

Redefining the Management Accountant: Professional Identity and Skills in the Era of Sustainability Integration

Corresponding Author

Olajide, Dahunsi
Arden University, School of Leadership and Management, United Kingdom
jide_icon@yahoo.com; odahunsi@arden.ac.uk

Co-Author

Oladele, Olumuyiwa Samuel
Augustine University, Ilara-Epe Nigeria
Department of Accounting and Finance
olumuyiwa.oladele@augustineuniversity.edu.ng

Ngozi, Odiaka
Global Banking School, United Kingdom
nodiaka@globalbanking.ac.uk

Oluwamayowa, Olarewaju
Global Banking School, United Kingdom
oolarewaju@globalbanking.ac.uk

Redefining the Management Accountant: Professional Identity and Skills in the Era of Sustainability Integration

Abstract

This study examines how management accountants' professional identities and skillsets are being redefined in response to the integration of sustainability within organizational control systems. Drawing on in-depth qualitative interviews with accountants, sustainability managers, and consultants in Sweden, Germany, and the Netherlands, the study explores the complex interplay of regulatory change, technological innovation, and evolving organizational expectations. The findings reveal that management accountants are increasingly adopting hybrid roles, acting as translators between financial and sustainability logics and developing new competencies in digitalization and cross-boundary collaboration. Jurisdictional boundaries are shown to be fluid and contested, shaped by both internal adaptation and external interventions. The study demonstrates that professional transformation is neither linear nor uniform, but is characterized by negotiation, ambiguity, and ongoing contestation. By synthesizing multiple theoretical perspectives, our study provides new insights into the drivers and dynamics of professional change at the sustainability frontier. The study concludes with practical recommendations for organizations and educators and calls for further research on the durability and evolution of hybrid professional roles in the context of sustainable business transformation.

Keywords: Sustainability accounting, Management control systems, Professional identity, Skillset transformation, Digitalization, Organizational change

1. Introduction

The global transition toward corporate sustainability is not only reshaping external reporting requirements but is fundamentally transforming how organizations operate internally. Increasingly, organizations are expected to embed sustainability into core functions, including accounting, which has traditionally centered on financial stewardship. Management accountants, once perceived primarily as providers of financial insights, now find themselves at the nexus of sustainability measurement, reporting, and management control (Egan & Tweedie, 2018; Kunz, Oltmann & Weinhardt, 2024). This shift, fueled by regulatory change,

stakeholder activism, voluntary frameworks, and the proliferation of sustainability accounting practices over recent decades (Singhania, Chadha & Anisha, 2025), is elevating both the strategic importance and the complexity of accounting work.

As organizations strive to meet new sustainability challenges, management accountants must draw on environmental management accounting, green entrepreneurship, and knowledge management to align business and sustainability objectives (Broccardo, Giordino, Yaqub & Alshibani, 2025; Martínez-Falcó, Sánchez-García, Marco-Lajara & Zaragoza-Sáez, 2025). Understanding how management accountants redefine their professional identities and skillsets in this rapidly changing landscape is critical for both scholarly inquiry and professional practice, as it highlights the evolving expectations of accountants in a world where financial and sustainability imperatives increasingly converge.

Despite the proliferation of sustainability initiatives, academic research continues to reveal persistent gaps and tensions in how management accountants navigate their evolving responsibilities. While the integration of sustainability objectives has become an urgent priority for boards and executive teams, many organizations are still in the early stages of embedding these concerns into their management control systems (Beusch, Frisk, Rosén & Dilla, 2022; Traxler, Schrack, Greiling, Feldbauer & Lautner, 2025). Previous studies have highlighted not only the increasing integration of non-financial information in management control systems but also the operational challenges of collecting and standardizing sustainability data, particularly when data are dispersed, non-standardized, or not immediately aligned with financial metrics (Troshani & Rowbottom, 2023; Demaret & Molinari, 2025).

Research also shows that supplier–buyer incongruence in environmental management accounting across value chains (Zeng, Katsumata, Li & Zhang, 2025) and the diversity of accounting teams (Occhipinti, Tallarico & Verona, 2025) add new layers of complexity for management accountants, who must now possess strong communication, negotiation, and cross-cultural skills to bridge such gaps. However, there is limited insight into the micro-level processes of identity work, skill development, and the negotiation of new professional boundaries in practice. For example, Goretzki, Löhlein, Schäffer, Schmidt and Strauss (2022) argue that changes in metaphors and narratives are essential in reshaping accountants' social identities, while Schaltegger, Girschik, Trittin-Ulbrich, Weissbrod and Daudigeos (2023) observe a growing trend of accounting professionals acting as internal change agents for sustainability. Recent work also underlines the growing need for management accountants to

mediate and collaborate with technical innovation teams and incorporate green technology innovation into their environmental management roles (Ngoc, 2025; Hussein, Mahmood & Hussein, 2025).

This transformation is not simply a matter of regulatory compliance or technical adjustment but reflects a deeper process of professional evolution and redefinition. The emergence of new specialist roles, such as carbon accountants and sustainability managers (Gibassier, El Omari & Naccache, 2020; Molinari, Carungu & Di Pietra, 2025), is further blurring the boundaries of the traditional management accountant's domain. Increasingly, accountants must grapple with data that is not only quantitative but also qualitative, and with performance metrics that are both financial and non-financial in nature (D'Amore, D'Alessio & Scaletti, 2025). As a result, the professional identity of management accountants is now in flux, as practitioners seek to balance competing logics, adapt to new information infrastructures such as ERP systems (Alsughayer, 2025), and reconcile the demands of multiple stakeholders.

Meanwhile, consultants and external change agents, often overlooked in traditional accounting literature, are now actively shaping management control practices by introducing sustainability-oriented tools and practices that reconfigure organizational logics and competencies (Gond & Brès, 2019; Gond, Brès & Mosonyi, 2024; Rana, Rahman & Öhman, 2025). These external actors play a pivotal role in influencing how sustainability is operationalized within firms, complementing internal efforts and accelerating the adoption of innovative control systems and reporting for SDG-aligned objectives (Krasodomska & Zarzycka, 2025).

Nonetheless, existing research on institutional and organizational drivers (Arjaliès & Mundy, 2013; Kunz et al., 2024) leaves open important questions about how management accountants personally experience and enact their evolving roles, especially in environments characterized by ambiguity and change. Identity transformation and skill acquisition do not occur in a vacuum but are shaped by ongoing organizational negotiations, the interventions of external actors, and wider professional field dynamics. Carrington, Zwick and Neville (2019) underscore the importance of internal activism and identity work, arguing that accountants are not passive recipients of change but actively shape how sustainability is enacted within organizations.

Yet, the generalizability of these processes remains uncertain, as practices may vary significantly by sector, country, or organizational culture. Moreover, the practical reality of

sustainability data management, often fragmented and labor-intensive, necessitates new technical skills, digital competencies, and cross-functional collaboration for management accountants (Troshani & Rowbottom, 2023; Molinari, Carungu & Di Pietra, 2025). The evolution of accounting education is also crucial, as future-ready accountants must acquire climate change knowledge and broader critical thinking skills (Li & Cui, 2025). Continuous dialogue and negotiation, both within accounting teams and with other stakeholders, are critical for resolving tensions between financial and sustainability objectives (Beusch et al., 2022; Traxler et al., 2025).

These trends signal that professional adaptation is neither automatic nor uniform; instead, it is a complex, context-dependent process influenced by individual agency, organizational culture, and the interventions of consultants and change agents. External consultants, as highlighted by Gond and Brès (2019) and Gond, Brès and Mosonyi (2024), do not simply transfer technical expertise but act as discreet change agents, equipping organizations with new tools, discourses, and mindsets that fundamentally alter management control and reporting practices. Their influence can lead to shifts in professional boundaries, a redefinition of “what counts” as accounting work, and a new focus on the alignment of internal processes with external sustainability expectations. The increasing prominence of new technologies, such as green nanotechnology (Hussein et al., 2025), and evolving performance measurement for climate risk and carbon accounting (Rana et al., 2025), further underscore that management accountants must operate at the intersection of technical, legal, and ethical domains.

Our study seeks to address the following research question: How are management accountants’ professional identities and skillsets being redefined in response to the integration of sustainability within organizational control systems? By focusing on both internal adaptations and the influence of external consultants and change agents, this study offers a comprehensive perspective on the evolving role of management accountants in the sustainability era. This question is of critical importance for both academic scholarship and practice, as it speaks to the broader challenge of aligning financial and sustainability imperatives within organizations.

Our study makes three core contributions to the literature on management accounting and sustainability. First, it advances understanding of the identity work and role negotiation undertaken by management accountants, drawing on Goretzki et al. (2022) and Schaltegger et al. (2023). Second, it elucidates the new skills and competencies needed for effective sustainability integration, building on the work of Egan and Tweedie (2018), Troshani and

Rowbottom (2023), and Gond and Brès (2019). Third, it demonstrates how consultants and external change agents drive transformation by shaping control systems and professional practices (Gond & Brès, 2019; Gond, Brès & Mosonyi, 2024).

Employing a qualitative approach, the study uses semi-structured interviews with management accountants, sustainability managers, and consultants across diverse organizations committed to sustainability. This method allows for an in-depth exploration of identity transformation, skill acquisition, and the interplay of internal and external forces shaping the profession. By capturing the complexity and diversity of professional adaptation, our study offers new insights into the changing nature of accounting work in a world increasingly defined by sustainability imperatives.

The remainder of the study is organized as follows: Section 2 outlines the material and methods; Section 3 presents the key empirical findings; Section 4 discusses implications for theory and practice; and Section 5 concludes with suggestions for future research.

2. Theoretical framework

2.1 System of professions, boundary work, and institutional theory

The transformation of the management accountant's identity and skillset in response to sustainability imperatives presents a theoretically rich puzzle that challenges the sufficiency of any single conceptual lens. In order to rigorously interrogate this redefinition, this study synthesizes and extends three foundational frameworks: Abbott's (1988) System of Professions, Boundary Work Theory (Gieryn, 1983; Gendron & Barrett, 2004), and Institutional Theory (DiMaggio & Powell, 1983; Scott, 2014), to generate new conceptual leverage for understanding contemporary shifts in management accounting practice.

2.1.1 System of professions

Abbott's (1988) system-level theorization offers a powerful lens for deconstructing the deep structural transformations underway in management accounting. Unlike static or essentialist models of professionalism, Abbott frames professions as dynamic, adaptive systems perpetually engaged in jurisdictional negotiation and contestation. In this view, the integration of sustainability within management accounting is not a peripheral or incremental shift but a profound jurisdictional rupture, an incursion of novel logics, practices, and expertise that destabilizes and reconfigures established boundaries of professional authority. Drawing on this conceptual architecture, our analysis interrogates how management accountants assert, defend,

or recalibrate their claims to expertise in sustainability domains, often amidst incursions by external actors such as sustainability managers, consultants, and digital technologists. These jurisdictional struggles are rarely resolved neatly; instead, they generate new, hybrid forms of legitimacy and create openings for ongoing contestation and adaptation. In so doing, Abbott's framework is indispensable for illuminating not only the performative identity work of management accountants, but also the fragile, contingent, and often unstable character of professional redefinition in an era marked by relentless sustainability imperatives. By privileging this dynamic systems view, we uncover how legitimacy, skill, and identity are continually negotiated rather than permanently won.

2.1.2 Boundary work theory

Boundary Work Theory provides an incisive analytic for interrogating how jurisdictional shifts, catalyzed by sustainability imperatives, are performed and negotiated in the lived, everyday practices of management accountants. Far from treating professional boundaries as fixed or self-evident, this theoretical approach foregrounds the array of performative, rhetorical, and material acts through which management accountants actively draw, patrol, or reconfigure the borders of their expertise. In the context of sustainability integration, these boundaries are rendered particularly fluid and contentious, as new "boundary objects" such as cross-functional dashboards, integrated ESG-financial reporting tools, or digital sustainability analytics platforms become sites for both collaboration and contestation. Such artifacts not only enable the emergence of hybrid roles (the "translator" accountant, the sustainability "change agent") but also embody the tensions, ambiguities, and creative possibilities inherent in redefining what it means to be a management accountant. Boundary Work Theory thus exposes the inadequacy of linear or deterministic narratives of professional adaptation, demonstrating that hybridization is as much a terrain of negotiation and struggle as it is of innovation. This lens compels us to see identity and skillset transformation not as smooth transitions, but as ongoing, contested performances in which both boundaries and professional meanings are actively and continuously made and remade.

2.1.3 Institutional theory

Institutional Theory furnishes a vital macro-level framework for elucidating the forces that render sustainability a defining concern for the management accounting profession as a whole. Unlike individualistic or organization-centric perspectives, institutional theory foregrounds how organizations and professions are embedded within, and shaped by, broader institutional

fields characterized by regulatory, normative, and cognitive pressures (Scott, 2014; DiMaggio & Powell, 1983). The proliferation of sustainability imperatives, whether in the form of new regulations, standards, or stakeholder expectations, creates powerful isomorphic pressures that impel both organizations and their professional constituents toward convergence in practice. Yet, the explanatory strength of institutional theory lies not merely in its account of adaptation or compliance, but in its sophisticated treatment of translation, resistance, and institutional drift. Sustainability mandates do not simply cascade into practice; rather, they are interpreted, reworked, or even subverted by management accountants within the frames of existing professional logics, historical routines, and organizational cultures. This process produces significant variability, as similar external pressures yield divergent local adaptations and hybridized forms of practice. By situating the shifting identity and skillsets of management accountants within this dynamic institutional environment, the theory allows us to interrogate both the drivers and the contingencies of change, revealing how professional adaptation is simultaneously enabled, constrained, and made meaningful within a complex ecology of legitimacy-seeking, cultural negotiation, and institutional evolution.

By integrating Abbott's system of professions, boundary work theory, and institutional theory, our study challenges linear and reductionist models of professional change, instead offering a nuanced account that attends to field-level contests, micro-level negotiations, and macro-institutional pressures. This multifaceted framework underpins a dynamic understanding of the management accountant's evolving identity and skillset in the era of sustainability, moving beyond static or technologically deterministic views. Importantly, this architecture also points to fertile directions for future research, highlighting the need to examine the situated, contested processes by which professionals and organizations interpret, resist, and hybridize sustainability. Ultimately, our approach provides a rigorous and reflexive foundation for ongoing debate about the boundaries, legitimacy, and transformation of management accounting.

3. Materials and methods

3.1 Design

We employed a qualitative research design to explore how management accountants' professional identities and skillsets are being redefined amid sustainability integration within organizational control systems. The choice of a qualitative approach reflects the need to capture the nuanced, context-dependent, and evolving practices characterizing this transformation,

phenomena not easily accessible via quantitative surveys or archival data (Ahrens & Chapman, 2006; Parker, 2012). Privileging participants' lived experiences and enabling in-depth investigation of identity work, negotiation, and adaptation, qualitative inquiry is well suited for advancing theoretical understanding in emerging and complex domains such as sustainability accounting, as advocated by Broadbent and Laughlin (2005), who emphasize the importance of context-sensitive qualitative research for capturing such complexities (Vaivio, 2008; Broadbent & Laughlin, 2005).

3.2 Sample

Our sample comprises 20 management accountants, sustainability managers, and consultants drawn from organizations based in Sweden, Germany, and the Netherlands. These three countries were purposefully selected as they are recognized in academic and professional literature as pioneers and global leaders in sustainability regulation, innovative business practices, and advanced integration of non-financial (sustainability) information within management control systems (Beusch et al., 2022; Broccardo, Giordino, Yaqub & Alshibani, 2025; Martínez-Falcó, Sánchez-García, Marco-Lajara & Zaragoza-Sáez, 2025). By focusing on these contexts, the study captured empirically rich cases of advanced sustainability practice and examines identity and skillset transformation among management accountants at the forefront of organizational change.

Participants were drawn from manufacturing, energy, services, and finance sectors, ensuring both large multinational corporations and SMEs were represented. Organizations operated at various stages of sustainability maturity, reflecting both early and advanced adoption. A theoretical sampling strategy (Glaser & Strauss, 1967; Eisenhardt & Graebner, 2007) targeted those directly involved in management control and sustainability metrics. Consultants and external change agents were included (Gond & Brès, 2019; Gond et al., 2024), as well as participants from organizations using digital technologies for sustainability (Alsughayer, 2025; Molinari et al., 2025). Participants were garnered via industry connections and LinkedIn outreach.

3.3 Data

Primary data were collected through semi-structured, in-depth interviews lasting 15–20 minutes each. The interview protocol was crafted to elicit narratives on career trajectories, role transitions, identity tensions, sustainability skill development, digital tool use, and collaboration with external consultants. Interviews were conducted via secure video

conferencing, audio-recorded with consent, and transcribed verbatim. This approach enabled participants to reflect on complex professional changes and allowed the interviewer to probe for concrete examples and critical incidents, consistent with best practices for qualitative field research and rigorous interview analysis in management accounting (Ahrens & Chapman, 2006; Myers & Newman, 2007). The semi-structured format also permitted iterative adaptation, enabling the incorporation of new themes as analysis progressed consistently with abductive qualitative research (Timmermans & Tavory, 2012). This exclusive focus on interview data maximized authenticity, facilitated nuanced exploration of lived experience, and ensured the richness and credibility of the empirical insights gathered.

3.4 Analytical technique

The analysis employed a thematic analysis framework (Braun & Clarke, 2006), widely used in qualitative accounting research (Parker & Northcott, 2016; Vaivio, 2008). This approach enabled the identification of recurring patterns, contradictions, and new insights in participants' accounts without relying on fixed a priori codes, making it ideal for capturing both established and emergent themes related to professional identity and sustainability (Gendron & Barrett, 2004). The process was guided by constant comparison (Glaser & Strauss, 1967), iteratively linking interview transcripts and codes. NVivo 14 facilitated systematic coding and transparency, with CAQDAS ensuring a robust analytical audit trail (Saldaña, 2021).

3.5 Coding process

The coding process began with open coding of a subset of interview transcripts, enabling the research team to identify salient concepts such as “boundary spanning,” “sustainability skill gap,” “consultant influence,” “ERP/digital literacy,” and “identity negotiation.” As coding progressed, these initial codes were grouped into higher-order categories through axial coding, capturing processes like “professional boundary redefinition,” “skillset transformation,” and “organizational learning in sustainability.” For example, an accountant learning to use ERP modules for Scope 3 emissions reporting was coded as both “digital literacy” and “environmental data management,” highlighting how new competencies intersect with evolving roles (Alsughayer, 2025; Molinari et al., 2025). Themes were refined through multiple coding cycles and constant comparison, supported by memo writing and regular team discussions to challenge assumptions and consider alternative interpretations (Corbin & Strauss, 2015). Final themes were chosen for explanatory power and resonance with both data and theory (Braun & Clarke, 2021), with illustrative data excerpts mapped to each.

3.6 Reflexivity

Several steps ensured rigor, validity, and reflexivity throughout the research process. The research team maintained a reflexive log, documenting positionality and potential biases throughout all stages (Alvesson & Sköldberg, 2017). Member checking was conducted, with preliminary findings shared with selected participants to enhance interpretive trustworthiness (Birt et al., 2016). Regular peer debriefings and cross-checks were undertaken to promote critical dialogue and methodological transparency (Lincoln & Guba, 1985; Parker & Northcott, 2016). Collectively, these procedures ensured a rigorous, context-sensitive, and methodologically robust approach to capturing professional identity transformation through in-depth qualitative interviews.

4. Results

4.1 From scorekeeper to change agent: reimagining professional identity

The transition from the “scorekeeper” role to that of a “change agent” was a central and vivid finding, repeatedly surfacing across Sweden, Germany, and the Netherlands. This shift directly addresses our core research question; how professional identities are being redefined amid sustainability integration?. As mapped in Table 2, this theme draws on constructs of identity work, agency, and organizational transformation.

A Swedish management accountant (P07) captured this dynamic:

“A few years ago, my job was all about closing the books and meeting quarterly targets. Now, I’m in meetings with the sustainability team, translating emissions data into something the board can understand. It feels less like I’m just reporting numbers and more like I’m steering the ship, sometimes I am the one making the case for investing in green innovation, not just calculating its cost.”

Such testimony illustrates a complex, iterative professional transformation, not simply a matter of additional responsibility, but a deep reorientation of identity, a pattern that extends and enriches the arguments of Carrington et al. (2019) and Goretzki et al. (2022). Their work theorizes identity work as both collective and personal, while our evidence demonstrates these processes are now a lived reality in practice.

A Dutch sustainability manager (P18) reinforced this:

“We are now seen as sustainability translators. Our leadership expects us to bridge the gap between our Net Zero ambitions and what actually happens in business units. Sometimes it’s awkward, there are older colleagues who still see sustainability as extra paperwork, but for me, it’s now core to my professional identity.”

This narrative makes clear that identity work is neither uniform nor uncontested: it is negotiated and sometimes resisted, reflecting a profession in transition. As Table 2 demonstrates, the diversity within our sample further underscores that these shifts are contextually variable, but the move toward change agency is unmistakable across sectors and countries.

4.2 Professional boundary redefinition and interdisciplinary collaboration

Findings in this section underscores the research question’s concern with skillset and role transformation, showing that sustainability is dissolving traditional silos and demanding new forms of interdisciplinary collaboration (Martínez-Falcó et al., 2025; Broadbent & Laughlin, 2005). The “boundary spanning” and “professional boundary redefinition” themes in Table 1 reveal how management accountants’ work is now deeply intertwined with other functions.

A Dutch participant (P14) recounted:

“It’s no longer just accounting and finance. I’m working with HR to design sustainability training, with IT to get the right data, and even with marketing on green branding. We form ad hoc teams, sometimes, I’m the only accountant in the room.”

These lived experiences support the theoretical view that sustainability accounting requires a fundamental renegotiation of jurisdiction and expertise (Gendron & Barrett, 2004; Goretzki et al., 2022). At the same time, as illustrated in Table 2, such expansion can be both empowering and contested. For example, a German accountant (P27) noted:

“I enjoy learning from engineers about emissions and product lifecycle. But sometimes, it’s a battle to get them to see why our reporting rules matter. There are cultural clashes. But I also see my role as a translator helping different departments understand each other.”

These findings vividly demonstrate the iterative, negotiated, and sometimes conflictual process by which professional boundaries are redefined. Such evidence enriches and extends the literature, offering context-rich, empirically grounded answers to the research question.

4.3 Skillset transformation and the “sustainability skill gap”

Participants consistently described an urgent need to develop new skills, particularly in digital technology, environmental science, and cross-functional communication underscoring the research question’s focus on skillset transformation. The “skillset transformation” and “sustainability skill gap” codes in Table 1 are strongly represented here.

A German accountant (P25) shared:

“I never thought I’d have to know so much about carbon accounting, let alone biodiversity. I took online courses, attended webinars, and honestly, I learn most by trial and error. Sometimes I worry that my technical knowledge lags behind the expectations.”

Such narratives provide vivid support for the idea that skill transformation is a complex, ongoing, and context-dependent process (Kunz et al., 2024; Broccardo et al., 2025). The analytical diversity mapped in Table 2 shows that while some organizations provide structured upskilling, much adaptation is self-driven and experiential.

A Dutch participant (P19) added:

“Our company offered training on the new EU Taxonomy rules and digital platforms for sustainability data. But there’s still a gap between the training and what you need in practice, especially when it comes to critical thinking and making trade-offs.”

These findings do more than confirm the literature, they push it further by providing granular, practice-based evidence of how management accountants are actually negotiating these new demands, making a direct contribution to theory and to the field’s understanding of sustainability-oriented adaptation.

4.4 Navigating regulatory and technological change

Regulatory shifts, especially new EU directives, were cited as transformative but challenging. The “navigating regulatory and technological change” and “digital literacy” codes in Table X ground this theme in both empirical data and contemporary theory (Demaret & Molinari, 2025; Traxler et al., 2025).

A Dutch accountant (P12) described:

“CSRD reporting has changed everything. We have to collect data we never looked at before, and the systems for this are still immature. There’s a lot of manual work, and sometimes it feels overwhelming, but it also means accounting is at the center of our sustainability story.”

This direct connection between regulatory change and professional repositioning shows the iterative, context-specific nature of transformation that lies at the heart of the research question. Participants’ stories, mapped in Table 1, show how technological adaptation is inseparable from regulatory adaptation:

“Our ERP system now has a sustainability module, but it wasn’t plug-and-play. We spent months customizing it, and there’s still confusion about what counts as material. But the biggest change is that accountants have to speak the language of IT.” (P05)

Such empirical findings demonstrate that regulatory change is not only a source of new technical requirements, but also a driver of enhanced professional legitimacy and a catalyst for new forms of expertise (Demaret & Molinari, 2025). This is a direct, context-rich answer to the research question and pushes the literature forward.

4.5 Consultant influence and external change agents

The impact of consultants and external agents emerged as a nuanced theme, with participants reflecting on both positive and negative experiences. The “consultant influence” theme in Table 1 demonstrates that management accountants’ role transformation is not only internally negotiated but also shaped by outside actors (Gond et al., 2024).

“We brought in consultants to help set up our sustainability control systems. At first, there was skepticism, they’re outsiders, after all, but they brought templates, benchmarking data, and a sense of urgency. Without them, I doubt we’d have moved as fast.” (P10)

This insight links directly to the theoretical frameworks around professional boundary work and organizational change (Gond & Brès, 2019). The evidence demonstrates that consultants can accelerate change, but their influence is complex and context-dependent, at times a catalyst, at times a source of resistance.

A Dutch accountant (P21) said:

“Consultants introduced a lot of jargon and complex models, but sometimes I felt they didn’t understand our culture. Some changes stuck, but others faded when the project ended.”

Embedding this theme in the results underscores how external actors contribute to the ongoing, negotiated redefinition of management accounting identity and skillset, a core element of our research question.

4.6 Tensions and trade-offs: financial vs sustainability objectives

Directly addressing the core research question, this section reveals how management accountants must continually negotiate between financial performance and sustainability objectives, echoing the “boundary spanning” and “practice tension” codes in Table 1.

A German accountant (P26) explained:

“There are months when the pressure to hit financial targets is so high that sustainability is deprioritized. It’s not that people don’t care, but you can’t always do both at once. There have been difficult conversations with finance about why we need to invest in emission-reducing technology when margins are tight.”

This is not simply a matter of adding sustainability metrics, but of active, ongoing negotiation and identity work illustrating the iterative, context-dependent nature of professional transformation (Beusch et al., 2022; Narayanan & Boyce, 2019). The coding framework shows these tensions are pervasive yet also give rise to innovation and new approaches:

“We’ve tried shadow pricing for CO2 emissions and built it into our project evaluation. It helps put a number on sustainability, but sometimes it’s criticized for being arbitrary. Still, it’s better than ignoring the costs.” (P09)

Such direct extracts show management accountants as active agents in shaping the reconciliation of sustainability and financial imperatives, pushing the literature forward with vivid, empirical evidence.

4.7 Organizational learning and adaptive capacity

This theme brings the research question full circle by showing how organizations, through both formal and informal learning enable or constrain the ongoing adaptation of professional identity and skillset, as mapped in the “organizational learning in sustainability” code of Table X (Parker & Northcott, 2016; Bowen, 2009).

A Dutch participant (P15) narrated:

“We set up a monthly ‘sustainability learning circle’ where anyone from finance, HR, or operations can join. People share mistakes, what worked, and what didn’t. It’s less formal than training but maybe more effective for changing mindsets.”

This underpin the study’s objectives, showing that identity and skillset transformation are dynamic, social, and embedded in organizational routines. Not all experiences are positive, however; adaptation is varied, sometimes slow, and always contextually specific, a point reinforced by the diversity in our sample and explicitly referenced in Table 1.

4.8 Contextual and country-specific factors

Finally, context matters: Swedish, German, and Dutch participants described distinct legal, cultural, and organizational backdrops to their work, mapping to the “country/context specificity” theme in Table X. This finding illustrates that while the professional transformation of management accountants is widespread, it is always conditioned by local circumstances, directly supporting the research question’s focus on complexity and variability.

“Sweden has a tradition of transparency and environmental regulation, so there’s less resistance. But in Germany, some firms see sustainability as a threat to competitiveness.”

(P02)

“The Netherlands is pragmatic; companies want to innovate but also expect clear guidance from government. When rules are vague, people hesitate.” (P20).

5. Discussion

5.1 Reconfiguring professional identity: from scorekeeper to change agent

Our study provides empirical confirmation and extension of a central theoretical proposition in contemporary management accounting: the transition from accountant as “scorekeeper” to “change agent” (Goretzki et al., 2022; Carrington et al., 2019). The findings vividly document how management accountants in Sweden, Germany, and the Netherlands are renegotiating their professional identities amid the integration of sustainability into management control systems. Whereas prior literature has described this transformation primarily in conceptual terms (Schaltegger et al., 2023; Arjaliès & Mundy, 2013), our evidence grounds it in the lived realities of practitioners, revealing not only enthusiasm and agency but also ambivalence, resistance, and negotiation.

Consistent with Goretzki et al. (2022), we found that metaphors such as “translator” and “bridge-builder” have become part of accountants’ self-narrative, signaling a shift toward roles that are proactive, interdisciplinary, and future-oriented. However, our findings also nuance the extant theory by highlighting that this transformation is neither linear nor uniformly experienced. Instead, it is marked by contestation, generational and sectoral differences, and persistent negotiation with traditional financial logics (Broadbent & Laughlin, 2005; Kunz et al., 2024). For example, while some participants readily embrace the change agent identity, others express discomfort or nostalgia for more clearly delineated roles. This echoes and extends research by Carrington et al. (2019), who note the micro-politics and identity work involved in corporate sustainability initiatives.

By foregrounding these complexities, our study not only confirms established theory but also refines it, emphasizing the dynamic, context-dependent, and negotiated nature of professional identity transformation in sustainability accounting. In doing so, we respond to calls for more empirically rich, practice-based research on the lived experiences of management accountants (Broadbent & Laughlin, 2005; Gendron & Barrett, 2004).

5.2 Redefining professional boundaries: collaboration and organizational hybridity

A striking contribution of this study is its elucidation of how sustainability imperatives dissolve and reconfigure traditional professional boundaries. Consistent with Martínez-Falcó et al. (2025) and Spence and Rinaldi (2014), our evidence shows that management accountants are increasingly required to work across departments, collaborating with HR, IT, marketing, and operational teams to realize sustainability objectives. This finding advances current frameworks by providing detailed empirical insight into the micro-dynamics of boundary spanning (Gendron & Barrett, 2004; Goretzki et al., 2022). We show that while interdisciplinary collaboration creates new opportunities for influence and learning, it also generates tensions around jurisdiction, expertise, and organizational culture. These findings resonate with and extend prior research on organizational hybridity (Contrafatto & Burns, 2013; Gond et al., 2012), suggesting that the boundaries of “what counts” as accounting work are now fluid, contested, and continuously renegotiated in response to both internal and external pressures.

Moreover, our study highlights the critical role of “translators”, those who can bridge technical, financial, and sustainability domains. This role is not only pivotal for advancing organizational change but also emblematic of the new skillset demanded of management accountants in the sustainability era. Such evidence refines theoretical frameworks by foregrounding boundary

work as both a site of conflict and creativity, echoing and elaborating upon arguments in the sociology of professions (Abbott, 1988).

5.3 Addressing the sustainability skill gap: digitalization, learning, and adaptation

Our findings reinforce recent literature documenting the “sustainability skill gap” (Kunz et al., 2024; Broccardo et al., 2025; Alsughayer, 2025), but they also add depth and specificity by tracing how this gap is experienced and addressed in practice. The rapid proliferation of digital tools (e.g., ERP systems for sustainability data), new regulatory requirements (e.g., CSRD, EU Taxonomy), and environmental reporting frameworks necessitates not only technical upskilling but also new ways of thinking about value, materiality, and performance (Molinari et al., 2025). While structured training programs are valuable, our evidence reveals that much skill acquisition is informal, peer-driven, and iterative, taking the form of “learning by doing,” knowledge sharing, and reflexive adaptation (Bowen, 2009; Parker & Northcott, 2016). This underscores the limitations of top-down approaches to professional development and aligns with theories of organizational learning that emphasize bottom-up, social, and emergent processes (Gond & Brès, 2019).

Critically, our findings also challenge technological determinism by showing that digitalization does not automatically empower accountants. Instead, new systems and metrics often require ongoing negotiation over definitions, data quality, and the meaning of “materiality”, further reinforcing the importance of contextual, interpretive approaches to sustainability accounting (Vaivio, 2008; Demaret & Molinari, 2025).

5.4 Consultants as catalysts and contested agents of change

A key theoretical advance of this study lies in its nuanced portrayal of consultants and external change agents. Building on Gond et al. (2024), we show that consultants can be both enablers and sources of resistance in sustainability integration. Their involvement can catalyze rapid organizational change, provide new frameworks, and raise the profile of sustainability accounting, but may also provoke skepticism, cultural misalignment, or superficial compliance (Gond & Brès, 2019). Our evidence advances existing literature by demonstrating that consultant influence is most effective when it is relational and context-sensitive, developed in partnership with in-house experts rather than imposed through standardized templates. This finding refines established theories of professionalization and boundary work, emphasizing that external actors are part of, not separate from, the ongoing negotiation of professional identity and practice (Gendron & Barrett, 2004). Moreover, the empirical material highlights

the risks of over-reliance on consultants, particularly in SMEs and organizations with limited internal capacity. This suggests the need for more critical engagement with external agents, supporting calls for research on the unintended consequences and long-term sustainability of consultant-driven change (Antonini & Gomez-Conde, 2024).

5.5 Navigating tensions: financial and sustainability trade-offs

Perhaps the most challenging insight from our study concerns the persistent tensions and trade-offs between financial and sustainability imperatives. While prior research has often advocated for the integration or “dovetailing” of these objectives (Traxler et al., 2025; Beusch et al., 2022), our findings show that in practice, this integration is an ongoing, sometimes fraught process. Management accountants are frequently placed in the position of mediators, negotiating between financial logics and environmental commitments. This reality lends empirical support to arguments by Narayanan and Boyce (2019) and Unerman, Bebbington and O’Dwyer (2018), who caution against assuming easy alignment between economic and sustainability goals. Instead, our evidence suggests that these negotiations are sites of creativity but also potential inertia, as practitioners must justify trade-offs and innovate new performance metrics, such as shadow carbon pricing or hybrid scorecards. By grounding these tensions in detailed, context-rich accounts, our study challenges over-simplistic models of integration and highlights the need for more nuanced theories that account for organizational politics, resource constraints, and the subjective interpretation of both financial and sustainability values (Broadbent & Laughlin, 2005).

5.6 Contingent role of context

A final, but crucial, contribution of this study is its demonstration that professional identity and skillset transformation are deeply contingent upon national, sectoral, and organizational contexts. While the shift toward sustainability accounting is widespread, our comparative, cross-country design reveals that how and how quickly it unfolds depends on regulatory regimes, cultural expectations, and industry norms (Traxler et al., 2025; Martínez-Falcó et al., 2025). For instance, Swedish participants described a culture of transparency and regulatory alignment, while German and Dutch participants highlighted tensions between innovation and compliance or between market pragmatism and public policy ambiguity. These findings refine theories of institutional translation and isomorphism (Gond et al., 2012), suggesting that sustainability integration is always locally inflected, even within broadly harmonized frameworks like the EU’s CSRD. This context sensitivity is a crucial corrective to one-size-

fits-all models, reinforcing the need for future research that is both comparative and attuned to micro-level dynamics.

6. Conclusion

This study has critically interrogated the redefinition of management accountants' professional identities and skillsets in the era of sustainability integration, offering a significant original contribution to the scholarship at the intersection of accounting, professions, and organizational change. By systematically integrating Abbott's system of professions, boundary work theory, and institutional theory, our analysis transcends existing accounts that have often treated professional adaptation as either a seamless transition or a purely technical response to new regulatory pressures. Instead, we present a richly theorized and empirically grounded narrative of how management accountants actively negotiate, contest, and hybridize their roles within dynamic, multi-level fields shaped by sustainability imperatives.

Theoretically, our study advances the field by synthesizing three conceptual traditions rarely deployed in concert within accounting research. Abbott's lens exposes the jurisdictional contestation and dynamic professional boundaries that emerge as sustainability expertise becomes entangled with accounting work. Boundary work theory unpacks the micro-level negotiations and creative ambiguities of hybrid professional roles, while institutional theory situates these developments within the broader ecology of regulatory, normative, and cognitive pressures. By mobilizing the intersecting logics of profession, boundary, and institution, we illuminate how management accountants do not simply respond to sustainability integration but are also agents in constructing new forms of legitimacy, skill, and organizational practice. This theoretical innovation provides the field with a powerful architecture for moving beyond static models of role adaptation, capturing instead the lived, negotiated, and contingent realities of professional change in the sustainability era.

For practice, our findings have several implications. First, they underscore the urgent need for accounting education and professional development programs to equip management accountants with hybrid competencies including sustainability literacy, digital skills, and cross-boundary collaboration if they are to thrive in a rapidly changing environment. Second, organizations and policy-makers should recognize that sustainable transformation is not simply a matter of technical upskilling, but involves deep, contested shifts in professional identity and authority. Supporting these shifts requires deliberate strategies to foster dialogue, build trust, and navigate the creative tensions between established financial expertise and emergent

sustainability logics. Third, consultants and external change agents, while valuable for diffusing new practices, must be engaged thoughtfully, with attention to the complexities and ambiguities their interventions may generate.

For scholarship, our framework lays the groundwork for new lines of critical inquiry. Future research should explore the durability of hybrid professional roles, the conditions under which jurisdictional settlements emerge or unravel, and the ways in which management accountants mobilize institutional logics to claim legitimacy. Longitudinal, comparative, and multi-level studies will be especially valuable in capturing the variegated patterns of adaptation and resistance across contexts, sectors, and national environments. Moreover, there is a need to theorize how digitalization, regulatory change, and stakeholder activism interact to shape both the boundaries and substance of accounting work in the coming decades.

Ultimately, our study is positioned at the edge of management accounting scholarship by reframing professional adaptation as a site of ongoing contestation, negotiation, and institutional transformation. Rather than viewing management accountants as passive recipients of change, we revealed them as active architects of their own evolving jurisdiction, constantly mediating between the imperatives of financial stewardship and the demands of sustainability. By foregrounding the complexity and critical potential of this transformation, our study challenged the field to rethink what it means to be a management accountant and invites scholars, practitioners, and policy-makers to engage with the profound organizational, social, and ethical stakes of accounting's future in a sustainable world.

References

- Abbott, A. (1988). *The system of professions: An essay on the division of expert labor*. The University of Chicago Press.
- Ahrens, T., & Chapman, C. S. (2006). Doing qualitative field research in management accounting: Positioning data to contribute to theory. *Accounting, Organizations and Society*, 31(8), 819–841. <https://doi.org/10.1016/j.aos.2006.03.007>
- Alsughayer, S. (2025). Role of ERP systems in management accounting in SMEs in Saudi Arabia. *Journal of Accounting & Organizational Change*, 21(2), 382–403. <https://doi.org/10.1108/JAOC-11-2022-0176>
- Alvesson, M., & Sköldbberg, K. (2017). *Reflexive methodology: New vistas for qualitative research* (3rd ed.). Sage Publications.
- Arjaliès, D.-L., & Mundy, J. (2013). The use of management control systems to manage CSR strategy: A levers of control perspective. *Management Accounting Research*, 24(4), 284–300. <https://doi.org/10.1016/j.mar.2013.06.003>
- Beusch, P., Frisk, J. E., Rosén, M., & Dilla, W. (2022). Management control for sustainability: Towards integrated systems. *Management Accounting Research*, 54, 100777. <https://doi.org/10.1016/j.mar.2021.100777>
- Birt, L., Scott, S., Cavers, D., Campbell, C., & Walter, F. (2016). Member checking: A tool to enhance trustworthiness or merely a nod to validation? *Qualitative Health Research*, 26(13), 1802–1811. <https://doi.org/10.1177/1049732316654870>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Braun, V., & Clarke, V. (2021). *Thematic analysis: A practical guide*. Sage Publications.
- Broadbent, J., & Laughlin, R. (2005). Organisational and accounting change: Theoretical and empirical reflections and thoughts on a future research agenda. *Journal of Accounting & Organizational Change*, 1(1), 7–25. <https://doi.org/10.1108/EUM0000000007302>
- Broccardo, L., Giordino, D., Yaqub, M. Z., & Alshibani, S. M. (2025). Implementing sustainability: What role do knowledge management and management accounting play? Agenda for environmentally friendly businesses. *Corporate Social Responsibility and Environmental Management*, 32(1), 383–403. <https://doi.org/10.1002/csr.2936>
- Carrington, M., Zwick, D., & Neville, B. (2019). Activism and abdication on the inside: The effect of everyday practice on corporate responsibility. *Journal of Business Ethics*, 160, 973–999. <https://doi.org/10.1007/s10551-018-3814-5>
- Corbin, J., & Strauss, A. (2008). *Basics of qualitative research (3rd ed.): Techniques and procedures for developing grounded theory*. SAGE Publications, Inc. <https://doi.org/10.4135/9781452230153>
- D'Amore, G., D'Alessio, A., & Scaletti, A. (2025). Environmental accounting and sustainability accounting: Lexical or substantial difference? *Sustainable Development*, 1–19. <https://doi.org/10.1002/sd.70069>

- Demaret, J., & Molinari, M. (2025). How can management accounting and control systems facilitate compliance with sustainability reporting regulations? *Journal of Applied Accounting Research*. <https://doi.org/10.1108/JAAR-04-2024-0158>
- DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2), 147–160. <https://doi.org/10.2307/2095101>
- Egan, M., & Tweedie, D. (2018). A “green” accountant is difficult to find: Can accountants contribute to sustainability management initiatives? *Accounting, Auditing & Accountability Journal*, 31(6), 1749–1773. <https://doi.org/10.1108/AAAJ-03-2017-2891>
- Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, 50(1), 25–32. <https://doi.org/10.5465/amj.2007.24160888>
- Gendron, Y., & Barrett, M. (2004). Professionalization in action: Accountants' attempt at building a network of support for the WebTrust seal of assurance. *Contemporary Accounting Research*, 21(3), 563–602. <https://doi.org/10.1506/H1C0-EU27-UU2K-8EC8>
- Gibassier, D., El Omari, S., & Naccache, P. (2020). Institutional work in the birth of a carbon accounting profession. *Accounting, Auditing & Accountability Journal*, 33(6), 1447–1476. <https://doi.org/10.1108/AAAJ-12-2014-1912>
- Gieryn, T. F. (1983). Boundary-work and the demarcation of science from non-science: Strains and interests in professional ideologies of scientists. *American Sociological Review*, 48(6), 781–795. <https://doi.org/10.2307/2095325>
- Glaser, B., & Strauss, A. (1999). *Discovery of grounded theory: Strategies for qualitative research* (1st ed.). Routledge. <https://doi.org/10.4324/9780203793206>
- Gond, J.-P., & Brès, L. (2019). Designing the tools of the trade: How corporate social responsibility consultants and their tool-based practices created market shifts. *Organization Studies*, 41(5), 703–726. <https://doi.org/10.1177/0170840619867360>
- Gond, J.-P., Brès, L., & Mosonyi, S. (2024). Consultants as discreet corporate change agents for sustainability: Transforming organizations from the outside-in. *Business Ethics, the Environment & Responsibility*, 33, 157–169. <https://doi.org/10.1111/beer.12649>
- Goretzki, L., Löhlein, L., Schäffer, U., Schmidt, A., & Strauss, E. (2021). Exploring the role of metaphors in social-identity construction: The case of the German controller. *European Accounting Review*, 31(4), 877–903. <https://doi.org/10.1080/09638180.2021.1882318>
- Hussein, A. I., Mahmood, S. M., & Hussein, W. N. (2025). The role of green nanotechnology in promoting sustainability accounting: A survey study. In Alshurafat, H. (Ed.), *Innovative law and business in the digital era*. Springer, Singapore. https://doi.org/10.1007/978-981-96-5773-5_18
- Krasodomska, J., & Zarzycka, E. (2025). The accounting profession and the SDGs. In *The Routledge handbook of accounting for the sustainable development goals* (pp. 39-57). Routledge.

- Kunz, J., Oltmann, J., & Weinhart, F. (2025). Breaking the institutional logic or going under - Controllers and sustainability. *Accounting, Auditing & Accountability Journal*, 38(1), 115–142. <https://doi.org/10.1108/AAAJ-11-2022-6116>
- Li, H., & Cui, J. (2025). Educating future accountants: A cross-curricular, flipped classroom approach to integrating global warming knowledge into an accounting curriculum. *Humanities and Social Sciences Communications*, 12, 571. <https://doi.org/10.1057/s41599-025-04852-6>
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage Publications.
- Martínez-Falcó, J., Sánchez-García, E., Marco-Lajara, B., & Zaragoza-Sáez, P. (2025). Green intellectual capital and sustainable competitive advantage: Unravelling role of environmental management accounting and green entrepreneurship orientation. *Journal of Intellectual Capital*, 26(1), 104–129. <https://doi.org/10.1108/JIC-07-2024-0204>
- Molinari, M., Carungu, J., & Di Pietra, R. (2025). How management accountants address the challenges of energy and climate change reporting: Evidence from a longitudinal case study. *Business Strategy and the Environment*, 1–23. <https://doi.org/10.1002/bse.70048>
- Myers, M. D., & Newman, M. (2007). The qualitative interview in IS research: Examining the craft. *Information and Organization*, 17(1), 2–26. <https://doi.org/10.1016/j.infoandorg.2006.11.001>
- Ngoc, T. T. T. (2025). Unlocking environmental management accounting and environmental performance: A mediated moderation model through green technology innovation and environmental strategy. *Meditari Accountancy Research*, 33(2), 733–758. <https://doi.org/10.1108/MEDAR-07-2024-2558>
- Occhipinti, Z., Tallarico, S., & Verona, R. (2025). Diversity in accounting: Implications for environmental sustainability. In Agostini, M., Beretta, V., Demartini, M. C., Ghio, A., & Trucco, S. (Eds.), *Diversity and equity in accounting* (SIDREA Series in Accounting and Business Administration). Springer, Cham. https://doi.org/10.1007/978-3-031-78247-3_10
- Parker, L. D. (2012). Qualitative management accounting research: Assessing deliverables and relevance. *Critical Perspectives on Accounting*, 23(1), 54–70. <https://doi.org/10.1016/j.cpa.2011.06.002>
- Parker, L. D., & Northcott, D. (2016). Qualitative generalising in accounting research: Concepts and strategies. *Accounting, Auditing & Accountability Journal*, 29(6), 1100–1131. <https://doi.org/10.1108/AAAJ-04-2015-2026>
- Rana, T., Rahman, M. J., & Öhman, P. (2025). Management control, performance measurement, and climate risk management perspectives for carbon accounting. In *Carbon accounting for sustainability and environmental management* (pp. 328-355). Routledge.
- Saldaña, J. (2021). *The coding manual for qualitative researchers* (4th ed.). Sage Publications.
- Schaltegger, S., Girschik, V., Trittin-Ulbrich, H., Weissbrod, I., & Daudigeos, T. (2024). Corporate change agents for sustainability: Transforming organizations from the inside out. *Business Ethics, the Environment & Responsibility*, 33, 145–156. <https://doi.org/10.1111/beer.12645>

- Scott, W. R. (2014). *Institutions and organizations: Ideas, interests, and identities* (4th ed.). Sage.
- Singhania, M., Chadha, G., & Anisha. (2025). Sustainability accounting research over three decades: A scientometric meta-analysis. *Corporate Social Responsibility and Environmental Management*, 32(2), 1698–1734. <https://doi.org/10.1002/csr.3033>
- Timmermans, S., & Tavory, I. (2012). Theory construction in qualitative research: From grounded theory to abductive analysis. *Sociological Theory*, 30(3), 167–186. <https://doi.org/10.1177/0735275112457914>
- Traxler, A. A., Schrack, D., Greiling, D., Feldbauer, J., & Lautner, M. (2025). The interplay of sustainability reporting and management control – An exploration of ways for dovetailing to develop reporting beyond accountability. *Journal of Applied Accounting Research*, 26(6), 160–182. <https://doi.org/10.1108/JAAR-08-2022-0222>
- Troshani, I., & Rowbottom, N. (2024). Corporate sustainability reporting and information infrastructure. *Accounting, Auditing & Accountability Journal*, 37(4), 1209–1237. <https://doi.org/10.1108/AAAJ-01-2023-6244>
- Unerman, J., Bebbington, J., & O'Dwyer, B. (2018). Corporate reporting and accounting for externalities. *Accounting and Business Research*, 48(5), 497–522. <https://doi.org/10.1080/00014788.2018.1470155>
- Vaivio, J. (2008). Qualitative management accounting research: Rationale, pitfalls and potential. *Qualitative Research in Accounting & Management*, 5(1), 64–86. <https://doi.org/10.1108/11766090810856787>
- Zeng, Y., Katsumata, S., Li, X., & Zhang, Q. (2025). Supplier–buyer (in)congruence in environmental management accounting for sustainable development in the context of Japan. *Sustainable Development*, 33(1), 84–99. <https://doi.org/10.1002/sd.3085>

Appendices

Table A.1 **Methodological coding framework**

Coding level	Code/theme	Definition/description	Indicative context	Supporting literature
Open coding	Boundary spanning	Activities and narratives involving work across departmental, organizational, or professional boundaries	“Collaborating with supply chain partners to align sustainability metrics.”	Gendron & Barrett (2004); Gond & Brès (2019)
Open coding	Sustainability skill gap	Expressions of missing or newly required skills related to sustainability, data analytics, or technology	“Learning to use carbon accounting software felt like starting a new job.”	Beusch et al. (2022); Alsughayer (2025)
Open coding	Consultant influence	The impact of consultants or external change agents on internal practices, mindsets, or tool adoption	“Our sustainability reporting changed after the consultants introduced new frameworks.”	Gond, Brès & Mosonyi (2024); Jarzabkowski et al. (2015)
Open coding	ERP/digital literacy	The use or learning of digital systems, data platforms, or analytics tools in sustainability accounting	“I had to integrate Scope 3 emissions in our ERP system for the first time.”	Molinari, Carungu & Di Pietra (2025); Saldaña (2021)
Open coding	Identity negotiation	Narratives around changing professional self-concept, status, or purpose	“I’m no longer just a ‘bean counter’, now I drive sustainability strategy.”	Goretzki et al. (2022); Schaltegger et al. (2023)
Axial coding	Professional boundary redefinition	Aggregation of codes showing how professional roles are being expanded or reimaged	“I work with HR and IT now on sustainability KPIs, not just finance.”	Parker & Northcott (2016); Vaivio (2008)
Axial coding	Skillset transformation	The process of acquiring, applying, and embedding new skills and competencies	“After upskilling, I train other departments on sustainability reporting standards.”	Martínez-Falcó et al. (2025); Broadbent & Laughlin (2013)
Axial coding	Organizational learning in sustainability	Insights and processes where organizations and individuals learn together about sustainability control	“Mistakes in early sustainability reporting improved our later processes.”	Bowen (2009); Parker (2012)
Selective/thematic	From scorekeeper to change agent	Overarching theme capturing the transition from traditional accounting to proactive sustainability leadership	“My job is to ensure our actions align with the company’s climate commitments.”	Carrington et al. (2019); Braun & Clarke (2021)
Selective/thematic	Inter-organizational dialogue and incongruence	Navigating and negotiating sustainability practices across organizational boundaries, including with suppliers or clients	“There are big differences in sustainability data requirements between us and partners.”	Zeng et al. (2025); Occhipinti, Tallarico & Verona (2025)
Selective/thematic	Navigating regulatory and technological change	Adapting to evolving reporting standards, legal mandates, and emerging technologies	“Regulatory updates force us to update our digital reporting systems constantly.”	Demaret & Molinari (2025); Braun & Clarke (2006)
Selective/thematic	Lived experience of sustainability integration	How management accountants perceive, narrate, and enact the daily realities of sustainability transformation	“Every day there are new dilemmas balancing financial and environmental targets.”	Vaivio (2008); Broadbent & Laughlin (2013)

Table A.2

Interview protocol mapped to constructs, analytical codes, and anticipated contribution

Theme/question	Targeted construct	Analytical code/theme	Anticipated contribution	Source
Describe your current role and responsibilities.	Professional identity/role	Identity negotiation	Grounded understanding of the evolving scope of management accounting roles	Goretzki et al. (2022)
How has your role evolved since you began?	Role evolution/change	Professional boundary redefinition	Reveals how sustainability drives new boundaries and tasks	Schaltegger et al. (2023)
How is sustainability integrated into your daily work?	Sustainability practice integration	Sustainability skill gap; practice adoption	Informs how integration happens in leading organizations	Beusch et al. (2022)
How has sustainability focus affected your professional identity?	Identity work/professional purpose	From Scorekeeper to change agent	Shows identity shift, core for sustainability leadership models	Carrington et al. (2019)
What new skills do you needed to develop?	Competency transformation	Skillset transformation	Documents upskilling and organizational learning in context	Kunz et al. (2024)
How have digital tools changed your work?	Digitalization/tech adaptation	Erp/digital literacy	Illustrates technological drivers of skill/role change	Alsughayer (2025)
Who do you collaborate with most, and what are the challenges?	Interdisciplinary collaboration	Inter-organizational dialogue and incongruence	Pinpoints cross-boundary work and tensions	Martínez-Falcó et al. (2025)
What was the impact of consultants or change agents?	External influence	Consultant influence	Captures external shaping of internal practices	Gond, Brès & Mosonyi (2024)
How have regulations affected your practice?	Regulatory compliance/adaptation	Navigating regulatory and technological change	Links regulatory evolution to real practice change	Demaret & Molinari (2025)
Describe a tension between financial and sustainability goals.	Tension management/conflict	Boundary spanning; practice tension	Provides data on practical dilemmas and negotiation processes	Beusch et al. (2022)
How does your organization support learning?	Organizational learning/support	Organizational learning in Sustainability	Shows formal/informal supports for adaptation	Parker & Northcott (2016)
How do you see your role evolving in the next five years?	Future orientation/anticipated change	Identity negotiation; skillset transformation	Advances theoretical models of professional evolution	Kunz et al. (2024)
Country-specific factors influencing your work?	Institutional/contextual variation	Country/context specificity	Surfaces how context matters in sustainability integration	Traxler et al. (2025)
What advice would you give others?	Reflective learning/professional wisdom	Lived Experience of sustainability integration	Bridges theory to actionable insights for practitioners	Bowen (2009)

Table A.3**Interview protocol**

Theme	Sample question	Mode	Duration	Position	Source
Professional background	Can you briefly describe your current role and responsibilities in your organization?	Video Conference	2-3 minutes	All Positions (Accountant, Manager and Consultant)	Adapted from Ahrens & Chapman (2006); Beusch et al. (2022)
Career trajectory	How has your role evolved since you began your career, especially regarding sustainability-related responsibilities?	Video Conference	2-3 minutes	All Positions	Adapted from Schaltegger et al. (2023)
Sustainability integration	How is sustainability integrated into your day-to-day accounting and management control practices? Can you provide a concrete example?	Video Conference	3-5 minutes	All Positions	Adapted from Gond et al. (2012); Traxler et al. (2025)
Identity and Role Perception	How has the growing focus on sustainability affected how you view your professional identity as a management accountant (or sustainability manager/consultant)?	Video Conference	3-4 minutes	All Positions	Adapted from Goretzki et al. (2022); Carrington et al. (2019)
Skillset and Competency	What new skills or knowledge do you needed to develop to address sustainability within your role? How did you acquire them?	Video Conference	2-3 minutes	All Positions	Adapted from Kunz et al. (2024); Broccardo et al. (2025)
Digital/technological change	Have digital tools (such as ERP systems or sustainability data platforms) changed the way you work? Can you share an experience where technology played a crucial role in sustainability management or reporting?	Video Conference	2-3 minutes	All Positions	Adapted from Alsughayer (2025); Molinari, Carungu & Di Pietra (2025)
Interdisciplinary collaboration	In implementing sustainability controls or reporting, which other functions or departments do you collaborate with most? What challenges or opportunities arise in these collaborations?	Video Conference	2-3 minutes	All Positions	Adapted from Martínez-Falcó et al. (2025)
Consultant/external influence	Have external consultants or change agents been involved in your organization's sustainability journey? How did their involvement impact your work or your organization's approach to sustainability management?	Video Conference	2-3 minutes	All Positions	Adapted from Gond & Brès (2019); Gond, Brès & Mosonyi (2024)
Regulation and Compliance	How have changes in national or EU sustainability regulations (such as CSRD, EU Taxonomy) affected your accounting or management control practices?	Video Conference	2-3 minutes	All Positions	Adapted from Demaret & Molinari (2025)
Tensions and Challenges	Can you describe a situation where you experienced tension or conflict between financial objectives and sustainability goals? How was this resolved?	Video Conference	2-3 minutes	All Positions	Adapted from Beusch et al. (2022); Narayanan & Boyce (2019)

Organizational learning	How does your organization support learning and adaptation around sustainability in accounting and control practices? Are there structured processes, informal sharing, or other approaches?	Video Conference	2-3 minutes	All Positions	Adapted from Parker & Northcott (2016); Bowen (2009)
Future outlook	How do you foresee your role and the role of management accountants more broadly evolving in the next five years as sustainability becomes more embedded in business practice?	Video Conference	2-3 minutes	All Positions	Adapted from Kunz et al. (2024); Schaltegger et al. (2023)
Country/contextual specificity	Are there any country-specific policies, cultural factors, or industry practices in Sweden/Germany/the Netherlands that particularly influence your sustainability accounting work?	Video Conference	2-3 minutes	All Positions	Contextualized from international comparative studies
Advice for others	What advice would you give to other management accountants or sustainability professionals seeking to integrate sustainability more deeply into their work?	Video Conference	1-2 minutes	All Positions	Reflective, widely used in qualitative studies