Typical communication of control information is very open	277	1	7	4.16	1.58	*0.35*	
Degree of accessibility of operational information is free	277	1	7	4.01	1.56	*0.64*	
Content of work-related communication between top mgmt. and subordinates is information and idea sharing, consultative, advice giving	277	1	7	3.52	1.60	*0.82*	
Operating mgmt philosophy favors emphasis on giving the most say to the expert in a given situation even if this means bypassing formal line authority	277	1	7	3.38	1.50	*0.78*	
Operating mgmt philosophy favors emphasis on initiative and adaptation to the local situation	277	1	7	3.68	1.44	*0.77*	
CLARITY	277	−2.20	1.44	0.00	1.00	(0.42)	0.64
Clear expectations of management	277	1	7	4.92	1.48	*0.56*	
Management has a clear view of goals	277	1	7	4.66	1.65	*0.86*	
Availability of resources and equipment	277	1	7	5.00	1.59	*0.44*	
GROUPCULT	277	−2.99	1.28	0.00	1.00	(0.56)	0.78
A team atmosphere describes the work environment	277	1	7	5.3	1.48	*0.67*	
Loyalty is important in the work environment	277	1	7	5.53	1.37	*0.78*	
Morale is important in the work environment	277	1	7	4.98	1.46	*0.79*	
LMX	277	−2.65	1.30	0.00	1.00	(0.72)	0.93
Cordial	277	1	7	4.48	1.60	*0.79*	
Friendly	277	1	7	5.29	1.55	*0.84*	
Open	277	1	7	5.26	1.63	*0.88*	

(*continued*)

Table 3.

	n	Min.	Max.	Mean	SD	Load-ing	Cronbach's alpha
Trusting	277	1	7	5.25	1.72	*0.92*	
Close	277	1	7	4.19	1.66	*0.80*	
PSYCHSAF	277	−3.54	1.02	0.00	1.00	(0.61)	0.94
Not afraid to be oneself at work	277	1	7	5.86	1.29	*0.72*	
Not afraid to express own opinions at work	277	1	7	5.68	1.31	*0.98*	
A friendly environment at work	277	1	7	5.44	1.38	*0.6*	

Notes: [a]Extraction method: maximum-likelihood; [b]Rotation method: Oblimin; [c]The variance extracted for each factor analysis is reported in parentheses in the top line of each table; [d]Italic indicates the loadings of the items that are used for the final measurement of the construct (> 0.30); [e]See Appendix A for complete wording of the items

Source: Authors' own creation

teams' use of budgets and performance measures for (1) identifying critical performance variables, (2) setting targets for critical performance variables, (3) monitoring progress toward critical performance targets, (4) providing information to correct deviations from present performance targets and (5) reviewing key areas of performance. The items are derived from Bedford (2015) and were defined by Widener (2007) and Henri (2006).

Factor analysis shows loadings >0.85 of all items on a single factor (Var. 78%, $\alpha = 0.95$). To create a measure of membership in the set of high diagnostic control uses, we coded membership as fully out for a Likert score of 3 and fully in for a Likert score of 7. The crossover point is set at a Likert score of 5. We decided to use these calibration parameters as the mean (5.24) and standard deviation (1.29) indicate that almost all firms in the sample place a high emphasis on diagnostic controls, which makes it more meaningful to adjust the calibration (Bedford *et al.*, 2016) [6]. The high emphasis on diagnostic controls is plausible, as this control system is widely used to provide structure and monitor employee' behavior (Simons, 1995).

Interactive systems: Interactive control use (INTER) is based on the formative measurement model, which is derived from Bedford (2015) and was developed by Bisbe *et al.* (2007). The construct is measured across five items:

(1) intensive use by top management;

(2) intensive use by operating managers;

(3) face-to-face challenge and debate;

(4) focus on strategic uncertainties; and

(5) noninvasive, facilitating and inspirational involvement (Bedford, 2015).

Boundary systems: Boundary control use (BOUND) is measured across four items that are derived from Bedford (2015) and are based on a formative measurement model. Bedford (2015) referred on analyses of Simons (1994, 1995), who reveals that boundary systems contain four constitutive dimensions:

(1) definition of appropriate conduct;

(2) limitation of search and experimentation;

(3) they are actively communicated by top management; and

(4) use of sanctions to subordinates who engage in activities outside stated boundaries irrespective of the outcome.

According to Bedford (2015), these attributes are defining facets of the construct rather than manifestations of a latent construct.

Beliefs system: Beliefs control use (BELIEF) is measured with four questions based on a formative measurement model derived from Bedford (2015). Some of the items are based on those used by Widener (2007); other additional items were created based on the descriptions of Simons (1994, 1995). Previous studies indicate that beliefs systems are defined by:

- the formal documentation of core values of the firm;
- the active communication of core values;
- the commitment of core values and firm objectives; and
- the inspiration and guidance of core values in the search for new opportunities (Simons, 1994, 1995).

Organizational structure: Organizational structure (STRUC) is measured as the decentralization of decision rights as a reflective model. The measure is derived from Bedford *et al.* (2016) and

consists of five questions that reflect a continuum from mechanistic to organic organizational structure. All items load significantly (>0.35) on a single factor (Var. 48%, $\alpha = 0.80$).

Job clarity: Job clarity (CLARITY) is the perception of working in an environment where management provides significant clarity around direction, job responsibilities and resources. It is measured through a reflective measurement model that was derived from Gartenberg *et al.* (2019). Factor analysis shows loadings >0.44 of all items on a single factor (Var. 42%, $\alpha = 0.64$).

Group culture: Group culture (GROUPCULT) is measured through a reflective measurement model that was derived from Kruis *et al.* (2016) and Heinicke *et al.* (2016). Factor analysis shows loadings >0.67 of all items on a single factor (Var. 56%, $\alpha = 0.79$). To calibrate high group culture, we used the thresholds 7 for full membership, 3 for full nonmembership and the crossover point is 5 as the mean (5.27) and standard deviation (1.20) indicate a generally higher emphasis on cohesion, teamwork and emphasis on team norms.

Leader-member relationship quality: Leader-member relationship quality (LMX) is derived from Ashford *et al.* (1998). It refers to the relationship towards ones' superior as cordial, friendly, open, trusting and close, and scales on a seven-point Likert scale from 1 "not at all descriptive of our relationship on average" to 7 "very descriptive of our relationship on average."6F All items load significantly (>0.79) on a single factor (Var. 72%, $\alpha = 0.93$).

Psychological safety: Psychological safety (PSYCHSAF) is developed by Kahn (1990), and it assesses whether individuals feel comfortable being themselves and expressing their opinions at work or whether there was a threatening environment at work. The construct is measured through a reflective measurement model. Factor analysis shows loadings >0.60 of all items on a single factor (Var. 61%, $\alpha = 0.94$). To create a measure of membership in the set of high psychological safety, we coded membership as fully out for a Likert score of 3 and fully in for a Likert score of 7. The crossover point is at a Likert score of 5. We decided to use these calibration scores as the mean (5.66) and standard deviation (1.12) indicate a generally higher perception of psychological safety.

As this study is case-oriented instead of variable-oriented, control variables are not part of the analyzing method (Greckhamer *et al.*, 2013; Ragin, 2000, 2008). All construct measures are illustrated in Appendix 1. The descriptive statistics and bivariate correlations are presented in Table 4.

3.3 Data analysis

After the calibration of our variables, we performed necessity analysis (Greckhamer, 2016). Neither of our attributes nor their negotiations are strictly necessary for high identity fit and

Table 4. Descriptive statistics and bivariate correlations (Pearson)

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
1. IDFIT	4.84	1.39									
2. DIAG	5.24	1.29	0.291***								
3. INTER	4.35	1.2	0.381***	0.646***							
4. BOUND	3.94	1.22	0.231***	0.348***	0.443***						
5. BELIEF	4.27	1.5	0.262***	0.423***	0.537***	0.561***					
6. STRUC	3.75	1.15	0.326***	0.157***	0.327***	0.163***	0.263***				
7. CLARITY	4.86	1.2	0.462***	0.441***	0.593***	0.272***	0.466***	0.351***			
8. GROUPCULT	5.27	1.2	0.569***	0.372***	0.374***	0.201***	0.299***	0.194***	0.418***		
9. LMX	4.89	1.44	0.551***	0.220***	0.297***	0.153*	0.238***	0.373***	0.468***	0.460***	
10. PSYCHSAF	5.66	1.12	0.561***	0.246***	0.301***	0.079	0.200***	0.363***	0.475***	0.478***	0.567***

Notes: This table shows estimated correlations between constructs; *$p < 0.10$; **$p < 0.05$; ***$p < 0.01$ (two tailed)
Source: Authors' own creation

need to be excluded from the further analyses (Pappas and Woodside, 2021) [7]. The next step is to insert the calibrated data into the truth table. The truth table is a chart with 2k rows (k = number of included sets), which displays all logically possible combinations of the included theoretical attributes (Greckhamer *et al.*, 2013). In this case, each support mechanism (formal and informal control) is allocated to a single row based on its fuzzy set membership scores in high identity fit. After the allocation, the truth table assesses which combinations lead to the outcome and which do not. This requires the specification of minimum frequency and consistency thresholds (Fiss, 2011; Greckhamer *et al.*, 2018).

Frequency refers to the number of cases that need to be observed in a truth table row to be considered valid empirical evidence. A higher frequency threshold means that each configuration refers to more cases in the sample. However, this also reduces the percentage (i.e. coverage) of the sample that is explained by the retained configurations (Pappas and Woodside, 2021). For samples larger than 150 cases, the frequency threshold should be set at three or higher (Fiss, 2011). The sample size of this study is 277; therefore, the threshold is set at three, and all combinations with a smaller frequency are removed from further analyses.

Once configurations with low frequency are removed, the truth table is sorted by raw consistency. Consistency refers to the degree to which cases correspond to the set-theoretic relationships expressed in a solution, and it is like the *p*-value in regression analysis (Bedford *et al.*, 2016; Fiss, 2011). Regardless of the sample size, Ragin (2008) has suggested a minimum consistency threshold of 0.80. In this study, a consistency threshold of 0.90 is selected.

In the final step, fsQCA computes three solutions based on Boolean algebra, namely the complex solution, the parsimonious solution and the intermediate solution. The solutions differ regarding the involvement of simplifying assumptions, called counterfactuals (Fiss, 2011; Greckhamer, 2011, 2016; Pappas and Woodside, 2021). The complex solution excludes counterfactual cases and presents all the possible combinations of conditions when traditional logical operations are applied. Parsimonious and intermediate solution sets integrate counterfactuals. Parsimonious solutions include all counterfactuals and present the most important conditions, which cannot be left out from any solution. These are called "core conditions" (Fiss, 2011). They are identified automatically by the software (Pappas and Woodside, 2021). The intermediate solution is obtained when performing counterfactual analysis on the complex and parsimonious solutions, including only theoretically plausible counterfactuals, by using existing theoretical knowledge (Greckhamer, 2011; Ragin, 2008). The researcher chooses if one of the conditions should be considered as "present," "absent" or "present or absent" in explaining the outcome (Fiss, 2011; Pappas and Woodside, 2021). This study did not include easy counterfactuals, as we want this study being explanatory. Therefore, the complex and intermediate solutions are the same. All analyses are conducted with the fs/QCA 3.0 software package (Ragin and Davey, 2016).

4. Results

4.1 Main results

To receive the results, an algorithm based on Boolean algebra is applied by the software. This determines the commonalities among the combinations that explain the outcome variable and leads to conditions being identified as sufficient and necessary to explain the outcome or insufficient on their own but necessary parts of the solution8F. The conditions can be present or absent in a solution, or conditions can be redundant, called "do not care" conditions. Core elements indicate a strong causal relationship with the outcome, and peripheral elements indicate a weaker relationship (Fiss, 2011; Pappas and Woodside, 2021).

The results that follow are presented by using the generally accepted notation where solid circles (●) refer to the presence of a condition and crossed-out circles (⊗) designate its absence (Ragin and Fiss, 2008) [8]. Large circles indicate core conditions that occur in parsimonious and intermediate solutions, and small circles refer to peripheral conditions that occur in intermediate but not parsimonious solutions. Blank spaces in a solution indicate a "do not care" situation (Fiss, 2011; Greckhamer, 2016). The solutions of the main analysis are shown in Table 5.

Solutions are grouped by their core conditions. Set theoretic consistency and coverage measures are also reported (Greckhamer *et al.*, 2018; Ragin, 2008). The overall coverage describes the extent to which the outcome of interest may be explained by the configurations and is comparable with the R-square statistics reported in regression-based methods (Pappas and Woodside, 2021). The higher a configuration's coverage, the more empirically relevant is a configuration for reaching the outcome of interest (with zero being the lowest and one being the highest possible coverage score). The coverage of the overall solution is 0.53, indicating a solid portion of high identity fit membership (Ragin, 2008). Further, the higher a configuration's consistency, the stronger is the evidence for a configuration being related to high identity fit. All configurations exhibit high consistency values of at least 0.92, with the overall solution consistency at 0.88, which indicates that the configurations are strongly related to high identity fit (Ragin, 2008).

The results of the fsQCA show four equally effective configurations of identity fit support mechanisms. The first configuration combines the presence of high job clarity and high leader-member relationship quality, along with the complementary conditions of high diagnostic, interactive, beliefs, boundary controls and an organic organizational structure as formal controls. High-group culture is a complementary, present informal control condition. Psychological safety is a redundant condition in the first solution. The second configuration

	Solutions			
Organizational level mechanisms	1	2	3a	3b
Diagnostic systems	•	•	⊗	•
Interactive control systems	•	•	⊗	•
Boundary systems	•	•	⊗	•
Beliefs systems	•	•	⊗	⊗
Organizational structure (organic)	•	•	•	•
Job clarity	●	•	⊗	⊗
Group level mechanisms				
Group culture	•	●	●	●
Leader-member relationship quality	●		•	•
Psychological safety		●	●	●
Consistency	0.92	0.92	0.92	0.94
Raw coverage	0.42	0.41	0.34	0.35
Unique coverage	0.04	0.04	0.05	0.01
Overall solution consistency			0.88	
Overall solution coverage			0.53	

Table 5.
Results of fsQCA for high identity fit[a]

Notes: [a]● refers to the presence of a condition; ⊗ refers to the absence of a condition (Ragin and Fiss, 2008); large circles indicate core conditions; small circles refer to peripheral conditions; blank spaces indicate a "do not care" situation
Source: Authors' own creation

combines the presents of a high group culture together with high psychological safety as core conditions. The presence of all formal controls supports the configuration of the core conditions. The combinations of high group culture and high psychological safety are core conditions in the solutions 3a and 3b, as well. The solutions only differ regarding the absence or presence of certain formal controls.

4.2 Subsample results

Several subsample analyses are conducted to get a better understanding of how the different identity fit support mechanisms work regarding the levels of seniority of management accountants. The primary activities of management accountants are found to differ depending on their hierarchical job position (Horton *et al.*, 2020), which also influences the need for different skills (Rouwelaar *et al.*, 2021). This might influence the configurations of support mechanisms for an identity fit as well. Junior management accountants are usually more involved in simpler nature of the tasks undertaken repeatedly without much involvement in strategic accounting decisions (e.g. transaction processing, recording and basic reporting, including purchase to pay, order to cash and record to report processes). Senior management accountants, usually in the middle management ranks, are responsible for the implementation of the accounting strategy. They communicate to lower-level employees and share information and ideas to higher career stages like the Head of Accounting or the CFO. The latter mentioned high ranked functions are involved in organizational-level decisions and are responsible for the whole accounting department (Goretzki and Messner, 2019; Horton *et al.*, 2020).

Table 6 shows the different fsQCA configurations of our case sample in three subsamples regarding the tree career stages of the management accountants in this study. The results show that there is only one solution for junior management accountants to support a high identity fit. A combination of interactive controls, an organic organizational structure and a high group culture are the core conditions in this configuration. The configuration exhibits a high consistency value of 0.91 and a solution coverage of 0.49. In case of the senior management accountants, three equally effective configurations are presented with an overall consistency of 0.9 and an overall solution coverage of 0.62. Solutions 2a and 2b indicate that the absence of boundary controls, together with a high emphasis on group culture, is effective to support a high identity fit with other formal and informal controls present or absent as complementary controls. Solution 3 suggests a combination of a high group culture and a high leader-member relationship quality. The solutions 4 and 5 for the subgroup of the Head of Accounting/CFO career stage indicate both a high emphasis of the combination of the core conditions of high leader-member relationship quality and psychological safety, together with the absence of diagnostic controls to support a high identity fit for that group. The configuration exhibits a high consistency value of 0.90 and a solution coverage of 0.47.

Almost all configurations in the main as well as in the sub samples indicate the importance of informal controls to support a high identity fit. A strong group culture appears to be most important, together with combinations of leader-member relationship-quality and psychological safety. To validate the findings, several robustness tests are conducted in the next section.

4.3 Robustness tests

4.3.1 Configurations for the absence of identity fit and low identity fit. The logic of QCA is causally asymmetric. That means that the set of causal conditions leading to the presence of an outcome can be different from the set of conditions that lead to the absence of an outcome

	Solutions					
	Junior MA (n = 185)	*Senior MA (n = 21)*			*Head of accounting / CFO (n = 71)*	
Organizational level mechanisms	1	2a	2b	3	4	5
Diagnostic systems	•	⊗	•	⊗	⊗	⊗
Interactive control systems	●	⊗	⊗	⊗	⊗	•
Boundary systems	•	⊗	⊗	●	⊗	•
Beliefs systems	•	⊗	●	●	⊗	•
Organizational structure (organic)	●	●	●	●	⊗	•
Job clarity	•	⊗	⊗	●	⊗	•
Group level mechanisms						
Group culture	●	●	●	●	•	⊗
Leader-member relationship quality		•	⊗	●	●	●
Psychological safety		⊗	•	•	●	●
Consistency	0.91	0.92	0.94	0.94	0.9	0.92
Raw coverage	0.49	0.44	0.46	0.41	0.39	0.38
Unique coverage	0.49	0.09	0.11	0.05	0.09	0.08
Overall solution consistency	*0.91*		*0.9*		*0.9*	
Overall solution coverage	*0.49*		*0.62*		*0.47*	

Table 6.
Results of fsQCA for high identity fit[a]

Notes: [a]• refers to the presence of a condition; ⊗ refers to the absence of a condition (Ragin and Fiss, 2008); large circles indicate core conditions; small circles refer to peripheral conditions; blank spaces indicate a "do not care" situation
Source: Authors' own creation

(Ragin, 2000). Therefore, we follow the recommendation of Fiss (2011) to additionally examine which causes lead to the absence of high identity fit. To do so, measures of membership with the absence of identity fit and low identity fit are created. The absence of identity fit is simply coded as the negation of the measure of high identity fit described above (full membership set at 1, full nonmembership set at 7, crossover point set at 4). We also created a measure for low identity fit (full membership set at 2, full nonmembership set at 6, crossover point set at 4).

In case of the absence of identity fit, basically combinations of absent conditions at the organizational level are core conditions. For low identity, fit combinations of the absence of job clarity together with LMX and psychological safety are found. All in all, there are several ways that lead to a decline of the identity fit for management accountants, though formal controls appear to be antecedents of informal controls. Appendix 2 provides details on estimations and results.

4.3.2 Alternative calibrations. QCA findings can be considered robust if slightly different inputs lead to similar enough findings. Therefore, calibration thresholds are changed to the same calibration thresholds for all variables (full membership set at 6, full nonmembership set at 2, crossover point set at 4), which are recommended to use having seven-point Likert scales (Pappas and Woodside, 2021). We further applied a frequency threshold at 3 and minimum consistency threshold at 0.8. This leads to a change of the findings' consistency (0.89) and coverage (0.32) but does not affect core conditions or the configurations found for high identity fit substantially. This is in line with previous analyses in the field (Fiss, 2011; Greckhamer *et al.*, 2018). The overall emphasis lies on the use of informal controls in combination with job clarity for high identity fit (see Appendix 3).

4.3.3 Traditional quantitative methods. An advantage of large sample QCA approaches is that it can complement existing linear models (Greckhamer *et al.*, 2013); on the other hand, the traditional approaches can also be used to validate the findings of the fsQCA (Pappas and Woodside, 2021). Therefore, the results of the fsQCA are compared with results of more traditional methods like cluster analysis and OLS regression (Fiss, 2011) [9].

In this study, a two-step cluster analysis is used. In the first stage, the number of clusters and initial centroid values for identity fit are determined through a hierarchical agglomeration procedure using Ward's method. In the second stage, a K-means clustering analysis is conducted using the initial centroid values (Hair *et al.*, 2014). Both procedures indicate a two-cluster solution. Appendix 4, panel A, shows the cluster solution. The diagram shows that the subgroup of management accountants with a high identity fit also perceives a strong group culture as well as a good relationship with their supervisors and high psychological safety at work.

Next, an OLS regression analysis is performed. The models regress identity fit on the formal and informal controls, including the analysis of interaction effects of the core conditions. That aims to identify complements or substitutes regarding the mechanisms (Bedford *et al.*, 2016; Erkens and Van der Stede, 2015; Gonçalves and Gaio, 2021; Gonçalves *et al.*, 2018) [10]. The results show significant associations similar to the configurations of the fsQCA for the full sample as well as for junior and senior management accountants (see Appendix 4, Panel B). However, boundary controls rather than interactive controls (which is theoretically more sensemaking) are significant variables in the regression models. A possible answer to these findings may arise from the (standard) calibration of boundary controls for the fsQCA analysis. In the case of the subgroup analysis for junior management accountants, the need for fixed rules and boundaries may also play a role in ensuring an identity fit for those young professionals.

5. Discussion and conclusion

During the last couple of years, the accounting literature has increasingly studied the changing nature of the management accounting role from the traditional "bean counter" to a modern business partner role, as this change might lead to individual identity conflicts of the management accountant with negative effects for the organization as well. Many prior studies have kept their focus on individual identity work to overcome these identity conflicts (Byrne and Pierce, 2018; Goretzki *et al.*, 2013; Järvenpää, 2007; Morales and Lambert, 2013). This study adds knowledge to prior qualitative literature (e.g. Goretzki and Messner, 2019; Heinzelmann, 2018; van der Steen, 2022) by investigating identity fit support mechanisms in a large case-based study using fsQCA with management accountants from Germany, Austria, Liechtenstein and the German speaking part of Switzerland. The mechanisms (formal and informal management controls) are based on organizational and team level. We refer to research on organizational behavior that calls for the better understanding of multilevel influences on identity work to fully grasp the underlying mechanisms that drive an identity fit in the organizational context (Ashforth *et al.*, 2011; Chreim *et al.*, 2007; Dutton *et al.*, 2010; Horton *et al.*, 2014; Lok, 2010). By applying configuration theory (Ragin, 2014; Ragin and Fiss, 2008), this study specifically examines control packages within this large-scale sample.

The results reveal that there are multiple, equally effective ways to support high identity fit for management accountants. In total, five major findings in the overall and sub samples are made. The findings (1) and (2) highlight the relevance of informal controls at the group level. Finding (3) indicates the initial importance of formal controls on organizational level to

support an identity fit. The findings (4) and (5) focus on case solutions of junior and senior-level management accountants:

(1) Several solutions within the overall sample present a combination of a strong group culture and high psychological safety as especially relevant to supporting a high identity fit. These results contribute to organizational behavior research that highlights the effect of a strong group culture and supportive and trustworthy coworker behaviors to be highly effective to influence employees' attitudes and the emotional dimensions of work (Kahn, 1990; May *et al.*, 2004). Social identity theory suggests that if individuals who identify with a group, then the group becomes a significant part of their self-concept (Ashforth and Mael, 1989). The literature also associates positive effects with group internalization, such as more positive self-perception and self-evaluation (Deci and Ryan, 2000). From the management accounting field, Lepistö *et al.* (2018) find in that sense that a strong group culture is a significant neutralizer of the image of dirty work that management accountants often perceive. The relationship with colleagues and superiors is further important to feel safe at work. People who feel to be able to show their selves without the fear of negative consequences are more confident towards their self-image, status or career (Edmondson, 1999; Kahn, 1990);

(2) The combination of high job clarity and high leader-member relationship quality has also been highlighted within the results. This adds to research that argues that changes in management accounting practices have an important impact on individuals' identities. Conflicts occur when new practices that management accountants have to enact no longer align with their understandings of their inner self (Goretzki *et al.*, 2013; Järvinen, 2009). Besides, Morales and Lambert (2013) suggested that management accountants' work identity is mostly regulated by upper echelons that need to clarify and legitimize their tasks. Individuals feel safer to engage themselves more fully, try out novel ways of doing things, discuss mistakes and learn from these behaviors when they are in supportive leader-member relationships (Edmondson, 2004; May *et al.*, 2004). If employees have little trust in their leaders, they are likely to feel judged or monitored and refrain from expressing their opinions because of fear that it may bring harm to their reputation (Edmondson, 2004). Thus, the results complement prior case studies that highlight the eminent role of supervisors of management accountants as a key promoter in reshaping their identities when supportive relationships are present (Goretzki and Messner, 2019; Goretzki *et al.*, 2013; van der Steen, 2022);

(3) Formal controls (present or absent) are usually peripheral conditions in the overall sample analysis. However, the supplementary analysis about different levels of identity fit underlines the important role of the examined formal controls. In case of the absence of identity fit, interactive, beliefs and boundary systems are absent core conditions as well. In other words, the absence of these control levers leads to the absence of an identity fit. That may indicate that an effective formal control system at the organizational level is needed for the initial realization of an identity fit. The analysis of the set of low-identity fit then indicates the importance of job clarity, leader-member relationship quality and psychological safety. After the initial realization of the identity fit by formal controls, the interplay with informal controls keeps improving the fit. This result adds to research of Pfister and Lukka (2019), who found that informal controls can stretch the positive outcomes of formal controls in a control package;

(4) The subsample analyses provide more insights regarding the individual differences of the career stages of management accountants and the relevant identity fit support mechanisms. In case of junior management accountants, all formal control mechanisms are present, but only the combination of interactive control systems and an organic organizational structure, together with a strong group culture as an informal control mechanism, are core conditions. Interactive controls communicate the concerns of the management throughout the organization (Adler and Chen, 2011). Thus, employees become aware of where potential opportunities and threats may arise and are motivated to be proactive in searching for new opportunities and guarding against threats (Ferreira and Otley, 2009). Continuous communication across organizational members and feedback from superiors seem sensemaking to support the identity fit for junior management accountants. Besides, organic structures that are characterized by decentralized decision-making, organizational adaptiveness and open communications without high emphasis on formal rules and procedures (Covin *et al.*, 2001), together with a strong group culture in the finance function, can facilitate role identification for junior professionals; and

(5) In contrast, to support a high identity fit for senior management accountants, informal controls such as group culture and leader-member relationship quality are thoroughly relevant. Moreover, the absence of boundary control systems is highlighted. The analysis regarding the CFO function shows a similar picture. Leader-member relationship quality and psychological safety are present, whereas diagnostic controls should be an absent core condition. Higher ranked management accountants need to offer more influence and autonomy than to adapt themselves within the institutional structures (Horton and Wanderley, 2018; Horton *et al.*, 2020). Thus, the results indicate the need for more self-determination (Deci, 1971) and own agency towards one's identity fit when people are in higher work positions. Therefore, informal rather than formal controls are relevant.

This study adds to previous case study research and shows implications for the management. The results address that support mechanisms for identity fit do not work in isolation but are rather an interplay in triggering identity work on organizational and group level. Moreover, the relationship between management accountants and other organizational members is most important to strengthen the management accountants' identity.

The existence of a trusting relationship with superiors has been found to be helpful to strengthen management accountants aspired identities by prior case studies (e.g. Byrne and Pierce, 2018; Goretzki *et al.*, 2013; van der Steen, 2022). This study complements these findings with large scale sample data. General managers can further influence the prestige of professional groups in the company by providing more resources or more rights or by showing that they care about their opinion (Hiller *et al.*, 2014). However, as observed by Morales and Lambert (2013), the relationships between management accountants and general managers are not naturally peaceful. General managers can therefore be the source of fragility in accountants' identity work. The present study highlights the importance of the relationship between both professional groups. This research on management accountants' identity fit has also implications for practitioners from other organizational professions who need to engage in identity work.

Nevertheless, this study is not free of limitations. First, we show several combinations of casual conditions that relate to a high identity fit for management accountants by using a large sample cross-sectoral survey to collect the data. In doing so, we only measure respondents' individual perceptions of how they perceive their own high identity fit. This

does not give any information about how the management accountant behaves in reality and if their identity fit supports their organizational role and work performance. Further, cross-sectoral studies have to be interpreted in the light of their common drawbacks (Speklé and Widener, 2018). However, we checked for the robustness of the data, and there is no reason to expect systematic bias across variables, and the likelihood of common method bias is low.

Second, QCA studies are not necessarily generalizable, as this is depended upon the initial construction of the study sample and the incorporation of any simplifying assumptions. With respect to the former, sampling in large QCA studies should follow the logic of selecting theoretically relevant cases (Greckhamer *et al.*, 2018; Ragin, 2008). Using a random sample often seems inappropriate for two reasons: the homogeneity problem (data with a central tendency and normal distribution) and the diversity problem (leaving out rare configurations) (Greckhamer *et al.*, 2013; Ragin, 2000). As the sample of this study is based on random data, we checked for the appropriateness of the sample to mitigate the likelihood of errors, and we left out simplifying assumptions (easy counterfactuals). Nevertheless, the interpretation of the data is limited, as the results might only have limited implications for management accountants in other cultural areas or other organizational structures than those involved in this study.

Third, the study analyzes the causal conditions that lead to a high identity fit of management accountants. As QCA studies are shaped by the fact that set theoretic relationships allow for asymmetric causal relationships, the causal conditions that lead to high identity fit cannot be generalized as also having implications for configurations leading to low identity fit (Fiss, 2011; Greckhamer *et al.*, 2018).

Despite the limitations of fsQCA, this study could demonstrate the strengths of the method and try to mitigate some weaknesses of other approaches when it comes to analyzing configurations. As such, this study provides novel insights into how to integrate new methods in the management accounting research stream and follows recent fsQCA studies (Bedford *et al.*, 2016; Erkens and Van der Stede, 2015). Furthermore, this study contributes to the literature that focuses on the configurations of formal and informal controls as a control package (Evans and Tucker, 2015; Ferreira and Otley, 2009; Gerdin *et al.*, 2019; Malmi and Brown, 2008; Pfister and Lukka, 2019) and follows latest research recommendations in that field (Bedford, 2020).

This research identifies which combinations of formal and informal controls help to gain legitimacy to support an identity fit and contributes to the importance of a strong group culture as well as the importance of the quality of the relationship to superiors and an overall high psychological safety of management accountants to perceive a high identity fit. From these findings, implications can also be made for other organizational functions that are affected by changes in their professions.

This study leaves room for further research avenues. First, a future study can investigate the influence of organizational identification as a support mechanism for management accountants' identity fit. Organizational identification refers to the extent to which employees experience a sense of oneness and belongingness with their using organization (Ashforth and Mael, 1989). By achieving high levels of the personal identification towards an organization, individuals are more likely to overcome challenges and stay in their organizations (Kristof, 1996). Therefore, high organizational identification may also be relevant in supporting the identity fit of management accountants in their current situation of role change. Different organizational characteristics, such as size or industry affiliation, can also possibly cause effects on the identity fit.

Second, future research can integrate effects that involve organizational crisis situations. Research indicates that, for example, financial crisis situations can increase the importance

of management accountants especially in interactions with other departments and in the decision-making processes (Endenich, 2014). This higher role acceptance might also positively influence management accountants' identity fit.

Third, this study leaves out how the development of new skills can support the identity fit of management accountants. As the finance function is changing, management accountants are in need to adopt a new set of skills and need to be open for continuous learning (Byrne and Pierce, 2007; Lepistö and Ihantola, 2018; Rouwelaar *et al.*, 2021). Future studies could thereby add to research regarding the role of universities in preparing students to work in the finance function (Jakobsen *et al.*, 2019) or shed more light in recruiting and selection processes to realize not only a high functional but also a high identity fit.

Notes

1. The sampling choice was driven by the common language (German). Therefore, the Swiss sub sample only includes firms from the German-speaking part of Switzerland.
2. We focus in this study on management accountants' individual behavioural effects. Thereby, management accountants, as employees in a firm, are exposed by the applied management controls (rather than in their function of developing management controls).
3. We searched for employees of the target firms and filtered for management accountants on that website. We did not specify any sub-profession in the management accounting field, as we aim to give a general picture of the management accounting profession.
4. The cover letter of the questionnaire explained the relevance of the study and emphasized the anonymity and privacy of the respondents. Contact information of the corresponding researchers was provided to give the opportunity to ask questions or to give feedback if desired. The survey questions have been randomized. To reduce complexity of the study, only a limited number of items were displayed on the screen at a time, and a progress bar indicated the headway of the participant. A few incentives like an executive summary as well as free participation of an executive education seminar at the university were offered to increase the response rate. In case of no response to the first invite, a reminder e-mail was sent ten days after the first contact.
5. This is in line with Ragin's (2008) recommendations to limit the number of causal conditions to maximal 10 conditions, as each additional condition doubles the number of logically possible configurations which also increases the difficulty of interpreting the findings (Greckhamer *et al.*, 2013).
6. Similar high emphasis on diagnostic controls has been found in previous empirical studies, as well (e.g., Heinicke *et al.*, 2016; Kruis *et al.*, 2016; Speklé *et al.*, 2017; Widener, 2007).
7. fsQCA identifies conditions that are (1) sufficient or necessary to explain the outcome and (2) insufficient on their own but are necessary parts of solutions that can explain the result (INUS conditions; insufficient but necessary part of a condition that is itself unnecessary but sufficient for the result) (Pappas and Woodside, 2021, p. 15).
8. In case of organizational structure, solid circles (●) refer to the use of organic structural controls, while crossed-out circles (⊗) refer to the use of mechanistic structural controls (Bedford *et al.*, 2016).
9. Although previous QCA literature indicated that these supplementary analyses often offer limited additional insights (Erkens and Van der Stede, 2015; Fiss, 2011).
10. All variables are mean-centered, and all VIFs for all models are well below the general threshold of 10, indicating that multicollinearity is not a significant concern (Hair *et al.*, 2014).

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Appendix 1

Table A1.

	Survey items	
	Items	Anchors
1	*Diagnostic control systems* *To what extent does the top management team use budgets and performance measures for the following*	*Likert scale 1–7: 1 = very low extent / 7 = very high extent*
1.1	Identify critical performance variables (i.e., factors that indicate achievement of current strategy)	
1.2	Set targets for critical performance variables	
1.3	Monitor progress toward critical performance targets	
1.4	Provide information to correct deviations from present performance targets	
1.5	Review key areas of performance	
2	*Interactive control systems* *To what extent does the top management team use budgets and performance measures for the following*	*Likert scale 1–7: 1 = very low extent / 7 = very high extent*
2.1	Provide a recurring and frequent agenda for top management activities	
2.2	Provide a recurring and frequent agenda for subordinate activities	
2.3	Enable continual challenge and debate of underlying data, assumptions and action plans with subordinates and peers	
2.4	Focus attention on strategic uncertainties (i.e., factors that may invalidate current strategy or provide opportunities for new strategic initiatives)	
2.5	encourage and facilitate dialog and information sharing with subordinates	
3	*Beliefs control systems* *To what extent...*	*Likert scale 1–7: 1 = very low extent / 7 = very high extent*
3.1	Are the values, purpose and direction of the company codified in formal documents? (e.g., mission/value statements, credos, statements of purpose?)	
3.2	Does top management actively communicate core values to subordinates?	
3.3	Are formal statements of values used to create commitment to the long-term vision of top management?	
3.4	Are formal statements of values used to motivate and guide subordinates in searching for new opportunities?	
4	*Boundary control systems*	*Likert scale 1–7: 1 = very low extent / 7 = very high extent*

(*continued*)

Table A1.

Survey items		
	Items	Anchors
	To what extent.. .	
4.1	Are codes of conduct or similar statements relied upon to define appropriate behaviour?	
4.2	Are there policies or guidelines that stipulate specific areas for, or limits on, opportunity search and experimentation?	
4.3	Does top management actively communicate risks and activities to be avoided by subordinates?	
4.4	Are sanctions or punishments applied to subordinates who engage in risks and activities outside organizational policy, irrespective of the outcome?	
5	*Organizational Structure*	*Likert scale 1–7*
5.1	Indicate how control information is typically communicated in your company	1 = through highly structured, formal channels of communication; 7 = through very open, informal channels of communication
5.2	Indicate the accessibility of operational information in your company	1 = highly restrictive access to important operational information; 7 = free flow of important operational information throughout the SBU
5.3	Indicate the content of work-related communication between top management and subordinates	1 = top management decisions and mandates, instructional, direction giving; 7 = information and idea sharing, consultative, advice giving
5.4	In general, the operating management philosophy in my company favors	1 = emphasis on giving the most say in decision making to formal line managers; 7 = emphasis on giving the most say to the expert in a given situation even if this means bypassing formal line authority
5.5	In general, the operating management philosophy in my company favors	1 = emphasis on specialization and top-level coordination; 7 = emphasis on initiative and adaptation to the local situation
6	*Job clarity*	*Likert scale 1–7: 1=strongly disagree and 7=strongly agree*
6.1	Management makes its expectations clear	

(*continued*)

Table A1.

	Survey items	
	Items	Anchors
6.2	Management has a clear view of where the organization is going and how to get there	
6.3	I am given the resources and equipment to do my job	
7	*Group culture*	*Likert scale 1–7: 1 = strongly disagree and 7 = strongly agree*
7.1	A team environment describes my work environment	
7.2	Loyalty is important in my work environment	
7.3	Morale is important in my work environment	
8	*Leader-Member relationship quality*	*Likert scale 1–7: 1 "not at all descriptive of our relationship on average" and 7 "very descriptive of our relationship on average"*
	Please scale your relationship to your supervisor	
8.1	Cordial	
8.2	Friendly	
8.3	Open	
8.4	Trusting	
8.5	Close	
9	*Psychological safety*	*Likert scale 1–7: 1 = strongly disagree and 7 = strongly agree*
9.1	I'm not afraid to be myself at work	
9.2	I am not afraid to express my opinions at work	
9.3	There is a friendly environment at work	
10	*Identity fit*	*Likert scale 1–7: 1 = strongly disagree and 7 = strongly agree*
10.1	My job "fits" how I see myself	
10.2	I like the identity my job gives me	
10.3	The work I do on this job helps me satisfy who I am	
10.4	My job "fits" how I see myself in the future	

Source: Authors' own compilation based on sources cited in chapter 3.2

Appendix 2

Panel A: Results of fsQCA for the absence of identity fit[a, b]

	Solutions					
Organizational level mechanisms	1	2	3	4	5	6
Diagnostic systems						
Interactive control systems	⊗	⊗	⊗	⊗	⊗	⊗
Boundary systems		⊗	⊗	⊗	•	⊗
Beliefs systems	⊗	⊗		⊗	⊗	⊗
Organizational structure (organic)			⊗	⊗	•	•
Job clarity	⊗	⊗	⊗	⊗	⊗	⊗
Group level mechanisms						
Group culture	⊗	⊗	⊗			•
Leader-member relationship quality	⊗	⊗	⊗	⊗	⊗	•
Psychological safety	⊗		⊗	⊗	⊗	•
Consistency	0.91	0.92	0.92	0.93	0.9	0.9
Raw coverage	0.55	0.5	0.44	0.44	0.36	0.22
Unique coverage	0.04	0.01	0.02	0.01	0.01	0.02
Overall solution consistency			*0.89*			
Overall solution coverage			*0.64*			

Panel B: Results of fsQCA for low identity fit[b]

	Solutions						
Organizational level mechanisms	1	2	3	4	5	6	7
Diagnostic systems	⊗	⊗	⊗	⊗	•	⊗	•
Interactive control systems	⊗	⊗	⊗	⊗	•	•	•
Boundary systems			•	⊗	•	•	•
Beliefs systems		⊗		⊗	•	•	•
Organizational structure (organic)	⊗			⊗	•	•	•
Job clarity	⊗	⊗	⊗	⊗	•	⊗	⊗
Group level mechanisms							
Group culture	⊗	⊗	⊗			•	•
Leader-member relationship quality	⊗	⊗	⊗	⊗	⊗	⊗	•
Psychological safety	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Consistency	0.98	0.97	0.97	0.97	0.9	0.96	0.9
Raw coverage	0.41	0.45	0.35	0.36	0.22	0.2	0.18
Unique coverage	0.01	0.05	0.01	0.01	0.02	0.01	0.01
Overall solution consistency				*0.93*			
Overall solution coverage				*0.58*			

Notes: [a]frequency cutoff = 3; consistency threshold = 0.9; [b]frequency cutoff = 4; consistency threshold = 0.9[b] • refers to the presence of a condition; ⊗ refers to the absence of a condition (Ragin and Fiss, 2008); large circles indicate core conditions; small circles refer to peripheral conditions; blank spaces indicate a "do not care" situation

Source: Authors' own creation

Table A2.

Appendix 3

Results of fsQCA for high identity fit standard calibration[a, b]

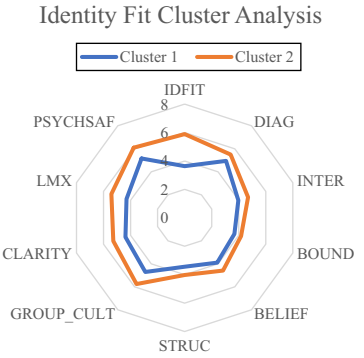
	Solutions		
Organizational level mechanisms	1	2	3
Diagnostic systems	⊗	⊗	•
Interactive control systems	•	•	•
Boundary systems	•	•	•
Beliefs systems	•	•	•
Organizational structure (organic)	•	•	•
Job clarity	•	●	●
Group level mechanisms			
Group culture	●	⊗	●
Leader-member relationship quality	⊗	●	●
Psychological safety	⊗	●	●
Consistency	0.86	0.94	0.96
Raw coverage	0.23	0.21	0.17
Unique coverage	0.08	0.05	0.03
Overall solution consistency		*0.89*	
Overall solution coverage		*0.32*	

Notes: [a]frequency cutoff = 3; consistency threshold = 0.8[b] • refers to the presence of a condition; ⊗ refers to the absence of a condition (Ragin and Fiss, 2008); large circles indicate core conditions; small circles refer to peripheral conditions; blank spaces indicate a "do not care" situation

Source: Authors' own creation

Table A3.

Appendix 4.



Source: Authors' own creation

Figure A1.
Panel A

Panel B
OLS regression for identity fit[a]

	Full sample (1)–(3)			Junior MA	Senior MA[b]
	(1)	(2)	(3)	(4)	(5)
Constant	0.000(1.000)	0.001(0.980)	−0.031(0.515)	−0.051(0.339)	0.022(0.686)
DIAG	−0.023(0.697)	−0.023(0.696)	−0.013(0.823)	−0.020(0.777)	0.003(0.973)
INTER	0.078(0.256)	0.078(0.256)	0.059(0.389)	0.005(0.955)	0.043(0.645)
BOUND	*0.098**(0.072)	*0.0978**(0.072)	*0.098**(0.071)	*0.204*** (0.002)	0.032(0.640)
BELIEF	−0.059(0.310)	−0.060(0.314)	−0.069(0.243)	−0.060(0.403)	−0.099(0.209)
STRUC	0.059(0.233)	0.059(0.235)	0.057(0.249)	*0.123*** (0.038)	0.095(0.144)
CLARITY	0.078(0.210)	0.077(0.214)	0.077(0.210)	*0.138**(0.067)	0.085(0.270)
GROUPCULT	*0.297**** (0.000)	*0.298**** (0.000)	*0.321**** (0.000)	*0.360**** (0.000)	*0.300**** (0.000)
LMX	*0.204**** (0.000)	*0.203**** (0.000)	*0.193**** (0.000)	*0.147*** (0.034)	*0.174*** (0.013)
PSYCHSAF	*0.231**** (0.000)	*0.231**** (0.000)	*0.267**** (0.000)	*0.145*** (0.039)	*0.230**** (0.001)
CLARITY* LMX		−0.002(0.952)			
GROUPCULT* PSYCHSAF			*0.065**(0.098)		
R^2	49.61%	49.61%	50.13%	52.21%	46.42%
Adj. R^2	47.91%	47.72%	48.25%	49.75%	43.67%
F-value	29.21	26.19	26.73	21.24	16.85
Sig. F	0.00	0.00	0.00	0.00	0.00

Notes: *$p < 0.10$; **$p < 0.05$; ***$p < 0.01$ (two tailed); OLS regression coefficients are reported; p-values in brackets;[a] all variables are mean centered; [b] This sample includes senior management accountants as well as head of accounting/CFO
Source: Authors' own creation

Table A4.

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