

BALANCING THE BOOKS AND THE PLANET

**A SINGLE-CASE STUDY INVESTIGATING THE RELATION
BETWEEN SUSTAINABILITY INVOLVEMENT AND THE
OCCUPATIONAL IDENTITY OF MANAGEMENT
ACCOUNTANTS**

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Balancing the Books and the Planet: A single case-study investigating the relation between sustainability involvement and the occupational identity of management accountants

Abstract

Through practice of a single-case study, this paper aims to shed new light on the interdisciplinary area of management accountants' approach to, and involvement in, sustainability-related activities. Through the application of identity theory, with particular influence from Hughes' (1951) findings of a moral division of labour and Thornborrow and Brown's (2009) concept of aspirational identities, we show the existence of an interdependent relationship between the occupational identity of management accountants, and their engagement towards sustainability reporting and adjacent activities. We find that (i) the legacy occupational identity of the profession serves as an initial blocker to acceptance of the novel work tasks, and (ii) how the institutional view of sustainability as an imperative part of business operations helps serve as an important factor impacting the occupation's view of the subject, their approach, and by extension, their occupational identity. The findings of this paper contribute to the existing research on the topic by introducing the use of identity theory on the involvement of the occupation in sustainability practices.

Keywords

Occupational identity, sustainability reporting, management accountant practices, aspirational identities, role enlargement

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1. Introduction

“Every company and every industry will be transformed by the transition to a net-zero world. The question is, will you lead, or will you be led?” - Laurence D. Fink, CEO of BlackRock Inc.

While the strive towards a more sustainable development of society dates to the release of the Brundtland report, the Paris Agreement of 2015 can be stated as the defining turning point of modern society's battle against climate change (UN, 2022).¹ For the first time, all nations jointly signed an agreement to adapt to climate change and fight its origination. The agreement can thus be viewed as a tipping point, following which the number of related regulations skyrocketed. One such regulatory example is the Corporate Sustainability Reporting Directive (CSRD) currently being developed by the EU, which aims to ensure that companies compliantly disclose sufficient information about the impact of their operations on not only people but also the planet (European Commission, 2022). Regulatory developments like the CSRD and the EU Taxonomy, together with demands from stakeholders such as customers and investors (Delmas & Toffel, 2008), are putting the heat on companies to ensure adequate sustainability compliance and reporting practices.

In pursuing regulatory compliance and stakeholder approval, companies are increasingly developing new tools and organisational roles (Campbell, Fisher, & Stuart, 2012). However, previous research on the topic has found that organisations already inhabit the solution in the form of management accountants and the finance function (Ascani, Ciccola, & Chiucchi, 2021; Schaltegger & Zvezdov, 2013; Schaltegger & Zvezdov, 2015),² yet this fact seems to have been overlooked. Considering their expertise in data collection (Adams, 2020), risk management, and the development of adequate measurement and reporting structures (Campbell et al., 2012), the finance function could be considered a key agent for companies in their strive towards ensuring regulatory compliance and sustainability accomplishment. Despite their theoretical contribution, several scholars have found that the finance function's involvement in sustainability practices is, in reality, limited or non-existent (Campbell et al., 2012; Egan &

¹ Released in 1987, the Brundtland report was the first report that popularised the concept of sustainable development, and brought attention to the need to address climate change.

² Throughout this paper, the term management accountant will be used interchangeably with business controller and in certain context finance function.

Tweedie, 2018; Schaltegger & Zvezdov, 2013). As such, previous research seems to indicate a dissonance between the potential contribution and the real involvement of management accountants.

Management accountants' role in organisational activities has been an extensively discussed research theme for many years (Hopper, 1980; Sathe, 1983). Today, scholars assume management accountants to strive towards taking on a role more focused on being a business partner to management (Sathe, 1983) and assisting in operational decision-making (Burns & Baldvinsdottir, 2005; Järvenpää, 2007). From a historical perspective, this contrasts the traditional view of the role as a number cruncher, an occupational role solely focusing on reporting financial numbers for others. As such, with scholars highlighting management accountants' number cruncher capabilities as the base for involvement in sustainability practices (Adams, 2020; Campbell et al., 2012) the strive towards becoming a business partner portrays an interesting dilemma: what is the impact on the self-identity of management accountants when the occupational ideal does not align with the activities they are tasked with completing in their everyday work?

In linking previous research on the strive towards a business partner role (Burns & Baldvinsdottir, 2005; Järvenpää, 2007) with the suggested contribution areas of management accountants within sustainability work (Adams, 2020; Campbell et al., 2012), this prompts the question of what sustainability involvement means for the self-perception of management accountants. While the academic body discussing the occupation's potential contribution to sustainability activities is growing rich and multi-faceted, how this development and role extension interplays with the topic of occupational identity has, to the extent of our knowledge, remained overlooked to this date. As such, this paper seeks to answer the following research question:

RQ: What is the relationship between management accountants' occupational identity and their involvement in sustainability practices?

To gain a deeper understanding of the themes discussed in the above segments, this paper conducts a case study of the multinational Swedish mechanical engineering company EngineeringFirm. The company is well-known even outside the Swedish borders for its impressive reporting system, however, the ever-more stringent regulations about sustainability

are putting increasing pressure on the organisational reporting apparatus. The management accountants of EngineeringFirm have a business background and are fostered in the sense of what their role and occupation entail. Now, pressures to change and adapt are emerging from regulators, operational managers, and society, and this study hopes to better understand the position of management accountants within sustainability reporting practices. In choosing to investigate the empirical observations gathered through the lens of identity theory, we aim to build upon the rich body of academic research on the sustainability involvement, as well as the general role, of management accountants. In investigating how the occupation approaches the enlarging role and how it interplays with its occupational identity, we contribute to this ever-evolving interdisciplinary body of research. However, the aim of this paper is not only to make an academic contribution but also to hopefully bring enlightenment to the corporations and organisations striving to better understand how to enable this necessary change process.

We identify that there exist an interdependent relationship between the occupational identity of management accountants, and their involvement and engagement in sustainability-related activities. First, we find that the legacy occupational identity as an expert of financial numbers serves as an initial barrier to embrace the novel sustainability work tasks. However, our second finding presents how the occupational view of the topic of sustainability is significantly influenced by changing societal factors. Thus, the institutional perception of sustainability as an imperative part of the business is found to influence management accountants' view of the matter, their approach, and by extension, their occupational identity.

The paper is organised as follows: In the following Section 2, we review the current discourse on the domain, present the theoretical lens, and outline the theoretical framework that is used to guide the empirical analysis. In Section 3, we present the methodology used and followed in the writing process of this paper. Section 4 outlines the empirical data collected during the research process, leveraging our theoretical framework for analysis. Section 5 relates and positions the paper's findings to prior research. In the final section, we conclude our results and present limitations, and suggest areas for future research.

2. Literature review

In this section, we outline the domain theory and the current discourse on management accountants' role within sustainability-related activities. In the later segments, we introduce the reader to the application of a method theory drawing upon identity theory, before the two theory areas are integrated into the theoretical framework used to guide the analysis of the alignment between identity and the current role enlargement of management accountants.

2.1 Introduction to the management accountant role

Having transformed from the dichotomous view of number crunchers vs. business partners of the last century (Hopper, 1980; Sathe, 1983), there today exists an almost consensual view around the scholarly notion of the management accountant as closely involved in managerial decision-making and other value-adding business activities (Burns & Baldvinsdottir, 2005; Byrne & Pierce, 2007; Goretzki, Strauss, & Weber, 2013; Järvenpää, 2007). However, while we find that scholars and managers alike increasingly expect the occupation to become active partners in the business, some contrasting empirics have shown reality not to be as aligned (Burns & Baldvinsdottir, 2005; Horton, Wanderley, Souza, & de Araujo, 2020; Karlsson, Hersinger, & Kurkkio, 2019; Lambert & Sponem, 2012; Morales & Lambert, 2013).

Lambert and Sponem (2012) are among those critically investigating the prevalence of the business partner role. In their study, the authors observe a challenge for management accountants to achieve a combination of both involvement and independence in their work, echoing the findings of Sathe (1983), who identifies similar difficulties facing the occupation. Further, Karlsson, Hersinger, and Kurkkio (2019) argue that the image of the business partner role might be more of an ideal than an empirical reality. Their study explores whether there are drivers that either facilitate or limit the adoption of the business partner role. In the study, the authors find that some individuals prefer the influence and autonomy of the business partner role, in contrast to others that prefer the attributes of the traditional number cruncher role. Their result aligns with the findings of Byrne and Pierce (2007), who conclude that management accountants, through their own attitudes, can wield influence over the formation of their role. Thus, a fundamental question is raised: If the role of management accountants is not one of business partnering either, what is it?

Contrary to the majority of contemporary research, Caglio (2003), Burns and Baldvinsdottir (2005), Byrne and Pierce (2007), and Karlsson, Hersinger, and Kurkkio (2019) do not view the role of management accountants as something that is either black or white. Instead, through empirical studies, they argue that the transition to a business partner might not be as straightforward as a large part of the existing literature suggests. While the degree of decision-making involvement has increased over time, traditional number cruncher activities are still required to be performed by management accountants, requiring a degree of coexistence between number cruncher – and business partner traits (Byrne & Pierce, 2007). The noted concurrence of the two roles has led scholars to argue that instead of the role shifting entirely from one end of a spectrum to the other, the traditional role of management accountants has broadened (Burns & Baldvinsdottir, 2005; Byrne & Pierce, 2007; Karlsson et al., 2019)

Studying the impact of ERP system implementation on the role of management accountants, Caglio (2003) illustrates how the introduction of a new business management system resulted in the management accountants of the studied company experiencing a subsequent role enlargement. The system made technical expertise available to all positions and people with access to the ERP. A direct result of this was an increased inter-functional collaboration and a blurring of the lines between accountants and other organisational functions. With the implementation of the system, accountants were found to be increasingly able to move out in the operations to support and engage in information interpretation for managers and other personnel. As such, Caglio (2003) presents findings that showcase how the traditional role of accountants has evolved into a hybrid accountant.

In line with Caglio (2003), Rieg (2018) argues for how the development of the hybrid accountant role illustrates a progression towards a business partner role rather than a complete metamorphosis. The author suggests that management accountants, to an increasing extent, perform both strategic and operational tasks, concluding that the traditional role of management accountants is being expanded. Further, the study investigates how well the self-perception of management accountants aligns with the day-to-day work performed in the workplace. Rieg (2018) finds that while a majority of management accountants perceive themselves to be performing business partnership activities, the actual tasks performed are more akin to those attributed to the bookkeeper's role. Thus, while recent researchers argue for a transformation for the occupation into more of a business partner role, there are contrasting scholarly views stating the shift to be an ideal rather than a reality.

2.2 What is the role of management accountants in sustainability?

On the topic of the changing role of management accountants, scholars have also focused their attention on how organisations can leverage upon the occupation's attributes in non-financial areas of the business. One such domain is the topic of sustainability (Adams, 2020; Campbell et al., 2012; Egan & Tweedie, 2018; Schaltegger & Zvezdov, 2015). Contemporary research has, in a relatively short time, managed to cover several different perspectives on the subject, ranging from management accountants' approach to sustainability reporting practices (Campbell et al., 2012), their predisposition (Schaltegger, Christ, Wenzig, & Burritt, 2022), and also their know-how (Ascani et al., 2021). As such we argue that similar to the scrutinisation of the actual existence of the true business partner (Burns & Baldvinsdottir, 2005; Horton et al., 2020; Lambert & Sponem, 2012), the empirical involvement of management accountants within sustainability reporting has also been an area of scholarly curiosity (Adams, 2020; Schaltegger & Zvezdov, 2015; Schaltegger et al., 2022).

In prior literature, divergent views exist as to what the deciding factors are that influence to what extent management accountants are involved in sustainability-related activities. Ascani et al. (2021), for instance, state how the future involvement of management accountants depends on their ability to develop competencies and skills in the area. On the other hand, Campbell et al. (2012) instead find that scepticism toward sustainability practices constitutes the key reason for under-engagement in this area, similar to Egan and Tweedie (2018) stating that there is a lack of mindset to even engage in sustainability initiatives. Moreover, the authors find that other occupations view management accountants as reluctant to participate in sustainability work, both practically and intellectually. In trying to understand the source of said scepticism, Schaltegger et al. (2022) propose the perceived lack of connection to companies' core businesses as a key barrier to further involvement. While those management accountants that actively engage in sustainability are willing to propose sustainability business cases (Adams, 2020; Schaltegger et al., 2022), Schaltegger and Zvezdov (2013; 2015) find that, in general, the occupation is significantly under-involved compared to for instance sustainability or operational managers.

According to Campbell et al. (2012), management accountants have the necessary knowledge to integrate sustainability reporting into their normal routines. Instead, the main barrier towards involvement has to do with the occupation's attitude and mindset towards working with sustainability. Illustrating this, Campbell et al. (2012) present a maturity model of four stages to explain how the finance function attitudes of *antagonistic*, *agnostic*, *supportive*, and *proactive* impact how they work with various value-adding tasks. Further, these tasks are explained to be an *alignment of sustainability with corporate strategy*, *integrations of sustainability and reporting with existing systems*, *connecting of sustainability outcomes to long-run financial performance*, *development, and management of sustainability-related intangible assets*, and lastly, *enhancement of risk-management portfolio through sustainability initiatives*. A finance function with an *antagonistic* attitude will do anything to hinder these tasks, whilst a *proactive* finance function is expected to actively encourage, develop, and take a leading role in driving sustainability initiatives.

Adams (2020), similarly to Campbell et al. (2012), aims to better understand how companies practically can improve decision-making related to sustainability issues and how these organisations can increase the strategic considerations of the Sustainable Development Goals (SDGs). Focusing on the contribution of the finance department, the scholar voices her surprise regarding the under-involvement of the function, which she states to be a key part of the venture towards meeting the SDGs. Adams (2020) concludes several areas where the finance function and management accountants alike are able to add value to sustainability practices. This includes for example (i) increasing the information mass provided to decision-makers, (ii) ensuring the reliability of non-financial data collection techniques, (iii) as well as examining methods for incorporating longer-term social and environmental effects into capital investment decision-making. Contrary to Adams (2020), Williams (2015) argues that the skill set amongst management accountants is not enough for them to successfully contribute to sustainability initiatives. While agreeing that the occupation will come to play a vital part in the progression of sustainability reporting, the author finds that management accountants lack a general understanding of the topic, and that the occupation requires more skills connected to a long-term view of sustainability. As such, there seems to be dissonance between management accountants and sustainability practices: their expertise is required and suitable for sustainability activities, however, their involvement remains limited, and expertise is underutilised.

2.3 Identity, aspirations, and a moral division of labour

While the blueprint for practical implementation remains missing, the notion that sustainability practices should be included in the role of management accountants can be stated to close to having reached a consensus (Campbell et al., 2012; Egan & Tweedie, 2018; Schaltegger & Zvezdov, 2015; Schaltegger et al., 2022). However, while an increasing amount of research is being conducted on the topic, we find in our review of the existing body of literature that a gap exists in terms of viewing this role enlargement through the lens of identity theory. With knowledge of the existing interplay between role transitions and identity adaptation processes (Wolf, Kuttner, Feldbauer-Durstmüller & Mitter, 2020), the interdisciplinary area of sustainability, management accountant practices, and occupational identity is deemed of high interest.

Discussions around the concept of identity and its organisational and occupational effects are among the most prominent in contemporary management accounting research (Alvesson, Lee Ashcraft, & Thomas, 2008; Brown, 2015). Simply put, identity can be understood as how people define themselves and their sense of belonging in the world. Ashforth, Harrison and Corley (2008) define identity as the construct that helps to answer fundamental but nonetheless complex questions in line with “Who am I?” and “Who are we?”. The authors also acknowledge that the concept is a social one. As such, identity is not viewed in isolation, with the authors further stating that identity is built on three separate components: self-conceptualisation, a social identity, and personal identity. These components include an individual's view of themselves, the group they identify with, and the characteristics that differentiate them from other individuals. Lastly, Ashforth et al. (2008) conclude that occupational identities are formed by the central but unique features of the individual's role.

The literature on identity has placed a significant emphasis on the formation of identity relating to specific occupations, highlighting the importance of exploring the intersectionality between work and identity (Horton & Wanderley, 2018). An individual's identity in the workplace is found to be influenced by a number of different factors, ranging from their particular position within the organisation, the current culture and values of the company, and also their professional identity. Horton and Wanderley (2018) conceptualise this notion as nested identities. In other words, an individual's workplace identity is not just a single, static identity but rather a complex and dynamic interplay of different identities that are nested within each

other. It also implies that an individual's professional identity, in part shaped by their education and previous experience, has an impact on how they position and see themselves within the workplace, together with how they interact with others. Wolf et al. (2020) add to this, stating that management accountants may identify themselves easier within their small workgroups than with people in similar professions. In conclusion, the multifacetedness of workplace identities emphasises the importance of considering multiple factors that influence an individual's sense of self within a professional context.

Along these lines, further findings argue how identities constructed by individuals are influenced by their aspirations and desires instead of solely by their past experiences and characteristics. On this, Thornborrow and Brown (2009) talk about aspirational identities. Identities viewed by the authors as aspirational are those that individuals aspire towards claiming, often grounded on current cultural ideas and societal expectations. Their research concludes that these aspirations can either serve as a motivator for individuals to strive towards formulated goals or as a sense of anxiety that constantly pressures and weighs down on those individuals that fail to live up to their aspirational image.

Prior research on the subject of management accountants has further emphasised the close connection between the adjacent concepts of role and identity. Along these lines, Wolf et al. (2020, p. 314) state: *"Identity includes how the role occupant interprets and makes sense of a role. The external description of a role is likely to affect the way people think about the role, whereas a person's identity influences the way one enacts this role"*. Following this line of thought, there are times when the existence of an identity, or possibly the existence of multiple nested ones, can cause conflicts. An identity conflict occurs when the values, beliefs, norms, and demands of one identity and those of another are misaligned (Ashforth et al., 2008). Horton and Wanderley (2018) give an example of when management accountants can experience identity conflicts, namely when their professional obligations to maintain independence and neutrality clash with expectations for increased involvement in business activities. Situations like the above, where external expectations on management accountants' contribution to an organisation lead to a mismatch with the individual's own image of the profession, risk threatening an individual's self-esteem and creating conflicting pressure (Morales & Lambert, 2013).

In everyday practices, these mismatches can come into play in terms of clean and dirty tasks (Heinzlmann, 2018; Hughes, 1951; Hughes, 1956). Embedded in the notion that occupational members assign a symbolic barrier between tasks they undertake and those they do not, Hughes (1956) shows that moral distinctions between prestigious and degrading tasks exist for professionals. As such, he argues for a moral division of labour, with individuals assigning meaning to tasks above mere technical distinctions, striving only to perform those that align with the normatively decided ideal image of that role. Moreover, Hughes (1951) argues that occupational members attempt only to perform those tasks that constitute the most prestige (as normatively defined), and to delegate those tasks they consider misaligned with the image they are striving towards - and dirty as such. Morales and Lambert (p.229, 2013) add to Hughes (1951), stating that *“dirty work are 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”*. They found that individual and contextual factors influence the categorisation of dirty work. As such, there is no universally accepted definition of the term. Instead, individuals define activities as dirty based on identity work, social settings, and a desire to align with idealised images (Morales & Lambert, 2013). In the figure below, we have attempted to illustrate the concepts of dirty and clean work tasks:

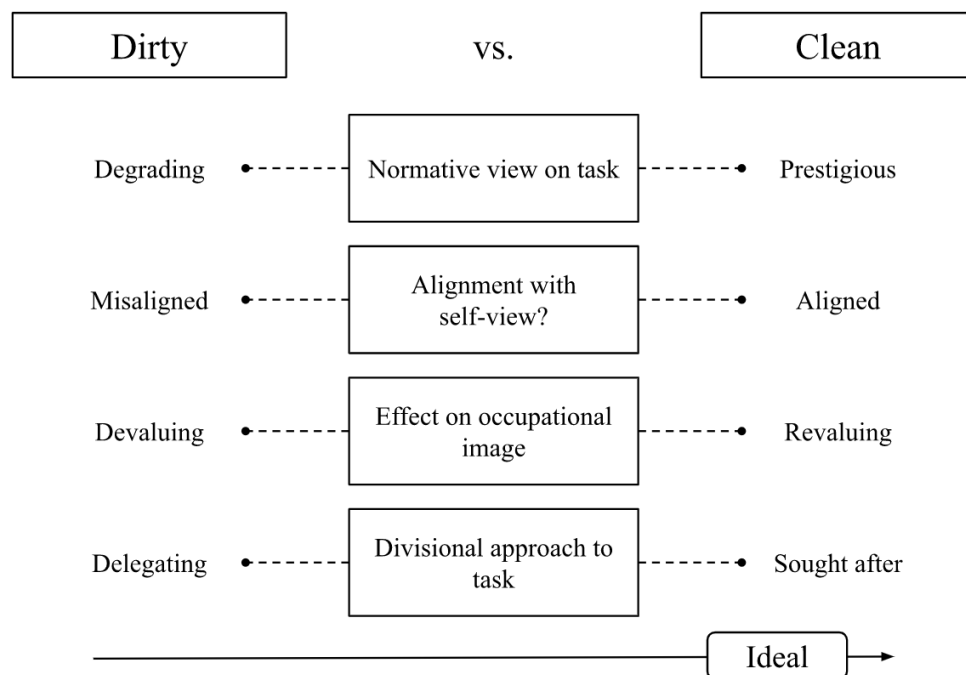


Figure 1. Clean and dirty work as guided by Hughes (1951, 1956)

2.4 Theoretical framework

In this final segment of the second section, we outline how we aim to apply and utilise identity theory to shine a new light on the increasingly discussed topic of management accountants and their involvement in sustainability practices (Adams, 2020; Egan & Tweedie, 2018; Schaltegger & Zvezdov, 2015). With the emerging pressures for organisations to be compliant with reporting requirements (Egan & Tweedie, 2018), the finance function and its management accountants are increasingly expected to partake in, and in some instances also lead, this venture (Campbell et al., 2012). From this shift emerges an extension of the management accountant's current role and responsibilities, although how well this extension aligns with their occupational identity is a question deemed well worth investigating further.

The empirical analysis will examine the evolving landscape of the management accountant role and in particular the implications of increasing external pressures related to incorporating sustainability activities. The evolution will be analysed through the primary lens of identity theory and how management accountants view themselves in this role and their contribution to the cause. With the introduction of sustainability reporting as a novel topic not directly connected to management accountants' educational and professional backgrounds, the extended responsibilities could potentially impact how they perceive themselves and their interactions with others. As such, the impact on management accountants' occupational identity can be viewed through what Horton & Wanderley (2018) describe as nested identities and how these might affect how management accountants perceive and position themselves in their new role. Assuming new responsibilities come in tandem with external expectations, this can risk affecting one's occupational self-view if mismatched with one's own image of the profession and the responsibilities and activities it is normatively believed to conduct (Morales & Lambert, 2013). Along the same lines, and with an intent to better comprehend the effects of societal pressures on companies and their employees to be sustainably compliant, we also aim to understand whether this has an impact on management accountants' aspirations and desires and how this, in turn, affects their occupational identities (Thornborrow & Brown, 2009).

Hughes (1956) shows that there exists a moral division of labour for professionals, where occupational members attempt only to perform tasks that constitute the most prestige. By mapping out which tasks management accountants deem prestigious - and linked to the normatively decided ideal image of what being a management accountant entails - we aim to

use the notion of a moral division to better understand the alignment between the ongoing role enlargement and identity aspects.

Along the same lines, understanding how management accountants view sustainability-related work and activities will be approached using the concepts of dirty and clean work (Heinzelmann, 2018; Hughes, 1951; Hughes, 1956). In stark comparison to organisations' financial accounting structure, there seems to be an academic consensus around the notion that the organisational sustainability journey remains in its infancy (Adams, 2020; Ascani et al., 2021; Campbell et al., 2012; Schaltegger & Zvezdov, 2015). As a result, initial company efforts have been observed to be concentrated on creating procedures for data collecting and reporting processes, primarily using manual methods. Prior research has also found an overarching scepticism towards sustainability and a lack of the mindset required to engage with the subject (Campbell et al., 2012; Egan & Tweedie, 2018). Adopting the dichotomous view advocated by Hughes (1951; 1956), and further supported by Morales & Lambert (2013), this could potentially be interpreted as the duties being performed within sustainability not being in line with their professional image - and hence regarded as dirty rather than clean.

It is not farfetched to state that sustainability as both a news and research topic has emerged as one of the most prominent of the last decade (Adams, 2020; Ascani et al., 2021; Campbell et al., 2012; Egan & Tweedie, 2018). As such, we aim to better understand whether this has an impact in the view of these extended tasks and responsibilities, positioning them on the spectrum between appreciated and sought after, or despised and delegated away (Hughes, 1956; Morales & Lambert, 2013). The theoretical lens outlined above, which draws heavily upon identity concepts gathered from the works of Hughes (1951; 1956), Morales and Lambert (2013), and Thornborrow and Brown (2009), is designed to help us navigate the empirics collected during the data collection phase of the research project. Thus, the aim is that it will assist us in answering the following research question stated in the introduction section:

What is the relationship between management accountants' occupational identity and their involvement in sustainability practices?

3. Method

In our contribution to the interdisciplinary field of sustainability practices and management accounting, this paper has followed a qualitative research approach to address the research question presented in the previous chapters. In this chapter, we expand on how the study has made use of its data sources, its data collection methodology and how the gathered empirics have been identified and analysed.

3.1 The qualitative research process

With a desire to fully comprehend the impact sustainability practices have on the self-view of management accountants, this study follows a qualitative research methodology. The qualitative approach was employed because it allowed us to examine underlying causes impacting actions and perspectives that would not have been seen via a quantitative lens (Vaivio, 2008). In line with Willig (2017), we view qualitative research as a tool to make sense of human actions. The role of the researchers is, as such, seen as that of an interpreter under the notion that “*data never speaks for itself and needs to be given meaning by the researcher*” (Willig, 2017. pp. 274). The single case study was determined to be more appropriate than a multi-case approach due to the richness of the contextual dynamics (Vaivio, 2008) that would be needed to understand the dynamics of organisational processes and tensions impacting identity work. The single-case study approach was also utilised by Morales and Lambert (2013), whose article and research methodology has been considered a great inspiration during the research process.

However, the decentralised organisation of EngineeringFirm also grants the attributes of a multi-case study to some extent. As further developed in section 3.2., *Data Collection Methodology*, interviews were conducted with management accountants across the company’s four separate business areas and their divisions. This allowed for the investigation of entity-crossing similarities and dissimilarities, providing additional data points into the research theme and its underlying drivers. As such, collected data from one entity was in the first phase evaluated in a stand-alone setting and then in a subsequent phase investigated in a broader perspective across entities with the aim of finding overarching patterns (Yin, 2009).

Unlike the domain of interest, the final research question was not cemented from the beginning of the research process. Instead, it was intentionally left open, which allowed us to leverage incremental empirical data collected during the interviews. The qualitative research approach was as such viewed as a continuous reflection of data (Ahrens & Chapman, 2006), characterising the process with iterative aspects. Newly collected data from the interviews were thus used to adjust the chosen research question and our theoretical framework. By choosing to follow the abductive process, we remained open to collect new empirical themes that appeared during the interviews. As such, the abductive approach can be found to permeate all different aspects of our research process. From adjustments to the interview guide (Kreiner & Mouritsen, 2005) to combining deductive and inductive approaches in the coding of data (Alvesson & Kärreman, 2007):

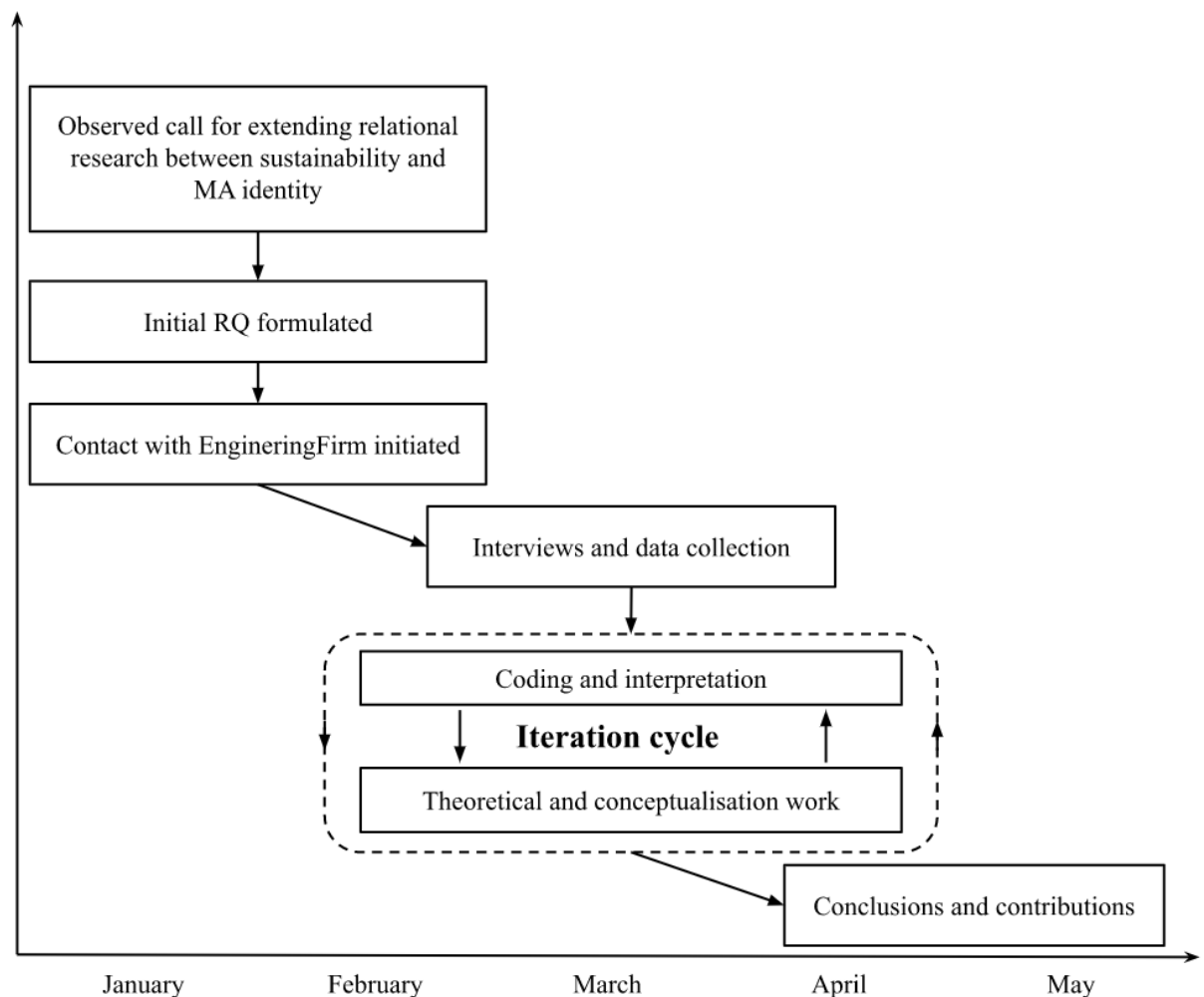


Figure 2. The abductive research process, as adapted from Bryman & Bell (2011).

3.2 Data collection methodology

In our aspiration to contribute to the scholarship of management accountants' position in sustainability activities, as well as its impact on occupational identity, this study gathered inspiration for the data collection from Qu & Dumay (2011). The majority of the empirical data material investigated in the study was gathered through conducting formal interviews with 21 employees at EngineeringFirm spanning different organisational divisions and levels of hierarchy. Of the employees interviewed, 18 held positions deemed equivalent to the one of a management accountant. Among the remaining three, one was a sustainability controller, one the vice president of Business Control at the firm, and one the vice president of Group Control. All but two interviews were held in English. For the two interviews that were instead held in Swedish, we want to highlight that the quotes used from these interviews are translated into English for the sake of the research paper's fluidity. Finally, the interviews were, in all but three occasions, held in the form of one-on-one interviews. This was done in order to aim for a softer setting in which the management accountants interviewed would not feel that their responses could be judged by one or more colleagues from the case company. Further, this was done to create a 'safe space' of comfort for the personal views shared by their interviewee regarding their professional involvement in sustainability reporting and adjacent activities. The sampling of interviewees was done together with the supervisor. Addressing the decentralised nature of EngineeringFirm and its separate business area structure, the sample was constructed with the objective to best reflect the share each business area represents of the entire group in terms of full-time employees.

In addition to the formal interviews, internal material, which we gained access from a number of the management accountants interviewed, was also used to provide an empirical sense of the processes and tools used in the day-to-day activities of EngineeringFirm. Furthermore, we also partook in a training session at the Stockholm School of Economics together with many of the management accountants we had interviewed earlier. In conjunction with the session, we were able to ask follow-up questions and discuss further the results that we, by that time, had been able to gather.

As already touched upon, the interviews were conducted using a semi-structured approach. With an intent to understand how management accountants make sense of the extension of their current role, the semi-structured approach is well suited due to its ability to provide researchers

with an insider understanding of organisational topics (Qu & Dumay, 2011). With its basis in ethnography, the approach positions the interview as a medium through which the internal views of the interviewee can be shared. Furthermore, the dynamic nature of the semi-structured format also allows for researchers to quickly respond to and follow up on topics deemed of particular interest for the study. An interview guide was constructed before the first interview to protect the study from what Hannabuss (1996) defines as “wasted potential”, where a qualitative research interview is conducted without proper preparation around the subject. During the interviews, the guide was utilised in a leading manner, enabling the semi-structured approach, which provided the discussion with topical themes while also allowing us to investigate further interesting responses with follow-up questions (Qu & Dumay, 2011). For instance, this approach was used to gain a deeper understanding of interviewees’ emotions and thoughts after they had explained a particular situation or scenario.

3.3 Data analysis and coding of the empirics

Throughout the research process, we utilised empirical coding in an interactive manner. In the primary phase, which followed a number of initial interviews, a first set of coding parameters was developed deductively based on knowledge of relevant issues in the existing literature (Skjott Linneberg & Korsgaard, 2019). This allowed us to gain a broad sense of recurring opinions and views regarding the sustainability tasks’ impact that had arisen during the primary interviews. This initial set formed a rudimentary basis facilitating the first stage of the data analysis. In line with Skjott Linneberg & Korsgaard (2019), ten codes were initially chosen as part of the coding frame.

After conducting more interviews and becoming more familiar with the research topic at hand, a more inductive approach to coding was introduced to the handling of the data material. The initial ten codes that were appointed deductively after the initial phase of the interviews, were adjusted in order to suit the emerging patterns observed. The idea of a mix between the two approaches is defined as abductive (Alvesson & Kärreman, 2007) in nature or as blended (Graebner, Martin, & Roundy, 2012). By applying the abductive approach to coding, we were able to remain faithful to the existing literature on the subject while also allowing for an open mindset that would enable the identification of surprises in the empirics gathered during the ensuing interviews.

Lastly, the final approach to coding was further inspired and guided by Skjott Linneberg & Korsgaard (2019) and the view of coding as a cyclical process (Saldaña, 2013). As mentioned, a combination of inductive and deductive coding was employed during the interview phase, which after finalising the last interview, resulted in ten codes. Post this cycle of coding, titled *Cycle 1: Intra-interviews*, the existing codes were seen as too blunt and descriptive and thus lacking the conceptualising qualities required for answering the posed research question. Additionally, after having finished the first cycle of coding, we initiated an extended literature search as an interest emerged to better understand to which extent aspirational identities had an impact on the relationship between the studied concepts.

During a second cycle, titled *Cycle 2: Post-interview*, we reorganised, relocated, and synthesised the empirical material. For example, several codes were dropped or merged due to overarching similarities with one another, while new ones were added. Reworking and condensing the material allowed us to narrow down and reorganise the material to a body of themes that suited the final synthesis and write-up. From this, we mapped our empirical findings according to three typologies of activities - *Data Collection*, *Data Interpretation*, and *Management Interaction* - where management accountant interacts with the sustainability concept. In structuring the empirical analysis this way, we could easily utilise the rich body of quotes in our analysis and in our application of our theoretical framework. By continuously keeping Saldaña's (2013) codes-to-theory model (although more complex in reality than the perfect state illustrated by the scholar), we could keep a working picture of how interrelated themes and concepts arrive at the contribution to and development of theory:

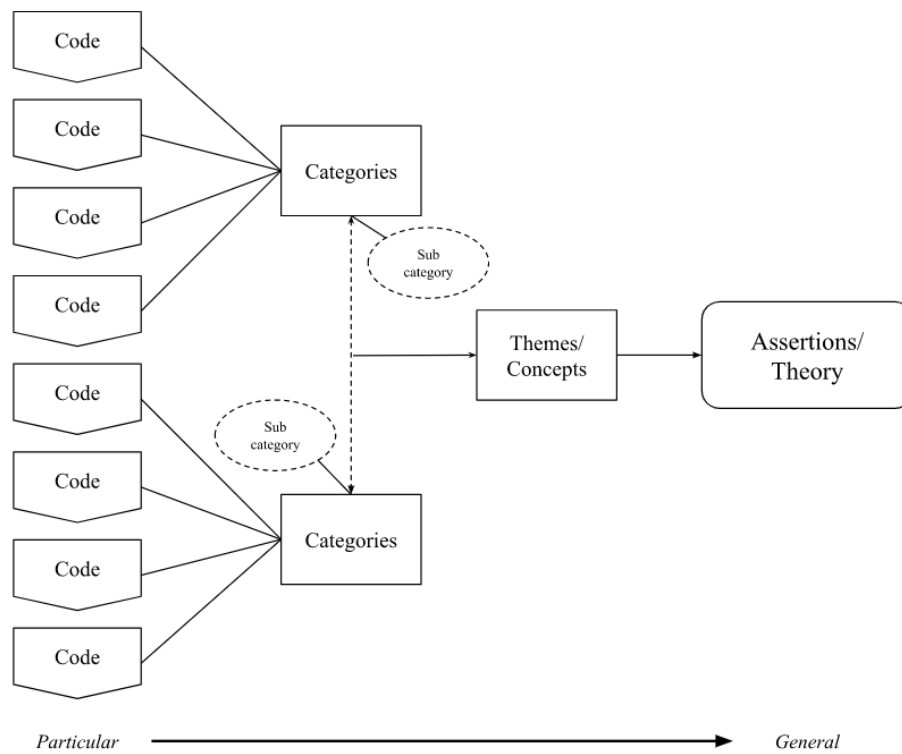


Figure 3. Codes-to-theory model for qualitative inquiry, adapted from Saldaña (2013).

4. Empirical analysis

In this section, we present the empirical material collected during the interview phase and review it using the theoretical framework presented in the second section of this paper. First, we present an introductory segment on the case company EngineeringFirm: its origin, business model, and approach to sustainability. Subsequently, we examine three types of activities - Data Collection, Data Interpretation, and Management Interactions - to investigate how sustainability-related aspects of these interplay with the self-view and identity of management accountants.

4.1. The management accountant function at EngineeringFirm

Since its foundation almost 150 years ago, EngineeringFirm has grown into one of the world's largest industrial companies. Today, the company serves customers in more than 180 countries, employing almost 50,000 people while amassing an annual revenue of more than SEK140bn.³ Fuelled by the mantra that their *“innovative spirit is reflected in everything we do”*, EngineeringFirm holds market-leading positions in almost all of its verticals, which primarily are built around energy-efficient compressors, generators, and industrial tools. As such, the company is well-positioned to reap the benefits of the aim toward a more sustainable society. Nevertheless, while the business opportunities stemming from the sustainability trend are well-known within EngineeringFirm, the firm remains deeply committed to ensuring the success of internal sustainability activities.

Over its almost 150-year-long history, EngineeringFirm has experienced and prevailed over multiple paradigmatic shifts. Nonetheless, the fight against climate change is different in both volume and character, simultaneously as many of the company's products are used by customers standing at the centre of the transition to a low-emitting and sustainable society. In 2022, the company set Science-Based Targets aiming to reduce emissions along the value chain, illustrating the company's aspiration to contribute, and the study's empirical account presents an evident admiration (amongst the management accountants) for the company's work in this regard. Furthermore, EngineeringFirm has found that over 90% of the CO₂ emitted along the value chain comes from product use.⁴ With this phase representing the absolute

³ Annual report 2022

⁴ Annual report 2022

majority of the company's climate impact, much emphasis is placed on the product companies' innovation and product development processes. As such, innovation and engineering excellence are located at the centre of its business model, granting the operational engineers a central place within the organisation and its value creation. Still, our empirical investigation illustrates an almost consensual belief around management accountants' contribution to firm success. It reveals a uniform perspective held by management accountants that their most significant contribution to the organisation is in giving operational managers the information necessary for sound decision-making, holding true for both sustainable and other activities:

"The job is about assisting the decision-making of the general [operational] manager, keeping them updated and guiding them. It is really about translating the numbers into managerial decisions" - Business Controller, EngineeringFirm

However, focused discussions around the occupation's day-to-day activities illustrate a different picture. While acknowledging the time spent on sustainability-related activities to be quite limited, the absolute majority of it seems to revolve around data collection and manual reporting of data, with little to no interaction with operational managers. With sustainability reporting and management still in its infancy, a large share of time spent also seems to simply revolve around figuring out which way is the correct way to complete quests and tasks related to sustainability. EngineeringFirm's management accountants are proud of their contribution to the financial reporting within the firm, where there are well-defined processes and an organisational body of knowledge smoothing the activities. Completing these legacy activities, they feel well-appreciated by the organisation's managers. However, on the back of a lack of existing processes, an intangibility of numbers, and an underlying desire to translate sustainability numbers to financials, the initial feeling and approach to completing these novel activities seem to be one of frustration and unfulfillment:

"There is a need to report more and more, but it is not like you can go into Google and like, 'how do you do this?' So, it is very much learning and defining the process as we go, and I think that we are now in the stage where they say that 'hey we will need to report this from that time' - but we do not fully know how to do that yet. This kind of news makes a lot of people quite uncomfortable" - Business Controller, EngineeringFirm

Nonetheless, sustainability is clearly outlined as a prioritised and key focus area at the company, making any involvement in related activities considered prestigious and rewarding. As such, the role enlargement of management accountants constitutes a disharmony between the frustration they feel for the day-to-day activities they are supposed to undertake, and the prestigious and related larger theme of sustainability. In the segments that follows, we seek to further illustrate this disparity by presenting three types of activities through which management accountants are expected to contribute - *Data Collection*, *Data Interpretation*, and *Management Interaction*. We use these examples in a manner to demonstrate the internal conflict experienced by management accountants at EngineeringFirm. While aspiring to contribute to the company's outlined and prioritised sustainability-related initiatives, as these activities seem often to involve tasks that traditionally have been considered dirty work in scholarly literature (Morales and Lambert, 2013; Heinzelmann, 2018).

4.2 Mapping of tasks

In the segments below, we have outlined three examples of daily activities where the management accountants of EngineeringFirm interact with sustainability and perform related activities.

4.2.1 Data collection

In its current stage, collecting data is one of the main tasks management accountants face when reporting on sustainability. However, the data gathering process differs when working with sustainability compared to data collection activities related to financial data. The task remains very manual in nature and throughout the interviews, it is observed that there is a limited set of routines to work along due to the novelty of the activity. As such, frustration and internal conflict arise among the management accountants of EngineeringFirm, who recurrently seek to translate sustainability data points into financial numbers, an area they are more comfortably and well-versed within.

The data collection at EngineeringFirm for sustainability is still manual and automated processes do not yet exist to the same extent as they do when it comes to data collection of financial numbers. Throughout the interviews conducted, it is observed that the manual aspects of collecting sustainability data points are not aligned with how management accountants are used to, or want to, operate:

“It [collection of sustainability data] is 100% manually. There is no system like an accounting system where you put a value behind, and the system works for you. It is really when we get the request on a quarterly basis from the group to say ‘please report your sustainability figures’.” - Business Controller, EngineeringFirm

The manual aspects of sustainability work described by the management accountants are challenging and frustrating since it is not always perceived to add clear value to the finance function’s end-goal. Being a number cruncher (that these sustainability tasks entails) does not play positively with the self-views of the management accountants (Hughes, 1951; Hughes, 1956; Morales & Lambert, 2013), and their aspiration of adding value to the operational side is vital to fulfilling their view of themselves (Ashforth et al, 2008) and what they strive towards and aspire to be (Thornborrow & Brown, 2009). Within EngineeringFirm, which is known for its success in digitising the finance function through automation, having to manually perform data collection activities presents a reality the occupation thought they had moved on from. Related to financial data collection, they are used to everything being efficient and smoothly running. For the financial numbers, digitisation and automation has reduced manual workloads, allowing the management accountants to target one- or two-day closings.

With the automation and digitisation of data collection, more time have been freed up for the management accountants to focus on activities they believe to be more in line with the normatively ideal image – being a business partner. However, since data collection tasks related to sustainability are typically manual by nature, management accountants working with these may perceive themselves as mere number crunchers. The normative view of the task might therefore be degrading and also miss-aligned with their occupational identity, which makes these tasks appear to be dirty according to the view presented by Hughes (1951). As organisationally structured sustainability-activities can be stated to still be in its relative infancy, management accountants at EngineeringFirm state that they ‘only’ spend around 2-3 hours per quarter on related tasks. However, they are fully aware that more and more things are required to be reported, and therefore will be added to their work-burden over the coming reporting periods. Almost all subsidiaries report sustainability quarterly to fulfil the group requirements. While the extra time and expected increase in tasks to be done is not seen as an issue, one observation from the 18 interviews conducted is the feeling of frustration among the management accountants that has arisen as a result of the lack of routines and processes.

“As soon as we know, whenever a new initiative is starting, especially on this scale like we have now with the environmental part, it is always a turbulent period and I think we are still in this turbulent period. Hopefully, it will stabilise, and it will be more structured and better organised.” - Business Controller, EngineeringFirm

As such, while the occupation believes the current period of manual data collection work to be not only dull, but also unfulfilling, there is an understanding that the sustainability reporting structure is work-in-progress. The frustration rather seems to come from the novelty of the tasks, and not the sustainability topic itself. There will be more and more requirements on new sustainability data points that must be reported. However, for the time being, it is sometimes unclear how or where to start:

“There is not a good cookbook on how to report that [on sustainability]. How many books are there on the IFRS rules? How do you report this? How do you report that, and how much is that on sustainability?” - Business Controller, EngineeringFirm

For management accountants, the uncertainty stemming from the novelty of sustainability tasks and processes can be stressful. Their prior experiences, such as education and previous employment, are instead related to financial numbers which are perceived as more concrete and understandable. Not having rules to follow when performing sustainability-related tasks seems to make management accountants uncomfortable in their everyday work. Moreover, our observations show that some individuals feel abandoned in their work with sustainability reporting. Only some have met a sustainability manager; the rest need to navigate the new topic on their own to get enough knowledge to meet the reporting requirements.

One thing about uncertainty is not knowing how to do it, but another aspect is not having the knowledge required to translate something unknown into something familiar. Within EngineeringFirm it is observed how different individuals use their own approaches to handle this kind of uncertainty, which can be viewed through Horton and Wanderley's (2018) concept of nested identities. One management accountant that has a hard time adapting to sustainability data reporting describes the contrast to working with financial reporting, where everything you report is balanced against something else which concretises it into something more material:

“How do you know if what you have reported is correct or not? There is no counterbalance - there is no counter proof that what you are reporting is accurate and complete.” - Business Controller, EngineeringFirm

A desire for measures that concretises the work tasks and the overall concept of sustainability was a recurring topic during the interviews conducted. Another management accountant at EngineeringFirm stated that she would be happy even to have a tax on CO₂ emissions, just for the cause of having a financial number as a comparison and being able to rely on the sustainability number as a financial number. Others do not see sustainability reporting as something complicated:

“I do not understand why it is so complex to create a third entry. Enter what you need to enter, it could be litres or CO₂. Adding more dimension to the entry should not be that difficult.” - Business Controller, EngineeringFirm

As illustrated by the sections above, the management accountants of EngineeringFirm seek to utilise some type of sense-making tool such as a translation code to financial language, to make them better understand what they must do and why they must fulfil named activities. The intangibility of the topic risk making the occupation feel lost in the new dimensions can affect the occupational identity - coming from a role where they could pride themselves in correctness and factuality.

While a majority of the management accountants interviewed state to be confused but excited about this new topic that has landed on their desks, there are those that are not as enthusiastic or proactive. One example of this is observed during an interview with a customer centre, which instead of doing their own data collection is satisfied and happy with just applying a percentage factor of low-single digits to sustainability numbers reported by their connected production company. As such, they are aware that their numbers are not fully correct, but this is for the time being seen as a “as good as it gets”-measure. This presents a situation when sustainability-involvement creates an identity conflict amongst the occupation (Ashforth, Harrison, & Corley, 2008; Horton & Wanderley, 2018; Morales & Lambert, 2013), as the occupation is centred in its pride to provide correct and value-adding information.

As mentioned above the confusion and different approaches to uncertainty can be related to the concept of nested identities. Several identities might affect how the management accountants view this specific issue. It can be their personal identities involving their view on the topic that the small working group has, which might differ from those in the same occupation (Horton & Wanderley, 2018). The nested identities stemming from what you know from previous professional, personal, and external experiences, might affect your view of the new role and these tasks. These nested identities can also affect the willingness to change into a new role (Horton & Wanderley, 2018). For this reason, some subsidiaries and management accountants expressed their thoughts about doing sustainability reporting more often than quarterly, making sustainability reporting more often to make them feel more comfortable and more quickly learn and see the outliers or make sense of the numbers:

“From the start, my personal conviction is that if you do it more often you will get faster and faster. If you do it fluently you become fast and also learn the figures and can see problems.”-
Business Controller, EngineeringFirm

Even though there is more manual work and uncertainty about the sustainability topic, a general understanding of its importance for the company, its customers, and the management accountants' personal lives is clearly observed during the interviews. Moreover, it is also noted through the interviews that this introductory phase of sustainability is seen as just that - introductory, and some uncomfortable aspects will be resolved over time. To get there, some are working on routines to create more self-esteem around it. Some observations collected during the interviews include doing the data collection work more frequently to learn how it works and how to handle the sustainability reporting in the best possible way, but also taking on more initiatives to learn more for themselves about sustainability.

4.2.2 Data interpretation

The tasks of interpretation, analysis, and ultimately contribution to decision-making based on the collected data falls under the role of management accountants. Related to this task, we have identified four overarching themes of observations, more precisely how the occupation works with sense-making, trust, data transparency, and pride in interpreting the data.

Interpreting the data and analysing the outcome is the next step after the data collection. Through the interviews, it is observed how the management accountants at EngineeringFirm

strive to find common ground between sustainability and financial tasks. Thus, they make use of sense-making mechanisms to improve their understanding of why a certain data point is decreasing or increasing. As they lack formal education in the topic, they employ what they know from their financial tasks to perform data interpretation. The management accountants at EngineeringFirm have confidence in their own work processes when it comes to interpreting the data, however we identify a general mistrust regarding the transparency of the data and its origin. This is exemplified by some sustainability data points heavily fluctuating unreasonably between reporting periods, which makes the management accountant responsible for interpreting the data uneasy and sceptical. Coming from a position of correctness and reliability, to now being in charge of analysing vague data points, risks leading to an identity conflict (Ashforth et al., 2008; Horton & Wanderley, 2018; Morales & Lambert, 2013).

“At the moment, the numbers that we do report are not fully true, but at least we do it, and it is becoming a trend.” - Business Controller, EngineeringFirm

EngineeringFirm is a Swedish group having a Swedish perspective on requiring its subsidiaries to use reliable suppliers regarding sustainability data. It is an entirely different story in other parts of Europe and the rest of the world, where sustainability practices have not come as far yet. The quality of the data received from suppliers differ depending on the subsidiaries' geographical location, which creates frustration against the requirements of the group. Moreover, there is also a feeling among more distant subsidiaries about a lack of understanding regarding the local possibilities to gather data. Frustration has arisen on not having the same possibility of providing management with accurate and high-quality analysis because of the lack of transparency of the data from their suppliers.

In the role of a management accountant, there is an occupational pride in being correct and presenting accurate numbers to operational management. This view of management accountants is not only shared amongst themselves, but also amongst other occupations in EngineeringFirm. However, an identity conflict (Ashforth et al., 2008; Horton & Wanderley, 2018; Morales & Lambert, 2013) arises when management accountants do not trust their numbers, from being someone who always knows right from wrong to suddenly being asked to interpret data that is impossible to even investigate if the underlying raw data is correct:

“We like clear things as a controller. It is black or white.” - Business Controller, EngineeringFirm

For the management accountants at EngineeringFirm, the currently perceived immateriality sustainability data points, present both a shift and a challenge for the occupation. Sustainability is not seen as “black or white” but rather as a grey zone of correctness, following the current lack of audited procedures or ideal measurement tools. The occupational aspiration to always be correct and provide operational management with accurate data can pressure the management accountants since it is hard to live up to the perceived idealised image when working with sustainability (Thornborrow & Brown, 2009). Tasked with reporting and interpreting sustainability data, which is being seen as vague or even untrustworthy in some cases, management accountants risk questioning how well this aligns with their occupational identity as trustworthy partners to the decision-makers of the business.

“In the end, we are still the finance guys.” - Business Controller, EngineeringFirm

Applying Thornborrow & Brown’s (2009) idea of what might influence the origination of aspirational identities, it is clear that the external pressure of sustainability-related regulation and increasing stakeholder awareness, plays an important role. The external pressure of being ‘sustainability-compliant’ has a dual effect on management accountants seeking to align with their aspirations: it can either risk being an anxiety factor if they do not comply, or it can be seen as a motivating factor pushing towards a change in identity. Throughout the interviews, it has become apparent that for the management accountants at EngineeringFirm, it is the latter effect that drives the occupation in their sustainability-activities. By taking on responsibilities in this domain early, the occupation is able to cement their contribution to the business, well-aligned with their desire to be more business-involved:

“The role of the controller needs to be the preacher in these [sustainability] issues, and we need to bring it up as a topic when it comes to driving the business.”- Business Controller, EngineeringFirm.

This desire to not only be active, but a proactive preacher, indicates that the sustainability context has the ability to ‘bathe’ tasks that historically would have been seen as dirty using Hughes’ (1951; 1956) terminology. With sustainability more often being viewed as a direct

part of the business operations, participation in these activities is increasingly being viewed as something rewarding and important, and credible for improving the occupation's image. While the occupational dislike towards the immateriality of sustainability numbers is apparent, the improved understanding of sustainability's clear part in the business operations makes it crucial for them to keep on learning and being proactive - even though a lack of data transparency and a great need for sense-making tools periodically creates an identity conflict. (Horton & Wanderley, 2018).

4.2.3 Management interaction

At EngineeringFirm, managerial interaction constitutes an important aspect of the perceived value management accountants bring to the company. For instance, the management accountants partake in product investment decisions with R&D managers, facility investment decisions with SHEQ (Safety, Health Environment & Quality) managers, and communicate sustainability data points during meetings with general management. It becomes apparent throughout the interviews that the employees are proud of their knowledge of interpreting and communicating the numbers collected. However, the overall novelty of the subject, and in some cases lack of structured reporting processes, lead to a discomfort when tasked with presenting numbers during management interactions, as illustrated by the following account from one of the interviews:

“At the end, when you cannot communicate about it properly, you can say whatever you want to the president. But you cannot prove it in any system and then it becomes a question whether they trust you or not.” - Business Controller, EngineeringFirm

The issue of trusting the numbers emerged as a recurring topic during the interviews at the case company. With scrutiny deeply embedded in their occupational identity, the management accountants of EngineeringFirm almost feel as if they are lying if they are presenting numbers to management that they cannot fully stand behind. The management accountants are as such faced with an identity conflict; they are normatively influenced to interact with operational managers and act as a business partner, while they at the same time dread having to stand for numbers they cannot truly track and understand (Ashforth et al., 2008). This also aligns with the observation of Horton & Wanderley (2018) concerning nested identities and the dynamic interplay of multiple identities developed and formed during an individual's education and professional life; on the one hand they hold the identity of an independent and scrutinising

numbers guy, while on the other they are normatively pressured to become more involved and contribute operationally.

In this instance, when presenting financial numbers to general managers, they feel comfortable verifying the accuracy of data points through financial tools such as double-entry accounting and cash flow analysis. Throughout the interviews, it becomes clear that management accountants may feel a sense of unfulfillment and disdain towards presenting sustainability-related numbers for management, as they are held accountable for presenting numbers and data points which they do not fully trust. As such, even though the management accountants of EngineeringFirm view their job as translating numbers into managerial decisions, management interaction risks being viewed as something unfulfilling due to the current lack of trust and transparency in sustainability numbers - as illustrated by the comment below:

“I contribute when I make figures clear. I hate reporting rubbish, and especially when I know that they made an estimate because that person [supplier personnel] is out for two months and they did not realise that there is a replacement person.” - Business Controller, EngineeringFirm

However, it is clear that contextual factors are in play in determining whether the task is considered dirty or clean (Morales & Lambert, 2013). While the accountants would resent having to present unverifiable and untrustworthy financial data points for managers, the contextually important sustainability factor changes the view of the task. Managers communicate sustainability as a focus area worthy of time, energy, and resources. This is in part illustrated by the decision by management teams to move the sustainability part of management meetings from the last segment (that historically often has gotten skipped over due to time restraints), to one of the initial topics discussed.

Further, which has been expanded upon in previous segments of this chapter, increasingly stringent regulation and a higher degree of automation is expected by the occupation to increase trust and transparency in the numbers. As such, there is an understanding that the annoying and displeasing issues of today will be solved by the tools of tomorrow. In line with the aspirational identities discussed by Thornborrow and Brown (2009), the management accountants view the task of interacting with managers on sustainability topics as an opportunity to reinforce their image of them as essential contributors to this emerging area of the business. What follows is

that in the case of EngineeringFirm, tasks that generally would be considered disdainful and rejected, are affected by contextual factors, and transformed into something sought after (Hughes, 1956; Morales and Lambert, 2013):

“As we are the owner of all the numbers, we have better control on the consumption of whichever sustainability number or reporting. That is why we need to be ambassadors, to create awareness first and then if there is something wrong, give the message or early warnings to the related departments in order to inform them of the right changes needed to be done.” -

Business Controller, EngineeringFirm

In the last segment of the empirical analysis, we will dive deeper into the intersection of two of our main empirical findings. Firstly, we have concluded how the management accountants of EngineeringFirm have adopted an aspirational identity as described by Thornborrow and Brown (2009) that is formed around their contribution as an ambassador of sustainability. Secondly, we have established that similar to how context can turn clean tasks dirty (Morales & Lambert, 2013), contextual factors such as the ever-growing importance of sustainability have the ability to “bathe” tasks historically seen as dirty (manual data collection, number crunching) into ones considered as clean. In this last segment, we are going to investigate what these findings entail for the occupational identity of management accountants.

4.3 The aspirational ideal of management accountants

Throughout the interviews, across both business units and levels of hierarchy, the dedicated approach to sustainability is evident within EngineeringFirm. In the previous segment, we identified and outlined three typologies of activities that management accountants are tasked with in their day-to-day work. If solely analysing the opinions and emotional approaches to the tasks, one would be able to define the tasks as very manual, non-value adding, and misaligned with the self-view of what being a successful management accountant entail (Morales & Lambert, 2013). However, that conclusion would also require the exclusion of valuable contextual clues.

As the role of the management accountants at EngineeringFirm enlarges to include activities related to sustainability, the occupation also faces the dilemma of understanding how this enlargement interplays with their own self-view. While there is an understanding that the new

role would mean performing an increasing share of activities considered dirty under the dichotomy laid out by Hughes (1951) and Morales and Lambert (2013), it would also mean that the occupation would be positioned in the midst of perhaps the company's biggest challenge yet. In the end, the overarching theme that emerges during the interviews presents an almost unison view where the management accountants of the organisations view the area as one of priority and focus. This is showcased by the quote below, which represents an interview answer to the question of where the occupation's largest potential to impact lies:

"I would say mainly it is the impact on the team to be the promoter of the way we look at sustainability. To show that it is not about extra work and extra reporting, but to show that there are benefits in this and what we are trying to achieve." - Business Controller, EngineeringFirm

In understanding the contextual power that sustainability seems to have on the moral division of labour within EngineeringFirm, Thornborrow and Brown's (2009) concept of aspirational identities can be of great use. Characterised as perhaps the most pervasive threat to the natural environment and societies the world has ever experienced, sustainability is undoubtedly one of the most heavily discussed societal issues of our time. As such, involvement in sustainability-related activities could be seen as something that individuals would aspire towards and claim for their occupation. The performance of exercises and tasks that fall under this umbrella of activities would, as such, not be seen as dirty, unfulfilling, and targets for delegation. Instead, the completion of these is rather seen as rewarding to both the individual identity and the occupational identity of management accountants (Thornborrow and Brown, 2009). Furthermore, proclamations of sustainability as a focus area for the company has also played an important part in impacting the occupation's view and approach towards sustainability, in line with how Horton and Wanderley (2018) find how company norms and values are found to influence professional identities. As so, when answering the "Who are we"-question asked by Ashforth et al. (2008), one could conclude that the management accountants aspire to be seen as contributors to a more sustainable tomorrow - following to their desire to increase their operational contribution (Thornborrow and Brown, 2009).

5. Discussion

In this section, the findings outlined in our empirical analysis are discussed in light of the literature review introduced in section 2.

The role of the management accountant and its position within organisations have been thoroughly discussed in previous research (Burns & Baldvinsdottir, 2005; Byrne & Pierce, 2007; Goretzki et al., 2013; Hopper, 1980; Järvenpää, 2007; Sathe, 1983). Our empirical findings add to the existing body of research by illustrating how the performance of sustainability tasks in their everyday work interplays with the perceived role and occupational identity of management accountants, a research angle that, to our knowledge, has been omitted from prior research.

Firstly, it is clear that the increasingly stringent regulations and societal pressures around sustainability are affecting the role. Our findings align with those of Wolf et al. (2020), in that they illustrate how the ongoing role extension leads to an ambiguity, where the management accountants are tasked with not only overseeing material financial numbers but also being in charge over immaterial sustainability data. Our findings highlight the complexity of this extension, where the multiple occupational identities are shown to be able to dampen the adoption of the extended role. To further complicate the shift, we observe how personal views and prior experiences are able to influence this role extension.

In recent years, scholars have observed how the business partner role has grown to be an almost idealised aspiration of management accountants (Burns & Baldvinsdottir, 2005; Byrne & Pierce, 2007), and the typical number crunching tasks are found to not be as prominent in a working environment undergoing digitalisation and automation (Järvenpää, 2007). Due to the novelty of sustainability reporting, a large share of the tasks is considered very manual in nature, resembling those activities historically linked to number crunching-roles. Simultaneously, we observe how management accountants increasingly view sustainability as closely related to the business and thus present a potential area of important contribution. As such, they are faced with a dilemma, where they have to perform number cruncher activities to move closer to the operations and, by extension - a business partner role. On the back of this, we align our findings with Caglio (2003), Rieg (2018), Karlsson et al. (2019), and Horton et al. (2020) who argue that the role should not be seen as either black or white but rather a hybrid

of the two. The hybrid role is not only seen as a hybrid between a number cruncher and a business partner but also as a hybrid between operational and financial contributions, illustrating how the role can be connected to different parts of the organisation. Thus, we argue that through involvement in sustainability, management accountants can be even more involved in the operational side of the business, complementing the findings of Caglio (2003). By taking responsibility for sustainability figures, management accountants are able to provide operational managers with more than just financial expertise, as they can use their insights and abilities to contribute to the overall success of the organisation's sustainability initiatives.

In Hughes' (1951; 1956) articles, clean tasks are seen as those performed by the business partner ideal, whereas dirty tasks are viewed as something bad – activities normatively viewed as being performed by the likes of a number cruncher. However, our findings align with those of Morales & Lambert (2013), who find that contextual factors complicate this division. In our findings, we demonstrate that work tasks previously perceived as dirty can be considered clean in the topic of sustainability. While the sustainability-related tasks presented in the empirical analysis closely share characteristics with those historically considered as belonging to number crunchers, the organisational importance of sustainability and its link to the operations can 'bathe' those tasks into something considered clean. As such, engaging in sustainability activities presents a challenge for management accountants (Lambert & Sponem, 2012). However, it also allows them to take positions closer to the operational side of the business and move closer to the normatively idealised role of a business partner.

As such, we propose that in order to better understand the relationship between the occupational identity of management accountants, and their involvement in sustainability, the relationship should be seen as interdependent. On the one hand, but in a shorter perspective, their legacy identity as financial experts serve as an explanatory variable on why the intangibility and uncertainty of sustainability-related activities risk leading to a sense of unfulfillment. On the other hand, the institutional view of sustainability as a vital and prioritised part of operations helps serve as an important factor impacting the occupation's view of the subject, their approach, and by extension, their occupational identity (as illustrated in Figure 4).

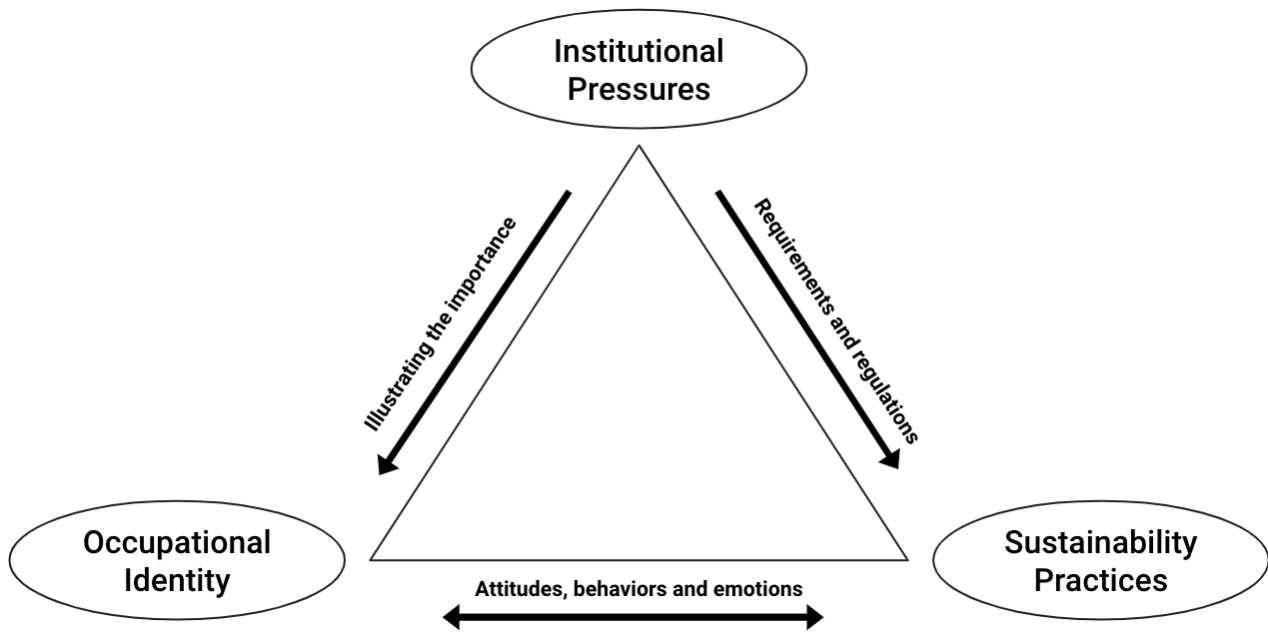


Figure 4: The relationship between sustainability practices and occupational identity

Several scholars have investigated management accountant’s potential contribution and approach toward sustainability tasks (Adams, 2020; Campbell et al, 2012; Egan & Tweedie, 2018; Schaltegger, 2022; Schaltegger & Zvezdov, 2015), with results pointing to occupational scepticism as the underlying cause of historically limited involvement in these activities (Campbell et al., 2012; Egan & Tweedie, 2018). Positioned against these findings, we complement the existing literature with results providing an updated view of management accountants’ approach to sustainability work. While a fair share of scepticism towards sustainability as a work task remains, mainly due to its intangible nature in contrast to the perceived tangibility of finance, we find that the function seems to be more extensively present in, and positive towards, sustainability than presented in previous literature.

In line with Schaltegger and Zvezdov (2015), our results further show that management accountants remain underutilised in sustainability-related practices compared to sustainability and general managers. Sustainability has matured as a business topic during the last years and decade, and our results show that the connection to business cases has materialised for many management accountants, which Schaltegger et al. (2022) mention as a barrier for involvement. As many of EngineeringFirm’s products help its customers to reduce emissions and general environmental footprints alike, it can be argued that customer pressures constitute a major driving force for the changed approach of management accountants. In turn, this is, according

to the interviewees, mainly driven by the continuing momentum for regulators and supervisory organisations. As such, the view of external stakeholders as essential drivers for sustainability adoption is reinforced in line with the findings of Delmas & Toffel (2008). Additionally, the increasingly more targeted approach from these external stakeholders is believed by the management accountants to concretise further the work related to sustainability. With intangibility and scepticism historically having been found to be the primary barriers to sustainability involvement (Campbell et al., 2012), our results thus shine an updated light on this view.

Using Thornborrow & Brown's (2009) concept of aspirational identities, our findings identify how the occupation increasingly views and acknowledges sustainability as an important theme to be proactive in towards their desired occupational identity. Within EngineeringFirm, the management accountants believe their key contribution materialises in the form of assistance and advice to their closest operational manager. Simultaneously, societal, and regulatory pressures are increasingly affecting corporations such as EngineeringFirm to interweave sustainability into their business model. As such, with the increasing acknowledgement of the connection between sustainability and operational topics (Adams, 2020), we believe the concept of aspirational identities fits well to explain the increasingly positive approach of management accountants towards participating in sustainability activities (Thornborrow & Brown, 2009).

This observation also has implications in terms of positioning the study with the findings of Egan & Tweedie (2018), who argues that there simply is a lack of mindset among management accountants to engage in sustainability initiatives. On the contrary, our results show that there is an almost consensual view among the occupation to be engaged and proactive in this area. We argue that this development mainly can be related to the continuing shift in external pressures from regulators and customers (Delmas & Toffel, 2008), but individual influences such as past experiences and personal traits are also found to impact the approach. To better understand the impact these influences hold, we argue that future research is needed. Concludingly, using Campbell et al's (2012) maturity model mapping approaches toward sustainability, our findings show the occupation taking on an increasingly proactive role as the theme's importance to the business increases in tandem. This finding is presented in stark contrast to the proposition laid out by Egan & Tweedie (2018) illustrated above, and the notion

that management accountants do not participate in the collection of sustainability information (Schaltegger & Zvezdov, 2013).

A recurring theme in prior literature has focused on to what extent management accountants hold the skills and knowledge required for sustainability involvement (Adams, 2020; Ascani et al., 2021; Campbell et al., 2012; Williams, 2015). The aspect of expertise is of great influence for the occupational pride of management accountants. With their expertise within finance, they are able to provide value along the entire information process chain, from collection, to interpretation, and finally through interaction with operational managers. In terms of sustainability, our findings show that management accountants believe themselves to have the technical capabilities required, as there are a lot of overlapping competencies that can be used from their knowledge within handling financial numbers (Adams, 2020; Campbell et al., 2012). In line with Ascani et al. (2021) the barrier is instead found to be related to a lack of capabilities required to translate the immateriality of sustainability to the more material dimensions they are used to working with in their work with financial numbers. Concludingly, our findings also respond to Williams (2015) who suggests that management accountants not yet fully understand their position in the long-term objective of sustainability. While we agree with the statement that they currently lack the full understanding of their place in this venture, our findings identify a proactive approach amongst the occupation to learn about it.

As previously has been mentioned in this research paper, the prioritisation of sustainability in institutional views is found to have spurred a proactive attitude amongst management accountants. This is the second half of the interdependent relationship between sustainability involvement and occupational identity. With the topic becoming increasingly cemented as a core part of operations, it serves as an important factor impacting the occupation's view of the subject, their approach, and by extension, their occupational identity. In their aspiration to take on a business partner role within organisations, management accountants are increasingly positive to taking on an active role within sustainability.

6. Concluding thoughts

In this section, the paper synthesises our main results, discusses the potential limitations of the study and lastly, presents potential areas where future research can help advance our findings.

Stemming from recent years' increasing pressures to comply with novel sustainability directives, companies are spending both time and money to find the optimal approach to meet the changing regulatory, operational, and social demands. In light of this, the employees of the finance function are increasingly utilised due to their ability to structure data collection processes, interpret and analyse, and also translate numbers into actions (Adams, 2020; Campbell et al., 2012). Notwithstanding this increasing support for the finance function's involvement in this venture, this paper has identified a gap in the body of research related to the interdisciplinary topic of sustainability involvement and identity alignment. Management accountants and the finance function are in their occupation striving only to conduct what they consider as value-adding activities. At this point in time, sustainability-related tasks are seen as predominantly manual and unfulfilling. This presents a dilemma for the management accountants, as their involvement in sustainability grants them access to a highly prioritised area of the operations that might not interplay with their aspirations of performing the value-adding activities linked to a business partner role. Thus, this study aims to investigate how management accountants' involvement in sustainability practices interplay with their occupational identity. By using the lens of identity theory to examine the sustainability involvement of management accountants, our contributions provide new insights into the ever-evolving research domain concerning their role and position within organisations.

Drawing on findings from a single case-study performed at a Swedish company, we observe that although the tasks performed by management accountants are perceived as overly manual and dull, the topic of sustainability has the ability to 'bathe' activities in other work-situations seen as unfulfilling, into something more rewarding. Through participation in sustainability-related activities, the management accountants view their role as more closely positioned to the operations of the firm, which plays well with their occupational aspiration to become more of a partner to the business.

Along the same lines, while the tasks remain manual, there is an understanding among the occupation that this area is still in its infancy. As it matures, and an increasing share of currently manual activities will be standardised and even automated, there will be extended opportunities for management accountants to perform the value-adding activities interconnected with the business partner role. With these findings, we contribute by applying the concepts of identity and aspirations to the existing literature on the interdisciplinary area of sustainability and the occupational role of management accountants. As such, we propose that the relationship between the occupational identity of management accountants and their involvement in sustainability should be seen as interdependent. On the one hand, their legacy identity as financial experts are an explanatory variable on why the intangibility and uncertainty of sustainability-related activities initially risk leading to a sense of unfulfillment. On the other hand, the institutional view of sustainability as a prioritised part of operations serves as an important factor impacting the occupation's view of the subject, their approach, and by extension, their occupational identity as management accountants. Recognising the interdependent relationship between occupational identity and management accountants' involvement in sustainability practices can help companies improve employee engagement and motivation towards sustainability, thereby contributing to the ongoing effort to achieve the science-based targets.

Ultimately, we also acknowledge that our study is not free from limitations impacting the interpretation of our research findings. Firstly, the case company's Swedish origin could potentially have an impact limiting the generalizability of the study's findings. Throughout the interviews, it was repeatedly noted by employees that the Nordic organisational culture was a contributing factor to why EngineeringFirm management teams had outlined sustainability as a prioritised area. As such, replicating the study in a different geographical region could yield diverging results. Secondly, the choice to perform a single-case study over a multi-company one could also have affected the results. Thirdly, as 18 out of the 21 employees interviewed at the case company held the position of (or equivalent to) management accountant, little attention and time were invested in understanding external views on the research topic. Occupational identities are affected not only by the self-view of employees but also by the views and beliefs of related occupations and individuals. As such, there might have been relevant information that we missed out on that could have assisted in answering the stated research question.

Thus, we encourage scholars, both from a methodological and a curiosity standpoint, to further research the multidisciplinary area of sustainability engagement and occupational identity. From a curiosity standpoint, we hope to inspire scholars to revisit the topic recurrently as (i) new reporting standards are implemented and (ii) as more progress has been made within the developing area of standardisation and automation. In this, we question whether new roles will have emerged to take a position or whether the finance function and the management accountants have cemented their involvement in sustainability. Moreover, future studies might build on this research to further investigate how organisations might work to reduce the barrier of intangibility (e.g., the use of e-learning and closer collaboration with sustainability managers). With management accountants striving towards a more active role within sustainability-related activities while aiming to reach their aspirational identity of becoming more operational, our findings suggest that a key focus for companies should be on increasing the understanding of the ‘why’ of sustainability.

7. Appendices

Appendix A: Data collection: Interviews at EngineeringFirm

Interviewee	Title	Date	Minutes
1	Business Controller	22/02/2023	49
2	Senior Accounting Specialist	23/02/2023	46
3	Business Controller	23/02/2023	50
4	Business Controller	27/02/2023	45
5	Assistant Business Controller	27/02/2023	36
6	Business Controller	28/02/2023	47
7	Business Controller	28/02/2023	47
8	Sustainability Controller	01/03/2023	53
9	Business Controller	02/03/2023	52
10	Business Controller	02/03/2023	50
11	Business Controller	06/03/2023	45
12	Business Controller	07/03/2023	45
13	Group Controller	07/03/2023	50
14	Business Controller	07/03/2023	52
15	Acquisition Business Controller	09/03/2023	46
16	Head of Shared Services Center	27/03/2023	50
17	AtR and Tax Manager	27/03/2023	50
18	Digital Finance Program Manager	30/03/2023	52
19	Group Sustainability Controlling and Reporting Manager	11/04/2023	50
20	Vice President Group Control	11/04/2023	50
21	Finance Manager	11/04/2023	57

Appendix B: Data collection: Example questions from the interview guide

Example	Question
1	How do you define sustainability and how does it relate to your role?
2	Would it be possible for you to expand upon, in your own estimate, how much time you allocated to sustainability-related issues?
3	When dealing with/working on sustainability related issues, which other professions and functions do you primarily interact with?
4	What would you say is the biggest challenge for your role when emerging in sustainability-related activities?
5	Are there aspects of sustainability-related work you prefer to others?
6	Do you believe that there are limits to what controllers can contribute to sustainability-issues?
7	Do you take pride in your sustainability work?
8	In your role as a business controller, what do you believe is the biggest contribution you can do in reaching its sustainability-related objectives?
9	Do you believe that there is a significant difference regarding your contribution in sustainability-related issues and non-related issues as such?

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