

Engaging management accountants in corporate sustainability

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Abstract

Purpose – Expectations regarding the participation of management accountants (MAs) in the promotion of sustainability of multinational enterprises (MNEs) have been poorly realised. This raises the question of whether MAs are invited to join in sustainability promotion or does sustainability not fit the perceived professional role of MAs. We suggest that the development of individual-level engagement of corporate sustainability is required for MAs to start contributing to corporate sustainability.

Design/methodology/approach – We utilise the psychological ownership theory to investigate how MAs' professional role could develop to incorporate advancing sustainability. Our qualitative study is based on 32 interviews conducted in seven local business units of three different technology-oriented MNEs.

Findings – We reveal features connected to the professional role of MAs that may impede the activation of the routes to psychological ownership of corporate sustainability, thus undermining their involvement in corporate sustainability enhancement. Moreover, we show that MAs' own perceptions of their professional role may impede the stimulation of the routes.

Originality/value – From a managerial viewpoint, our study helps readers to understand how the routes to psychological ownership of corporate sustainability could be cultivated in the development of the future role of MAs. It also gives input for MA professional organisations and MA professional education providers to develop conditions that foster sustainability thinking among MAs. Moreover, by integrating the examination of MAs' professional role with the psychological ownership theory, we broaden the theoretical scene both in management accounting and in business sustainability research.

Keywords Corporate sustainability, Management accountant, Professional role, Psychological ownership

Paper type Research paper

1. Introduction

Sustainability has become a megatrend that strongly influences society, governments, markets and enterprises all over the globe. Businesses are expected to meet the needs of their indirect and direct stakeholders, both current and future (Dyllick and Hockerts, 2002), through actions aligned with the United Nations (UN) Sustainable Development Goals (SDGs), a set of 17 interrelated goals that articulate the desired outcomes of sustainable development (United Nations, 2015). To meet these expectations, the majority of multinational enterprises (MNEs) have included the SDGs in their agendas and integrated financial and sustainability-related nonfinancial data into their annual reports (KPMG, 2020). The call for sustainability changes the business context and the determinants of corporate success, which also have implications for the professions that support businesses.

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The authors thank the editor and the anonymous reviewers for their time and fruitful comments, which helped us develop our original paper. Furthermore, we are grateful to Professor Sami Kurki and Ph.D. Merja Lähdesmäki for their friendly reviews and constructive comments. We acknowledge the financial support of the Finnish Foundation for Economic Education.



However, empirical surveys conducted among large companies show that the functions of accounting, management control and finance are less involved with sustainability management practices than other functions (Ballou *et al.*, 2012; Schaltegger and Zvezdov, 2015; Windolph *et al.*, 2014), despite the calls from the accounting profession for accountants to take a noteworthy role in embedding sustainability into organisational decision making and accounting and reporting processes (see, e.g. A4S, 2018).

There is common agreement that management accountants (MAs) need to be involved in advancing sustainability (Evans *et al.*, 2011; Gray and Collison, 2002; Gray *et al.*, 1993; Mathews, 1997; Schaltegger and Zvezdov, 2015). Within management accounting research, studies have shed light on how MAs could contribute to advancing sustainability. While Burritt and Schaltegger (2010) emphasised the opportunities to support management decision making, it has been suggested that MAs contribute by providing information and new accounting techniques to improve sustainability performance measures (e.g. Lambert and Sponem, 2012; Scarpellini *et al.*, 2020) and not limiting their contribution to playing a gate-keeping role between sustainability managers and higher management (Schaltegger and Zvezdov, 2015). Schaltegger (2018) suggested that MAs could further develop their role as coordinators and organisers of processes and system developments to integrate sustainability information with the overall measurement and information management system of the corporation. Additionally, with appropriate autonomy and obtained personal sustainability knowledge, MAs could develop into boundary spanners who share sustainability experience and strategic intent within an organisation (Johnstone, 2019).

At the same time, some researchers have presented doubts as to whether MAs possess the required capabilities for or interest in advancing sustainability (e.g. Bebbington and Larrinaga, 2014; Cooper, 1992; Gray *et al.*, 1995) to take on a role as a strategic business partner for sustainability (Egan, 2018; Egan and Tweedie, 2018; Schaltegger and Zvezdov, 2015). Egan and Tweedie (2018) found that MAs' professional habitus, and their need to maintain distinctive professional expertise, may impede their engagement in sustainability. However, they suggested that adequate recognition, time and supportive organisational engagement with other professionals can help to overcome such a professional dilemma. Accordingly, while sustainability requires individual-level engagement, what affects MAs' individual attitudes towards and relationship with advancing sustainability in a corporate context requires more research attention. Hence, it is of interest to further investigate further how the perceptions of MAs' professional role affect MAs' ability and willingness to engage in sustainability issues and how the professional role of MAs could broaden towards deeper engagement in sustainability. Inspired by Bhattacharya (2019), who argued that individual-level engagement arises when individuals can feel corporate sustainability to be their own, we examine the perceived professional role of MAs and its congruence with sustainability enhancement through the lenses of psychological ownership theory. Psychological ownership refers to the state in which individuals feel as though the target, whether material or immaterial, or a piece of it is "theirs" (Pierce *et al.*, 2001, p. 299). With sustainability set as the target, the theory provides a structured framework at the individual level through which a possible transition of the MA role to incorporate sustainability can be understood. Accordingly, we ask in this study: *How could MAs' (perceived) professional role support the development of psychological ownership of corporate sustainability at the individual level in an MNE context?*

With this study, we respond to the call to investigate how MAs could become more strongly involved in sustainability accounting and management (Egan and Tweedie, 2018; Schaltegger and Zvezdov, 2015). Accordingly, Gibassier (2021) highlighted the interest of examining the role of "sustainability accountants" as business partners to identify possible obstacles that MAs may face in becoming effective actors in the sustainability transition. Such a microlevel understanding is essential to facilitate transformational processes of the

MA profession (Schaltegger *et al.*, 2022). Our study contributes to management accounting and business sustainability research by combining the views of psychological ownership with MAs' professional role literature, providing insights into how MAs as individuals may become more engaged in corporate sustainability. From a managerial point of view, our study helps readers to understand how the routes to psychological ownership could be cultivated in the development of the work role of MAs to encourage their involvement in advancing MNE sustainability. It also gives input for MA professional organisations and MA accounting professional education providers regarding how to support effectively the conditions that foster sustainability thinking among MAs.

2. Theoretical framework

In this section, we theoretically establish a link between the possible evolvement of MAs' professional role to include sustainability-related tasks and the psychological ownership theory. We propose that the psychological ownership theory provides a structured framework within which the possible transfer of MAs' professional role to include sustainability can be described. Furthermore, the established routes to psychological ownership offer a practical approach to engage individuals and professional teams as collectives to enhance sustainability in their work.

2.1 MAs' professional role

Biddle (1979) defined a role as a set of expectations associated with a particular social position in a specific type of setting. This view incorporates the assumptions that persons are part of a social structure and have expectations regarding their own and others' behaviours (Biddle, 1986). In an organisational context, each person is linked to other members based on the functional requirements of the organisation; thus, the role of each person is strongly shaped by shared expectations of the other organisation members (Katz and Kahn, 1978). The structurally positioned (professional) role is intertwined with the concept of role identity (Ashforth, 2000; Goretzki *et al.*, 2013). Ashforth (2000) defined role identity as the goals, values, beliefs, norms, interaction styles and time horizons that are typically linked to a role. While a role provides the boundaries for a person to interpret and make sense of themselves while occupying the role, role and identity develop in interaction (Ashforth, 2000; Chreim *et al.*, 2007; Ibarra, 1999).

Research on MAs' professional role (e.g. Burns and Baldvinsdottir, 2005; Goretzki and Messner, 2019; Goretzki *et al.*, 2018a; Granlund and Lukka, 1998; Järvenpää, 2007; Lambert and Sponem, 2012; Sathe, 1983) has described developments from a traditional scorekeeper or "bean counter" role towards a more business-oriented business partner role. While scorekeepers typically engaged in gathering, analysing and preparing reports (Friedman and Lyne, 1997) following a consultant or watchdog approach (Granlund and Lukka, 1998), business partners are seen as being more of an interface between corporate business operations and senior management (Goretzki *et al.*, 2018b; Schaltegger and Zvezdov, 2015) that contributes to the value creation, management and control of a business (e.g. Burns and Baldvinsdottir, 2005; Järvenpää, 2007). Accordingly, business partnering is typically related to organisational improvements regarding internal processes, decisions and efficiency (Wolf *et al.*, 2015).

In general, business orientation has been seen in the practitioner's literature as a good thing, it is thought to add to MAs' value and standing within an organisation (Goretzki and Messner, 2019), and the role of business partner has been raised to a, more or less, ideal model role (Goretzki *et al.*, 2018b; Morales and Lambert, 2013). However, while the tasks of business partners have been described in the literature on a rather abstract, ambiguous level (Goretzki *et al.*, 2018b), considerable room has been left for interpretations of the contents of the role

(e.g. Coad and Herbert, 2009; Morales and Lambert, 2013). Morales (2019) argued that, nearly all management accountants whose views have been repeated in the accounting literature have seized the notion that they are or should become business partners, albeit offering contradictory understandings of what that means. Hence, MAs are driven to base their professional identity on an imagined, aspirational business partner role (Goretzki and Messner, 2019; Morales and Lambert, 2013).

Despite variations in the organisational context of countries and industries, MAs' role as business partners has gained ground in MNEs during the last decades (Goretzki *et al.*, 2018b). This has been greatly facilitated by decentralisation, which has located MAs close to operational managers and increased the interaction with the operative management and organisation (Burns and Baldvinsdottir, 2005; Byrne and Pierce, 2007; Granlund and Lukka, 1998; Järvenpää, 2007), and by standardised accounting or enterprise resource planning (ERP) systems (Caglio, 2003; Coad and Herbert, 2009; Järvenpää, 2007). As a result, MAs have gained experience and know-how that improve their business orientation. Simultaneously, MAs' role has not typically been limited to business partnering, as they are continuously expected to have a somewhat contrasting functional orientation within corporate control (Goretzki *et al.*, 2018a; Lambert and Sponem, 2012; Maas and Matejka, 2009; Rieg, 2018). Consequently, while MAs also have the responsibility to participate actively with local managers in identifying profitable action strategies, as well as the responsibility to conduct corporate compliance and control activities, and provide information to functional managers, they are assumed to experience role conflicts (Hopper, 1980; Maas and Matejka, 2009).

The roles of MAs have been continuously reshaped through manifold developments, such as globalisation, customer-oriented markets with tough competition, digitalisation, standardisation and academisation of the profession (Goretzki and Strauss, 2018). While sustainability has inevitably become an essential element directing businesses, and considering the variety and expectations of the MA roles described in the literature, it could be presumed that MAs have the opportunity (and even obligation) to direct some of their attention to promoting sustainability-oriented processes and to contribute to the diffusion of sustainability accounting and reporting within MNEs. The role of business partner incorporates expectations of MAs to be proactive and powerful actors that influence other organisational members' (including managers') actions. Additionally, MAs' functional responsibility to conduct corporate compliance and control activities equips them with certain authority. However, previous studies have indicated that MAs' actual influential power is highly dependent on collegial managers' views on MAs and what they allow MAs to do (e.g. Morales and Lambert, 2013). MAs' endeavours to become more influential have not necessarily been straightforward; for example, the juxtaposition of MAs' abstract knowledge and the operative expertise of other organisational actors has resulted in competition and conflicts in the relations between the parties (Armstrong, 1985; Ezzamel and Burns, 2005; Vaivio, 1999). Moreover, Järvenpää (2007) showed that the corporate culture considerably affects and shapes MAs' roles in an organisational context; MAs typically belong to the management accounting function and their individual position and roles are determined, to a large extent, by the positioning of the management accounting function within an organisation. Byrne and Pierce (2007) found that MNEs tend to follow a more imposed corporate model in determining the role of MAs; the roles appear to be more standardised, institutionalised and predefined in the business units of MNEs. In such a setup, MAs' capacity to reshape their own roles may be limited, despite their own attitudes and initiatives.

2.2 Theory of psychological ownership

Pierce *et al.* (2001, 2003) defined psychological ownership as the state in which individuals feel as though the target of ownership, or a piece of that target, is "theirs" (i.e. "It is mine!").

Psychological ownership incorporates the feeling of possessiveness and being mentally tied to an object (Pierce *et al.*, 2001). Furthermore, it relies on a cognitive and affective core that reflects an individual's awareness, thoughts and beliefs regarding the object of ownership (Pierce *et al.*, 2003). While psychological ownership is principally acknowledged by the individuals having the feeling of ownership, it differs considerably from legal ownership, which is sustained by a legal system and typically confirmed by external entities (Pierce *et al.*, 2003). Moreover, psychological ownership can be felt for physical objects as well as for other people or immaterial objects, such as ideas and words (Pierce *et al.*, 2003), design (Baxter *et al.*, 2015), groups, organisations, work or jobs (Van Dyne and Pierce, 2004), the environment (Süsslenbach and Kamleitner, 2018; Ullah *et al.*, 2021) and sustainability (Bhattacharya, 2019; Kurki and Lähdesmäki, 2023).

According to Pierce *et al.* (2003), feelings of ownership allow individuals to fulfil three basic human motives: efficacy and effectance; self-identity; and a sense of place (belongingness). As a motive, *efficacy* reflects the basic human need to feel capable in a given domain (Bandura, 1977). People attempt to take possession because it allows a sense of effectance and control (Pierce *et al.*, 2003). *Self-identity* as a motive is about how people define themselves. Possessions help people to establish their sense of identity, express their self-identity to others and maintain continuity of the self over time (Dittmar, 1992; Mead, 1934). A *sense of place (belonging)* is considered as a central human need that links to the feeling of ownership (Duncan, 1981; Pierce *et al.*, 2001, 2003; Porteous, 1976; Weil, 1952). Feelings of psychological ownership arise from an object becoming a “home” or an individual's own place (Pierce *et al.*, 2001) and providing a sense of familiarity, comfort and security (Duncan, 1981). Moreover, Pierce *et al.* (2001, 2003) suggested that these three motives are complementary and additive in nature. Thus, as long as a particular object stimulates and satisfies one or more of the three motives, individuals can develop a sense of ownership towards it.

Pierce *et al.* (2001) identified three major routes that give rise to the sense of ownership. A person can derive the sense of ownership through any one route or any combination of these three routes, although multiple routes are likely to strengthen the feeling of ownership (Pierce *et al.*, 2003). The first route is *having control over the object*; the more control and power one exercises over an object, the more one views it as an extension of oneself (Furby, 1978). The experience of control implies a degree of freedom or autonomy in relation to and in interaction with the object (Pierce *et al.*, 2009). For example, an opportunity to participate in decision making is likely to trigger psychological ownership of the decision as it becomes “my decision” and one feels oneself to be “the cause” (Jussila *et al.*, 2015). The second route is *developing deep knowledge about the object*; the more information and the better the understanding an individual obtains about an object, the deeper the association that evolves between the self and the object and, hence, the stronger the feeling of ownership that develops towards it (Pierce *et al.*, 2001). The third route is *investing the self in the object*; this allows individuals to see themselves reflected in the object and to feel that its existence is in part due to their efforts (Pierce *et al.*, 2003, p. 93). Accordingly, such an investment can come from devoting one's skills, time, effort and creativity to the object.

The development of psychological ownership towards an object can be a complex and dynamic process (Pierce *et al.*, 2003), where the intensity (Pierce *et al.*, 2001) and quality (Jussila *et al.*, 2015) of the association to the object influence the outcome. The feeling of ownership is exposed to changes in routes, the characteristics of objects and individuals, and the interaction between them, which can alter or even diminish an existing sense of ownership (Pierce *et al.*, 2003).

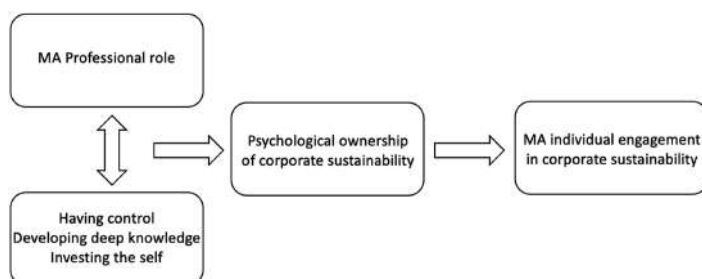
Feelings of psychological ownership generate mostly favourable effects for the target object. For example, psychological ownership may positively affect individuals' attitudes towards the object (Jussila *et al.*, 2015) and their willingness to invest in it (Asatryan and Oh, 2008; Kamleitner and Feuchtl, 2015) and increase their sense of responsibility and citizenship

behaviours towards it (Pierce *et al.*, 2003; Van Dyne and Pierce, 2004). However, under certain circumstances, it might also cause harmful behaviour; for instance, when an individual has a need to retain exclusive control over the object or is unwilling to share it with others (Pierce *et al.*, 2003; Wang *et al.*, 2019). Furthermore, the sense of responsibility might cause stress or even turn into an overwhelming burden for an individual (Pierce *et al.*, 2003).

2.3 Linking corporate sustainability, psychological ownership and MAs' professional role

Pierce *et al.* (2003) argued that object attributes affect the degree to which an object can satisfy the three founding motives and the extent to which the object enables or impedes the routes to ownership. Considering the attributes of corporate sustainability, it has excellent potential to stimulate psychological ownership. To meet the criteria of corporate sustainability, the entire company needs to be organised in a sustainable manner (Meurer *et al.*, 2020). Thus, nearly everything people do within the company can be undertaken with sustainability impacts in mind, supporting behaviours that are likely to satisfy the efficacy need (Kollmuss and Agyeman, 2002). Furthermore, while the feeling of ownership creates a bond between the object and the person, everything that affects the object also affects the owner, to some extent (Kamleitner, 2014). Therefore, when people act in favour of corporate sustainability, they are likely to favour themselves as well. In parallel, Bhattacharya (2019) suggested that advancing corporate sustainability provides people with a unique opportunity to meet their self-identity needs at and through work. Additionally, he noted that, by engaging in solving corporate sustainability issues, people have a chance to feel part of something larger, that is, "having a place".

While corporate sustainability has the qualities of an appropriate object for psychological ownership, the three routes towards psychological ownership of corporate sustainability become focal. The routes may be activated by any perceived increase in control over corporate actions that have a sustainability impact, any perceived addition to knowledge about sustainability issues and related corporate impacts, and any personal investment that people make in corporate sustainability improvements. Consequently, to understand how MAs' sustainability thinking in their professional role and work could be further evoked, we empirically examine how MAs' (perceived) professional role could support the development of psychological ownership of corporate sustainability at the individual level in an MNE context (see Figure 1).



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Figure 1.
The process of MA
individual level
engagement in
corporate
sustainability through
psychological
ownership

3. Research methodology

In this study a qualitative, interpretative research approach (e.g. Ahrens and Dent, 1998; Parker, 2012; Vaivio, 2008) was adopted to gain an understanding of the impacts of MAs'

perceived professional role on their engagement in corporate sustainability. The subject was examined from the viewpoint of both MAs and their colleagues from other professional groups. The theory of psychological ownership was utilised as a focus driver (Lukka and Vinnari, 2014), and the analysis was based on the iterative dialogue between the empirical data, MA professional role literature and psychological ownership theory (Lukka and Modell, 2010; Timmermans and Tavory, 2012; Van Maanen *et al.*, 2007).

3.1 Research data

The present study was conducted in seven local Finnish business units that are part of three different MNEs. However, we did not conduct a multiple case study (Yin, 2014) in the sense that the aim was not to compare different case settings or explore the differences between the MNEs case-by-case but to study MAs and other managers in an MNE context that was common to all the studied companies. In Finland, governmental attitudes towards the needs of sustainable development are generally positive and social awareness is rapidly increasing (Sachs *et al.*, 2021). Therefore, it is reasonable to suggest that, while enhancing sustainable development at the societal level, these cultural aspects in Finland also support sustainability enhancement in the chosen local business units (e.g. Marano and Kostova, 2016). The MNEs all operate in the technology industry serving the energy and transportation sectors. They can be regarded as forerunners in the context of sustainability, and in their business, they aim to invent new products and solutions that enable sustainable development. They all base their sustainability strategy on the three pillars of sustainable development recognised by the UN (economic, social and environmental), and report their sustainable development in accordance with the Global Reporting Initiative Standards adapted to the UN's SDGs. According to their sustainability reporting, sustainability targets are supported throughout the companies by management systems, tools and practices related to sustainability issues. In addition, a systematic approach is used, including measurement, reporting and external auditing of their sustainability performance. The MNEs also assesses their sustainability related risks on a regular basis.

The data consisted of semi-structured interviews with 32 representatives of local business units (see Table 1). Of the interviewees, ten were working as MAs, and, of these, seven were also management team members. For a versatile picture of the MA's professional role, 20 interviewees were selected from members of the local management teams, representing various functions of the units. Management team members were chosen, as they work closely with MAs and were familiar with MA job roles. Also, two persons having a specifically sustainability-related role, but without a managerial position were interviewed for possible additional sustainability-related viewpoints, as no management team member had sustainability as specific/only responsibility area. However, sustainability was seen as being closely connected to the tasks of the management team members, it is, the Quality and/or Health, Safety and Environment managers. To ensure informative but still manageable data, the selection of interviewees was based on the purposive sampling method (Patton, 2002). Accordingly, we used three criteria in which the interviewees represented different managerial/functional positions, local business units and MNEs. The aim of this study was to gain a deeper understanding of the phenomenon and we did not intend to make sample-to-population generalisations (e.g. Englander, 2012); hence, the credibility of the empirical qualitative data was used, rather than representativeness, to assess the selection of interviewees (Englander, 2012; Kvale and Brinkmann, 2009, p. 113). Furthermore, the sustainability reports for 2019, the websites of the MNEs and the presentation material of the local business units were utilised to gain a comprehensive understanding of the research context, it is, the MNEs' structures and the operations of the local businesses. Moreover, they were used to obtain an overview of each company's initiatives regarding its sustainability activities.

Profession/title	N
Controller with management team role	7
Controller with no management team role	3
Business unit manager	5
Quality, health, safety and environment manager	4
Sustainability specialist	1
R&D or product manager	3
Sales and marketing or customer manager	3
Operations or procurement manager	2
Lawyer	1
HR-manager	1
Business developer	1
Process developer	1
<i>Gender</i>	
Female	14
Male	18
<i>Age</i>	
<35	4
35–45	8
46–55	16
>55	4
<i>Education</i>	
Technological (BSc, MSc, Dr)	15
Economical (MBA, MSc)	15
Other (MSc)	2
Source(s): Table created by authors	

Table 1.
The interviewees

Two pilot interviews were conducted in June 2020 and the subsequent interviews followed between August and November 2020 (see [Appendix 1](#)). Because of the COVID-19 pandemic, only six interviews took place face to face and the remainder were conducted by means of a video connection using Zoom. The length of the interviews varied between 1 h and 2 h, with an average of 1 h and 14 min, and they were conducted in either the Finnish or the English language. With the permission of the interviewees, the interviews were recorded and transcribed verbatim. However, because of a technical malfunction during the recording, one interview was only documented by written notes.

Each interview was opened by a picture of the UN SDG map to stimulate the conversation and to give a common framework for the different aspects of sustainability. The interviews covered the following themes: the presence of sustainability aspects in the operations of the local business unit; the role of sustainability perspectives in the interviewees' own work and their ability to promote sustainability; the perceived involvement of the MNE at the global level; the enabling vs hindering factors in a sustainability transition; the means to manage a sustainability transition; the consideration of sustainability aspects in private life vs work; the expectations of the local business unit's citizenship behaviour; the knowledge and skills related to sustainability; the cooperation between functions; and the reporting and measuring of sustainability issues. In addition, the interviewees were asked about their perception of MAS' role in a sustainability context. The topics were openly and thoroughly discussed from the viewpoint of the interviewees' experiences and expectations. This approach allowed rather flexible conversations while still ensuring that all of the main issues covering the interview themes were discussed with every interviewee (e.g. [Vaivio, 2008](#)).

3.2 Data analysis

The interviews were analysed by following the established procedures for qualitative content analysis with three interlinking phases (e.g. [Miles and Huberman, 1994](#)). During the first phase, all of the interviews were carefully read. To condense the data, open coding of the empirical material was started. During this phase, we searched for factors influencing the MA role related to corporate sustainability in a local business unit context. We paid particular attention to how the MAs experienced general sustainability trends, how they perceived corporate sustainability and its communication, and how they described their own role in corporate sustainability-related issues. In the case of those interviewees who were not an MA, we focused on how they perceived the role of MAs in a corporate sustainability context. We then examined the coded text instances and, based on their contents, we grouped the codes into larger thematisations. Finally, we deliberated on the main themes identified through the lenses of the theory of psychological ownership and the perceived professional role of MAs (see [Appendix 2](#) for detailed codes).

To ensure the quality of the results and the credibility of the research, the two authors analysed and interpreted the data through collaboration and iterative discussions ([Patton, 2002](#)). The first author has a lengthy, solid work experience as an MA in MNEs, which supported the sensitivity of the analysis and interpretation ([Vaivio, 2008](#)). The analysis process was facilitated by the Atlas.ti 9 Mac software. A number of interview citations are presented in the findings section to increase the transparency of the data analysis and to make it easier for the reader to evaluate our interpretations. It should be noted that the interviewees referred to the MAs as “controllers” since this professional title is in use within the participating MNEs. However, for clarity, we also used the term “MA” in the interview citations.

4. Findings

Generally, all of the interviewees showed a positive interest in the topic of sustainability and they willingly shared experiences and interpretations, also related to their private lives. When discussing corporate sustainability and the local business unit involvement, variations in familiarity and involvement could be distinguished among the interviewees. Moreover, from the discussions, it was noticeable that a more thorough integration of the global corporate sustainability strategies into the local strategies seemed to be in a processual stage, and its implementation into practices varied in the different local units. Interviewees from only few local business units appeared to recognise sustainability issues as strategically important for their local business, beyond merely considering them from an innovative technology perspective. However, the awareness of corporate sustainability among all the participants was on such a level, that it was quite easy to discuss the existing and possible roles of the MAs.

4.1 Non-existent sustainability in MAs' job roles in local business units of MNEs

The organisation structures related to MAs' functions and their established or predefined job roles seemed to be quite similar in the three studied MNEs. The interviewees from the local business units specifically brought MAs' role as a business partner to our attention and, for MAs participating in the local management team, as an influencer. Moreover, an operative follow-up and reporting role and a functional-oriented role (i.e. the role that is typically associated with compliance and control activities) were recognised.

Interestingly, our findings revealed that, with an exception of two MAs, the MAs in the MNE local business units currently have hardly any connection to corporate sustainability issues in any of their job roles. MAs' familiarity with corporate sustainability was typically

on quite a general level. For instance, while most MAs recognised the UN SDG map or elements of it, only one of the interviewed MAs recalled an existing, direct linkage to their own business unit. Moreover, the MAs identified some corporate-level reporting and communication related to sustainability but the awareness of sustainability topics or metrics, especially related to their own business unit (with the exception of safety and integrity), was rather low.

I feel, however, that maybe it [sustainability] rests more on the intranet. We do not in our unit speak of it, as such, as a separate topic. For instance, considering environmental issues. (MA, Interviewee 9)

The focus on profitability-related numbers and the absence of a sustainability perspective could be distinguished in the discussions about sustainability-related metrics. It was clear to several interviewees that they had no role in developing or providing current sustainability-related metrics, and they expected these kinds of metrics to be provided (and followed) by other functions.

I somehow think that these kind of [sustainability issues] – that is, we [finance] have like numbers, profitability-related numbers. Those [sustainability issues] are more on our quality side, quality and health, safety and environment. And they, presumably have metrics. (MA, Interviewee 14)

There were no strong indications that including sustainability perspectives or issues in the MAs' own work would be considered relevant among the MAs. Although many expressed that they would appreciate an opportunity to link sustainability viewpoints to their own work, there were also MAs who did not see it as being of particular interest.

Maybe I do not experience a need [to spend time on sustainability-related issues]. I believe spending time will become actual if such themes occur. (MA, Interviewee 2)

Many of the interviewed MAs did not consider sustainability in their present work and typically had difficulties in seeing how it could or should be included. They highlighted their role as having a strong focus on numbers and profitability which, according to them, currently does not include sustainability viewpoints.

Surely it [sustainability] can impact somehow, but now I cannot say what it could be then. In what way? It tends to be that we calculate different scenarios – if we do this and this, what impact does it have on profitability? (MA, Interviewee 25)

Thoughts about getting involved through calculating scenarios were supported by another MA (Interviewee 20) who, deviating from the mainstream, told us that sustainability had a central role in his work. He was currently participating in modelling optimised solutions and emphasised the essence of utilising digitalisation and data for scenario building.

It could be distinguished that the MAs who were management team members were considered to have more power and more possibilities to influence the implementation of sustainability into the activities of the organisation. However, this influencing power was not necessarily related to the MA role, as such, but rather to the managerial role. All the management team members were seen to have the role of leading and instigating discussions. Through their membership of the management teams, MAs were seen to have a say in value-based discussions and the strategic planning of business operations.

If you are in a strategic MA role . . . as the business MA you can, as a management team member, of course impact the strategic roadmap and related activities. But when it comes to more operative controlling and to these control centres that handle financial reporting etc., then it is more about [issues related to] well-being at work. (Colleague, Interviewee 19)

However, also as management team members, MAs appeared to narrow their views to the financial aspects. For instance, despite the presence of an open and communicative culture,

one MA doubted whether she, as an MA, would receive a favourable response if she were to initiate a discussion on sustainability. Another MA remarked that discussing sustainability beyond cost and profitability was somewhat taboo. Conversely, one MA saw the influencing possibilities as a matter of the MA's own interest, thus indicating that MAs may have autonomous power in advancing sustainability, even if it was not explicitly outlined in their expected roles.

While most of the interviewed MAs tended to exclude corporate sustainability from their role, viewing it as a concern for other functions, the findings revealed that they lacked notable psychological ownership of corporate sustainability. From the perspective of psychological ownership theory, corporate sustainability did not seem to significantly fulfil the three basic human motives: *efficacy and effectance*; *self-identity*; and *sense of place (belongingness)*. In contrast, the two MAs that told us they were directly involved with corporate sustainability expressed a true interest in the subject. One of the MAs even conveyed a personal desire to implement new sustainability-related metrics for their business, which suggests a developed sense of individual-level psychological ownership towards corporate sustainability. While this phenomenon should be acknowledged in the development of MAs' professional role, our findings provide a basis for the identification of influential factors through the routes to psychological ownership and, consequently, offer new insights into how MA engagement to enhance corporate sustainability may be addressed.

4.2 Connecting MA roles to corporate sustainability through the routes to psychological ownership

4.2.1 Having control. Considering the development of psychological ownership of corporate sustainability, a lack of concrete linkages between corporate sustainability and MAs' work tasks is likely to prevent the route of having control from becoming activated (Kurki and Lähdesmäki, 2023). When considering the MAs' professional roles and how corporate sustainability may be concretised in their work more specifically, some clear openings were distinguished in our findings. MAs' role as business partners, especially as assistants or co-operators, was seen as a potential touchpoint for corporate sustainability and MA tasks.

I believe it [sustainability] fits in just fine . . . The MA is the business partner to the organisation and helps the members with problems they have. And this [sustainability] can be an issue among others. (MA, Interviewee 30)

The business partner role was seen as being well-suited to bringing sustainability aspects into risk assessment, scenario constructions and diverse analyses. Many of the MAs highlighted that, while sustainability development most likely has impacts on costs and thus on the financial numbers, sustainability aspects should be included in different kinds of profitability analyses and impact scenarios.

It would be peculiar if not all aspects impacting the financial numbers were taken into account in the analyses. (MA, Interviewee 9)

The focus of the MAs seemed to be more on the (increasing) cost effects that they expected sustainability aspects to produce. Typically, the MAs stated that nearly all focal key performance indicators (KPIs) that are regularly followed up are financial in nature and have an emphasis on profitability. While the financial, numerical basis seems to be deeply embedded in the MA business partner role, it would, to strengthen the route of having control, be advantageous to address and concretise the causal links between corporate sustainability and financial metrics. For instance, few of the MAs mentioned a need for analysing how sustainability-related issues may affect future sales volumes, and only one of them noted that MAs should also learn to recognise sustainability aspects as possible value creators.

Simultaneously, challenging the MAs' quite strict financial focus, the colleagues frequently pointed out that MAs would need to expand their mindset beyond financial aspects to contribute properly to business partner tasks, thus indicating a mismatch between MAs' and their colleagues' expectations of the business partner role. Several of the colleague interviewees called for diverse scenarios including impacts of sustainability-related factors. In this setup, the interviewees urged the MAs to broaden their mindset.

I think that one thing that MAs need to improve in the future is the understanding of these “softer” things. Sincerely, I do not believe that today we can achieve the best financial results by only looking at the numbers. We may be understating the relevance of green values to the customers. (Colleague, Interviewee 27)

One colleague also expressed his concern about a contradictory development of the MA business partner role, preventing the sustainability aspect from becoming topical in the role:

Earlier, the MAs and the management accounting function seemed to have a broader territory, a broader field of work. It has little by little reduced so that nowadays it involves purely financial matters, not much else . . . I think more about the mission of the management accounting function – must it be limited to only following up and calculating numbers or could the role be something broader? (Colleague, Interviewee 29)

These collegial views could also help the MAs to overcome the limitations of being strictly bound to financial numbers. Additionally, they signal that MAs have a “license to think sustainability”, which could strengthen the route of having control.

The operative follow-up and reporting role could provide similar opportunities to strengthen the feeling of having control as the business partner task to arouse risk awareness:

I have encouraged our MA to think about suitable metrics for our business. To proactively raise these things . . . to think about how sustainability could be measured and to start constructing methods of measurement. (Colleague, Interviewee 16)

In consensus with their colleagues, MAs willingly included the task of taking part in developing appropriate sustainability-oriented metrics and KPIs in their role. While MAs themselves highlighted that KPIs and targets concretise corporate sustainability in a helpful way, the possibility of participating in developing them would probably strengthen the route of having control effectively.

Despite acknowledging increasing sustainability-related regulatory (reporting) requirements, few of the interviewed MAs thought that sustainability-originated reporting or related follow-up would become a significant element of their work. Only one MA identified a possible future link between MA tasks and the recently introduced European Union (EU) taxonomy directive, which obligates all financial market participants, including MNEs, to identify those of their economic activities that can be considered environmentally sustainable (EU Technical Expert Group on Sustainable Finance, 2020). Many mentioned financial reporting packages as MAs' responsibilities and separated sustainability-related reporting from the whole. Typically, sustainability reporting was seen as being included in the responsibilities of functions dealing with quality and/or health, safety and environmental (HSE) topics.

It is, in my opinion, maybe an organising thing. In a way, does it belong or not belong to the MAs' reporting package? It can still be viewed that the MAs continue to report financial aspects and some other quarters report on sustainability aspects. (MA, Interviewee 9)

The discussions about sustainability-related reporting reveal the linkage of MNEs' organisational structures and the development of psychological ownership. Organisational structures signal a mandate. When lacking, the route of having control becomes repressed.

Finally, the interviewed MAs shared a common understanding that their professional role incorporates an inbuilt authority that is not based on management team membership. This could be associated more with their functional role, which incorporates compliance and control activities. As one interviewee expressed it:

I believe, as an MA, you have on your side that you always can make your voice heard. (MA, Interviewee 9)

Consequently, the MAs recognised their ability to affect attitudes towards sustainability through their own behaviour and communication. Some even noted that, while MAs are often seen as strict profitability guardians, their view on sustainability aspects may have additional weight. With this in mind, they experienced that an MA even has the potential to direct attention to aspects other than the prevalent cost efficiency aspect.

4.2.2 Developing deep knowledge. Some of the interviewed colleagues recognised that corporate sustainability may lead to more profound changes in business models and, when topical, the implementation would require attention and support from MAs. They noted that such new business models may require new KPIs or changes in the interpretation of current KPIs. As an example, a revenue model based on leasing as a consequence of a circular economy, was mentioned.

This means that the product is considered in the assets – it impacts the balance sheet in a different way. (Colleague, Interviewee 8)

Such viewpoints were totally missed by the interviewed MAs interviewed. Typically, they admitted that their know-how about corporate sustainability was not at an adequate level and, most often, they mentioned the need for a better understanding of the whole. Several noted that the corporation could provide training regarding sustainability in a broad sense – for instance, through similar training that has already been provided for safety or codes of conduct. However, from an MA's point of view, it was also seen as essential to gain a better understanding of the organisational impacts on sustainability, in order to be able to analyse how possible changes in the operations affect the financial numbers.

It would be easier to talk about advancing sustainability if different facts of the organisation's impacts were known. (MA, Interviewee 20).

Despite recognising the need for knowledge, the MAs did not appear to have an independent or immediate need to increase their sustainability-related know-how. Rather, they seemed to be waiting for some "external (or internal) force" to make it more topical, referring to sparse time resources.

In a way, yes . . . I think that if I was about to start advancing these [sustainability] topics, I would probably know where to start, but then we come to these time management issues. (MA, Interviewee 21)

Nevertheless, finding time for both corporate-level training on sustainability and related internal know-how sharing could effectively serve the development of psychological ownership of corporate sustainability, as developing deep knowledge about an objective is one of the major routes towards psychological ownership.

The MAs themselves brought up collaboration and reciprocal communication as central means for developing a deeper understanding of corporate sustainability.

In my opinion, it adds value to have participants from different functions as it generates different viewpoints. While the understanding is not complete, so-called stupid questions can be asked, which may make others become aware of something essential . . . usually, it is beneficial that people have different knowledge and various backgrounds. (MA, Interviewee 2)

Typically, the interviewed MAs identified functioning networks as a central source for improving personal know-how about sustainability.

There could be some trainings but I believe that, mostly, it [know-how] develops when you yourself go and speak to different people in different functions. (MA, Interviewee 3)

The networking and collaborative features in the business partner role also seemed to be appreciated by the colleagues and some suggested that MAs could, through participation in the development of cross-functional processes and through networks, act as a glue in sharing a common understanding and information related to sustainability. When the MAs also easily saw themselves participating in sustainability-related problem-solving and, particularly, providing their extensive networks across functions and other corporate business units, networking seemed to provide a natural path embedded in the business partner role for MAs to develop their knowledge of corporate sustainability.

... although you don't necessarily know that much about the issue itself, you can provide a contact from another business unit. Or you can be in contact with someone that you have heard has similar kinds of problems ... surely it is the same with sustainability, it is always good to be aware of what happens in the different functions of the organisation. (MA, Interviewee 2)

Furthermore, the interviewed MAs reflected on the already-existing skills that could be utilised when considering sustainability aspects. Many saw an association between Lean control and sustainability. Accordingly, they saw that Lean control has provided them with a critical mindset related, for instance, to waste and needless steps in their work. Attempts to automate ordinary tasks – for instance month-end closing tasks – were seen to provide better readiness for advancing sustainability in the future, enabling the agility to change and develop technology to include sustainability aspects. However, indicating different areas of interest or skills, only a couple of the interviewed MAs mentioned the possibility of utilising digitalisation or artificial intelligence in, for example, developing sustainability-related metrics and providing bases for sustainability-oriented scenarios. A few of the interviewees also brought to attention that MAs typically interfere in all kind of topics within the organisation with a “controlling” mindset, for instance ensuring that tasks are performed accurately and on time.

That ... [securing] is what we do related to many things already. Mostly of course related to financial aspects, but it could also be related to something else. (MA, Interviewee 2)

According to them, the controlling mindset could also be used in sustainability aspects, provided that the know-how is sufficient. From the development of a psychological ownership point of view, possibilities to build on existing skills and knowledge may provide an inspiring base for expanding and deepening the knowledge of corporate sustainability.

4.2.3 Investing the self. While the sense of ownership may develop through any one route or any combination of the three routes, multiple routes are likely to strengthen the feeling of ownership further (Pierce *et al.*, 2003). Hence, concrete linkages between corporate sustainability and work tasks may have a particular role in the development of MAs' psychological ownership of corporate sustainability. Specifically, all the potential touchpoints for corporate sustainability and MA tasks identified in Subsection 4.2.1 are also likely to strengthen the route of investing the self. This route is triggered by the time, effort, skills and attention that MAs are able to devote to sustainability issues, that is, when the impact of the MAs' own efforts becomes more tangible.

Furthermore, MAs brought forward some underlying factors that are likely to affect MAs' ability to, or interest in, becoming more deeply involved in corporate sustainability. They recognised the importance of the corporate strategy and its communication in defining a strong corporate mandate and emphasised the need for managerial commitment through the

prioritisation of activities advancing sustainability. Subsequently, they considered sustainability-related key performance indicators (KPIs) as clear and supportive signals of the management's interest in and commitment to sustainability and, accordingly, as a central tool for directing focus and giving license to act.

When thinking about what to prioritise in work, if we had some specific targets related to sustainability, we could focus on those targets . . . it feels like the focus is more on financial targets and related to costs and functioning processes . . . if there were concrete [sustainability-related] targets, we, and all the functions, could think about what we can do differently or develop. (MA, Interviewee 3)

According to our findings, MAs typically had no clear corporate-level expectations or mandate to participate in advancing corporate sustainability. Nevertheless, when aiming for MAs' involvement and for MAs to invest their time and efforts (i.e. invest their self) actively in corporate sustainability, an explicit mandate is essential.

The studied MNEs provided standardised and predefined job roles throughout the global corporation. Considering the MA role, there were no direct references to sustainability in the current descriptions. Interestingly, there were mixed opinions among the interviewed MAs regarding whether it would be beneficial to have some recognisable point of connection to sustainability. Only one MA noted that, if a connection were to be recognised in the corporate business partner role descriptions, it might increase the MAs' focus on corporate sustainability issues.

Many years, there has been this talk about business partnering. There could be more about the content. If it would include sustainability, it [sustainability] would surely be more in focus – a box that is promoted by the CFO would bring attitude and visibility. (MA, Interviewee 25)

Generally, mentioning sustainability in the MA role description was seen as irrelevant, while sustainability was considered to be naturally included in the business partner role, whenever sustainability-related issues are topical for the local business unit. A more detailed corporate description could, according to one MA, even be interpreted as an order that diminishes local-level sensitivity. However, from a psychological ownership viewpoint, corporate MA role descriptions could provide an efficient way to signal mandate. Alternatively, an absence of corporate sustainability aspects in corporate MA role descriptions may remarkably prevent both the route of investing the self and the route of having control from becoming active.

5. Discussion

Burns and Baldvinsdottir (2005) stated that "It is equally important for tomorrow's management accountants to show adaptability when facing the inevitable new challenges (contradictions) along the way, and be able to recognise, act upon and cope with emergent opportunities for change (praxis)" (p. 751). To stay the course, and considering the currently increased importance of, and calls for, sustainability, we investigated how MAs may become more engaged in corporate sustainability as individuals and, consequently, develop their own sustainability thinking (Kurki and Lähdesmäki, 2023). We found several factors that affect the emergence and strength of the three routes (having control, developing deep knowledge and investing the self) to psychological ownership of corporate sustainability are currently missing or insufficiently present in MAs' professional role. In addition, MAs' own perceptions of their professional role may impede the stimulation of the routes. Subsequently, in the light of the routes of psychological ownership and the insights gained from the literature related to MA roles, we discuss, the opportunities to better incorporate corporate sustainability into the MA role.

5.1 Ability building

An engaging overall corporate culture provides a critical basis for awakening and developing psychological ownership (Bhattacharya, 2019). Regarding corporate sustainability, at its best, the culture encourages employees to discuss and participate in sustainability efforts and decisions, and, while people typically identify themselves with decisions that they are a part of, they develop psychological ownership of such decisions (Jussila *et al.*, 2015). Furthermore, an open and transparent culture allows employees to advance their own ideas and develop autonomous thinking regarding corporate sustainability, nourishing the route of investing the self (Kurki and Lähdesmäki, 2023). However, despite an inviting corporate culture, it is unlikely that different functions of an MNE may individually choose which sustainability management activities to undertake (Windolph *et al.*, 2014). Rather, the overall corporate strategy driven by the top management determines whether functions engage in sustainability management (Egan and Tweedie, 2018; Windolph *et al.*, 2014). Järvenpää (2007) showed that, while MNEs can actively re-shape the business partnering role of MAs to incorporate new aspects and activities (e.g. corporate sustainability), through supportive organisational structures, new accounting systems and innovations, and active training and career planning policies, such undertakings need to be supported by the official corporate strategies and values.

A legitimate mandate is essential for potentially institutionalising and making evident a professional role change for MAs at the organisational level (Goretzki *et al.*, 2013). Similarly, it is a key factor at the individual level to activate all three routes of psychological ownership of corporate sustainability (Kurki and Lähdesmäki, 2023). Therefore, it is relevant to reflect on the reasons why sustainability-related aspects are not considered in the corporate MA role descriptions, indicating that sustainability related tasks are not included in their professional role. One interpretation, supported by our findings, is that the business partnering role should be understood as a broad one; it should automatically incorporate corporate sustainability when essential. The role is at the centre, for instance, when bringing sustainability aspects into risk assessment, scenario constructions and diverse analyses. Another reason, also mirrored by our findings, may be the novelty of the phenomenon of MNEs' defining and implementing comprehensive corporate sustainability strategies. Implementing such strategies throughout the corporation is a time-consuming process, with amplified challenges due to organisational complexity. Hence, embedding corporate sustainability aspects into organisational structures and job roles is probably in its early stages.

Still, there might also be a more profound reason: corporations do not trust in the capabilities or interest of MAs to incorporate sustainability into their job role (Egan, 2018). Our findings showed evidence that MAs experienced a lack of both a broader understanding of sustainability and know-how about sustainability in practice and that they felt no pressure to increase their related knowledge, evidencing a weak preparation of MAs for the demands and changes brought about by corporate sustainability. These quite alarming observations imply a high risk of MAs being decoupled from sustainable development concerns – a risk that should be recognised and acted upon by MA professional organisations and MA professional education providers. In the pursuit of improved sustainability knowledge and sustainability-related skills and competences, professional education has a focal role in overcoming the present deficiency (Schaltegger and Zvezdov, 2015; Halari and Baric, 2023). Including sustainability more strongly in professional education and providing topical sustainability-oriented conferences and training seminars would give a clear signal to MAs that sustainability knowledge is required in the future professional role of MAs and, thus, increase both their ability and their willingness to proactively invest time in sustainability topics. Hence, considering the development of psychological ownership, a more sustainability-oriented professional education may support both the route of developing

deep knowledge and the route of investing the self. Moreover, for the route of having control to become active, an intentional sustainability-oriented education can provide the necessary concretisation of corporate sustainability when connections to daily work are still lacking (Lee *et al.*, 2017).

However, despite the importance of professional education, Caron and Fortin (2014) demonstrated that the formal training in sustainability for accountants is insufficient, noting that related knowledge is mostly acquired informally and within organisations rather than through universities or professional bodies (see also Boyce *et al.*, 2019). MNEs' organisational knowledge sharing is not to be underrated as it can be effective for the route of developing deep knowledge to become activated (Kurki and Lähdesmäki, 2023). Kurki and Lähdesmäki (2023) showed that providing opportunities to participate in sustainability-related activities, for example through piloting or benchmarking, could be a powerful means to increase individuals' commitment to sustainability. Actually, our findings provided evidence that MAs themselves value MNE internal training, particularly knowledge sharing through networks and cooperation, as the preferable means to improve personal sustainability know-how. Considering internal knowledge sharing, MNE-wide job rotation may also be a useful tool in MAs' professional change process (Järvenpää, 2007). In a sustainability context, the literature review by Chams and García-Blandón (2019) found that both "green" training and job rotation are essential tools for generating sustainability competencies. While information alone may not be adequate to create a feeling of ownership (Pierce *et al.*, 2001), training combined with job rotation both concretises and increases the intensity of the association and, thus, influences the outcome. A wide-ranging association with corporate sustainability probably leads to a perception of a deeper understanding of it and, consequently, to a sense of ownership of corporate sustainability.

5.2 Willingness building

Considering the psychological ownership aspects, our findings support the view that the role of MAs typically incorporates influential power and autonomy (Schaltegger and Zvezdov, 2015; Wolf *et al.*, 2015), both of which are important elements for strengthening the route of having control. Combined with the established MA role of participating in different networks, the current MA roles provide major ingredients for strengthening individual level psychological ownership of corporate sustainability and, consequently, integrating sustainability concerns throughout the organisation and beyond, as suggested by Johnstone (2019). However, strongly linked to the willingness to invest the self, a professional role change for MAs may also require a professional role identity change (Chreim *et al.*, 2007; Goretzki *et al.*, 2013; Horton and de Araujo Wanderley, 2018) – that is, a change in how they incorporate their perception of occupational interests, abilities, goals, motives and values and how they link them with acceptable career roles (Chreim *et al.*, 2007). Horton and de Araujo Wanderley (2018) suggested that possible identity conflicts represent a critical trigger and facilitator of institutional change. They argued that MAs try to reduce perceived discrepancies through active identity work and job crafting, which facilitate changes in the roles, tasks and relational boundaries of MA work.

Järvinen (2009) suggested that professional role identity takes shape through discursive processes in which persons validate their activities, successfulness and hopes regarding future development to others and themselves. Hence, MA role identity is shaped in an extensive context by different types of interactions and by MAs' perception of whether, to them, important people appreciate or oppose a certain behaviour (Goretzki and Messner, 2019). Although we could not recognise ongoing MA identity work related to incorporating corporate sustainability in our study, our findings indicated that MAs would probably rather have organisational support than resistance in a possible role identity change towards

sustainability; the colleagues of MAs typically interpreted the implementation of corporate sustainability as a cross-functional task and expressed expectations of MA involvement in this task.

However, a major obstacle for MAs to broaden their mindset towards sustainability thinking is a deeply and widely institutionalised mind-set within accounting, which adopts the assumption that standard economic theory, at large, is a taken-for-granted (Jones, 2010; Lukka and Becker, 2022). Furthermore, determining sustainability indicators is subjective in nature, incorporating political dimensions, while MAs are typically regarded as representatives of objectivity (e.g. Bebbington *et al.*, 2007). Disturbing this conventional thinking, corporate sustainability entails broad horizons, requiring multidimensional interpretation and measurement of the interactions of economic, social and environmental issues, as well as acknowledging generational timeframes. The fact that accounting is strongly biased towards the measurement and generation of profit is especially challenging for developing multidimensional measurements (Bebbington and Larrinaga, 2014; Contrafratto and Burns, 2013; Lukka and Becker, 2022). Visible also in our study, MAs have a strong tendency for quantified commensuration, which diminishes or cuts off many qualitative aspects of business operations and their role in society (Lukka and Becker, 2022). Supporting this notion, Arora *et al.* (2022) found that MAs did not appreciate integrated reporting and that they found it challenging to convert numerical information into narratives.

Halari and Baric (2023) suggested that the lack of MA involvement in corporate sustainability activities, such as a circularity economy, arises from both a perceived conceptual distinction between accounting and the nature of sustainability and from the persistently perceived stereotype of MAs being conservative, number crunching “bean-counters”. However, by providing also collegial views, our findings indicate that the stereotypical views are fostered mainly by the MAs themselves and rarely by their colleagues. Rather, there seems to be a mismatch between MAs’ and colleagues’ expectations regarding the MA role as colleagues wished MAs would broaden their mindset beyond purely financial aspects (see also Egan and Tweedie, 2018; Byrne and Pierce, 2018). While Rieg (2018) found that MAs’ business partnering is determined more by subjective norms than by their personal attitude, the collegial views may also expose an opportunity for MAs to overcome the limitations of being tightly bound to financial numbers. Egan and Tweedie (2018) argued that, when adequately supported, MAs can experiment with new duties that stretch their professional identities. Moreover, with a sufficient movement into new roles, MAs could gain acceptance and a favourable evaluation of their new proficiencies as future roles are likely to be more important when determining their occupants’ (i.e. MAs’) future stereotypes than the current beliefs about them (Koenig and Eagly, 2014).

It should also be noted that MAs are not the only professional group that has to face and cope with tensional (or even paradoxical) features originating in corporate sustainability (Carollo and Guerri, 2018; Hahn *et al.*, 2015; Van der Byl and Slawinski, 2015). Several professions are undergoing a significant change in how they integrate corporate sustainability objectives into their roles and core values. Interestingly, project managers experienced quite similar tensions as MAs when confronted with the prospect of including vague, sustainability objectives in their practices, such as organisational barriers and lack of mandate, knowledge, and institutional support (Sabini and Alderman, 2021). In addition, the reactions of project managers to such tensions resemble those of MAs. This includes transferring responsibility to other professionals and questioning the necessity of project manager involvement. (Sabini and Alderman, 2021). When examining sustainability managers, professionals with longer term experience and responsibilities relating to corporate sustainability issues, Carollo and Guerri (2018) found tensions that were more closely related to how the sustainability managers can effectively or satisfactorily exercise

their work in advancing sustainability: by being business versus values oriented, by being an organisational insider versus outsider, and by having a short-term versus long-term focus.

The outcomes of these studies indicate that the psychological ownership of corporate sustainability is still in its infancy among many professions within MNEs. However, the identified tensions experienced by sustainability managers reveal a different relationship with corporate sustainability. We suggest that this is due to a more developed psychological ownership of corporate sustainability. In their work role, sustainability managers are more likely to have been exposed to corporate sustainability issues for a longer period of time and at an intensity that strengthens the emergence of psychological ownership (Pierce *et al.*, 2001, 2003). The inherent complexity of corporate sustainability will remain although developing psychological ownership of it. However, psychological ownership may also equip individuals (MAs) to better accept the contradictory characteristics of corporate sustainability and, rather, begin to see it as a source for transformational innovation and rethinking, as suggested by Pedersen *et al.* (2021). This can be supported by both MNEs and professional organisations and educators, through increased openness and transparency regarding the inevitable tensions arising from corporate sustainability.

6. Conclusions

This study contributes to management accounting and business sustainability research by employing the frameworks of psychological ownership theory and literature on MAs' professional role to gain a new understanding of the (lack of) involvement of MAs in corporate sustainability initiatives. We suggested that developing a feeling of psychological ownership of corporate sustainability is an important precondition for MAs to become sustainability thinkers and engaged in the sustainability transition. Our study shows that several factors that affect the emergence and strength of the three routes (having control, developing deep knowledge and investing the self) to psychological ownership of corporate sustainability, such as a linkage to one's own work, adequate know-how, and a clear mandate, are currently missing from, or are insufficiently present in, MAs' professional role. The study also shows how MAs' own perceptions of their professional role may hinder the activation of the routes. At the same time, our analyses demonstrate that such a state need not be steady and that the situation can be improved by acknowledging the factors that can stimulate the three routes to psychological ownership of corporate sustainability. Business partnering, in particular, provides a natural foundation for incorporating corporate sustainability into MAs' daily work – a central factor for activating the three routes.

As a practical implication, our study provides information for MNE managers regarding how they can actively engage MAs in corporate sustainability. For instance, including sustainability aspects in corporate-level MA role descriptions would both indicate a needed mandate and concretise a linkage to MA work. The study also provides input for management accounting professional organisations and management accounting professional education providers, regarding how to effectively support the conditions that foster sustainability thinking among MAs. Sustainability-related skills and know-how are preferably addressed in multiple ways. In this vein, our findings concretise the need to introduce a broader, interdisciplinary approach into accounting, to address sustainability development (Bebbington and Larrinaga, 2014; Lukka and Becker, 2022). To date, the focus has been on the financial numbers too much.

We acknowledge the potential empirical limitations of the study. It was conducted as a qualitative, interpretive (Ahrens and Dent, 1998; Parker, 2012; Vaivio, 2008) study, including 32 interviews carried out in seven MNE units. According to Lukka and Modell (2010), validation in interpretative studies can be seen as an issue of convincing readers of the

authenticity of research findings and simultaneously ensuring that explanations are plausible. We believe that, in our account, with its rich and thick empirical data combined with careful theoretical analysis and using psychological ownership theory as a method theory (Lukka and Vinnari, 2014), we were able to reach both authenticity and plausibility in our interpretation. However, to gain an even better understanding of the development of MAs' engagement in corporate sustainability and, more broadly, of MA work related to different aspects of sustainability, it would be valuable for future research to explore the impact of contextual factors. Both qualitative and quantitative studies could shed light on how factors like company size, industry type, and organisational culture and structures influence MAs' roles. For example, MAs working in MNE headquarters may be engaged in corporate sustainability issues differently than MAs working in local MNE business units. Furthermore, the job role of MAs may vary significantly in small and medium-sized companies. From a psychological ownership theory perspective, it could be of interest to empirically explore the impacts of adding sustainability issues into daily work tasks.

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The conducted interviews

Interviewees	Profession/title	Interview date	Interview time in minutes
MA, Interviewee 1	Controller	26-Aug-2020	59
MA, Interviewee 2	Controller	19-Aug-2020	76
MA, Interviewee 3	Controller	25-Aug-2020	72
Colleague, Interviewee 4	Quality, Health, Safety and Environment manager	21-Aug-2020	75
Colleague, Interviewee 5	Sales and Marketing or Customer manager	10-Sep-2020	49
Colleague, Interviewee 6	Operations or Procurement manager	31-Aug-2020	90
Colleague, Interviewee 8	Sustainability specialist	13-Nov-2020	87
MA, Interviewee 9	Controller with management team role	20-Aug-2020	69
MA, Interviewee 10	Controller with management team role	24-Jun-2020	63
Colleague, Interviewee 11	HR-manager	10-Sep-2020	71
Colleague, Interviewee 12	Business unit manager	23-Nov-2020	76
Colleague, Interviewee 13	Process developer	2-Sep-2020	71
MA, Interviewee 14	Controller with management team role	20-Nov-2020	61
Colleague, Interviewee 15	Business unit manager	11-Sep-2020	82
Colleague, Interviewee 17	Sales and Marketing or Customer manager	3-Sep-2020	86
Colleague, Interviewee 18	R&D or Product manager	17-Aug-2020	61
Colleague, Interviewee 19	Quality, Health, Safety and Environment manager	12-Nov-2020	130
MA, Interviewee 20	Controller with management team role	19-Nov-2020	55
MA, Interviewee 21	Controller with management team role	22-Sep-2020	91
Colleague, Interviewee 22	Business unit manager	18-Aug-2020	71
Colleague, Interviewee 23	Operations or Procurement manager	4-Sep-2020	72
Colleague, Interviewee 24	Sales and Marketing or Customer manager	25-Nov-2020	56
MA, Interviewee 25	Controller with management team role	20-Aug-2020	75
Colleague, Interviewee 16	Business unit manager	26-Oct-2020	69
Colleague, Interviewee 26	R&D or Product manager	20-Aug-2020	91
Colleague, Interviewee 27	Business unit manager	11-Jun-2020	62
Colleague, Interviewee 28	Quality, Health, Safety and Environment manager	26-Aug-2020	73
Colleague, Interviewee 29	Business developer	20-Aug-2020	75
Colleague, Interviewee 31	Quality, Health, Safety and Environment manager	2-Sep-2020	70
MA, Interviewee 30	Controller with management team role	8-Oct-2020	85
Colleague, Interviewee 32	R&D or Product manager	1-Sep-2020	60

Table A1.
The conducted interviews

Source(s): Table created by authors

Appendix 2

The interlinking phases of data coding and analysis		
First: open coding	Second: grouping codes into larger thematisation	Third: theoretical lenses; PO routes and motives
Accounting and sustainability	Analysing	Having control
Analysing role	Assisting role, problem solving	Developing deep knowledge
Assisting role	Business partner	Investing the self
Business continuity	Communication	Efficacy and effectance
Business partner	Corporate impact	Self-identity
Capabilities	Culture	A sense of place
Communication	Data provider	
Complexity tolerance	Difficult to see role	
Connection B&S	Digitalisation and AI	
Corporate impact	Familiarity	
Data quality	Incremental or natural change	
Difficult to see role in sustainability	Influencer role	
Digitalisation and AI	Knowhow, capabilities	
Familiarity	Management team member	
Flexibility	Metrics	
Follow-up	Need for targets	
Incremental change	Networking	
Influencer	No leading role	
Information provider	Operational environment	
Integrity	Own interest	
Knowhow	Profitability gradient	
Local mandate	Reporting, follow up	
Management team member	Risk awareness	
Managing risks, risk modelling	Time	
Metrics developing	Values	
Multidimensional	Whistle blower, data quality	
Need for targets		
Networking		
New business models		
No leading/leading role		
Open culture		
Organisational structure		
Own attitude towards sustainability		
Own behaviour		
Own interest in sustainability in work		
Own role		
PDA		
Pressure		
Problem solving		
Profitability guardian		
Project participation		
Raising risk awareness		
Reporting		
Sustainability common topic		
Safety		
Strategy implementation		
Time		
Training		
Umbrella role		
Values		
Well-being at work		
Whistle blower		

Source(s): Table created by authors

Table A2.
The interlinking
phases of data coding
and analysis