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Understanding ESG Adoption in SMEs: A Cross-Country Qualitative Study Using Activity Theory

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Abstract

Small and medium-sized enterprises (SMEs) play a central role in economic development but face distinctive challenges in adopting environmental, social, and governance (ESG) practices. While existing research identifies key drivers and barriers, there remains limited understanding of how SMEs navigate competing pressures and implement ESG in practice across different institutional contexts. This study addresses this gap by examining ESG adoption in SMEs across Ireland, Germany, Poland, and Türkiye through the lens of Activity Theory (AT). Using a qualitative multiple-case design, we draw on semi-structured interviews with SME owner–managers, ESG experts, and vocational education and training (VET) stakeholders (N = 44). Findings show that ESG engagement in SMEs is shaped by leadership framing, resource constraints, and increasing external pressures from customers, regulators, and financial institutions. ESG practices are uneven across pillars, with environmental initiatives the most developed, social practices emerging, and governance largely limited to compliance. AT highlights how persistent contradictions, such as tensions between short-term survival and long-term sustainability, or between complex regulatory demands and limited organisational capacity, shape SME responses. When supported by appropriate mediating artefacts, including training, simplified frameworks, financial incentives, and networks, these contradictions can enable learning and more strategic ESG integration. Cross-country differences reflect variations in ecosystem maturity, which condition whether ESG engagement stabilises at compliance or develops toward operational and strategic integration. The study contributes a theory-driven, practice-based explanation of SME ESG adoption, including a typology of compliance-oriented, operational, and strategic engagement modes, and offers insights for policymakers, educators, and support organisations seeking to promote more effective and context-sensitive sustainable SME transformation.



Academic Editors: David John Edwards, Hatem El-Gohary and Syed Mohsin Ali Shah

Received: 7 January 2026

Revised: 1 March 2026

Accepted: 9 March 2026

Published: 13 March 2026

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Keywords: ESG; SMEs; Activity Theory; sustainability practices; governance

1. Introduction

ESG has rapidly shifted from a peripheral concern to a core condition for market access, finance, and legitimacy for European SMEs, creating an execution gap that existing support ecosystems do not always bridge. SMEs are the backbone of the European business economy. In 2024, the EU non-financial business sector was home to approximately 26.1 million SMEs, representing 99.8% of all enterprises, and employing 89.8 million people (65.1% of total employment) [1]. This paper adopts the European Union definition of small and medium-sized enterprises set out in Commission Recommendation 2003/361/EC [2],

which classifies enterprises as micro, small, or medium-sized based on employee numbers and either annual turnover or balance sheet total. While this classification provides analytical clarity, it also masks considerable heterogeneity among SMEs in terms of organisational capacity, regulatory exposure, and access to resources, differences that are particularly salient in the context of ESG adoption.

Despite their economic importance, SMEs face distinctive challenges in adopting environmental, social, and governance (ESG) practices compared with larger firms. These include limited awareness, resource constraints, informal management structures, and the centrality of owner-managers in decision making [3–5]. Sectoral differences are evident, with consumer-facing industries such as food and textiles often showing higher levels of sustainability and ESG engagement, driven by regulatory scrutiny and consumer expectations [6]. Generational dynamics also matter, with younger owner-managers generally more inclined to prioritise sustainability and adopt digital tools than their older counterparts [7,8]. Urgency is increasing due to mounting supply-chain transmission of ESG requirements, tighter disclosure expectations, and lender due diligence practices that increasingly condition access to finance on sustainability performance.

Yet three persistent gaps remain in the literature. First, the governance pillar in SMEs is comparatively under-specified and weakly institutionalised. Second, much existing evidence documents what SMEs do in relation to ESG but offer limited insight into the mechanisms through which learning, adaptation, and change occur. Third, cross-country comparative insights into how differing levels of institutional maturity shape SME ESG practices remain limited. Together, these gaps indicate the need for an explanatory lens that connects everyday SME practice to institutional pressures and supports.

Existing studies show a consistent pattern: environmental practices are most developed, selected social practices are evident, and governance is typically limited to compliance [3,6,9–13]. ESG adoption in SMEs therefore remains fragmented and reactive, with sustainability rarely embedded in long-term business models [6,10,11]. This pattern underscores the need for theoretical approaches capable of explaining how SMEs move beyond compliance-driven action toward strategic integration.

At the policy level, the regulatory and institutional environment surrounding SME sustainability is undergoing rapid change. Under the CSRD, certain listed SMEs will be required to disclose ESG information in line with proportionate European Sustainability Reporting Standards (ESRS). The Voluntary SME Standard (VSME), introduced in 2025, provides a simplified framework for non-listed SMEs to report ESG performance [12]. Beyond direct regulation, SMEs are increasingly exposed to indirect pressures through supply chains and financing conditions, as larger customers and financial institutions embed ESG requirements into tendering, procurement, and lending decisions.

Although ESG is increasingly framed not only as a regulatory obligation but as a strategic opportunity, many SMEs struggle to translate these expectations into practice. Existing research has extensively catalogued drivers and barriers but often treats them as relatively static variables, offering limited insight into how SMEs negotiate competing demands or why adoption trajectories differ across contexts.

This study addresses these gaps by examining ESG adoption in SMEs across 4 countries (Ireland, Germany, Poland and Türkiye) with differing levels of institutional maturity and ecosystem support. Ireland and Germany reflect relatively high-regulation contexts with more established innovation and support ecosystems, whereas Poland and Türkiye represent contexts where sustainability infrastructures and SME support may be at earlier stages of development. A comparative analysis of these four countries can illuminate how national policies and institutional capacities shape not only the level of ESG engagement but

also the processes through which SMEs interpret, prioritise, and implement ESG practices. Accordingly, the study addresses the following research questions:

1. How do SMEs in Ireland, Germany, Poland, and Türkiye currently engage with ESG practices across environmental, social, and governance dimensions?
2. What internal and external drivers, barriers, and institutional supports shape ESG adoption in these contexts?
3. How can Activity Theory help explain the contradictions, learning processes, and variations in ESG engagement among SMEs?

The objective of this study is to develop an activity-theoretical explanation of SME ESG adoption that identifies key contradictions, mediating tools, and learning mechanisms within and across institutional contexts characterised by differing levels of regulatory maturity, sustainability infrastructure, and ecosystem support, and to derive comparative insights for capability-building and ecosystem design.

The remainder of the article is structured as follows: Section 2 develops the literature review and theoretical framework; Section 3 describes the methodology; Section 4 presents findings; Section 5 discusses theoretical and practical implications; and Section 6 concludes.

2. Literature Review and Theoretical Framework

2.1. Key Drivers for ESG Adoption in SMEs

The literature on ESG adoption in SMEs has expanded rapidly over the past decade, largely in response to growing regulatory pressure and sustainability policy agendas. The literature identifies both internal organisational factors and external institutional pressures as important influences on ESG adoption in SMEs.

Internally, leadership commitment and managerial values consistently emerge as significant determinants. SMEs are strongly influenced by the values of their owner–managers, meaning that the leader’s personal vision often substitutes for formal sustainability governance [7,13]. Leaders who embrace sustainability integrate environmental and social considerations into daily operations, fostering a culture that supports long-term value creation [13,14]. Conversely, when sustainability is perceived primarily as a cost, firms tend to engage in minimal, compliance-driven activities [7]. While there is broad agreement on the importance of leadership values, studies differ on how these values are translated into sustained practices. Some emphasise incremental operational actions, while others highlight the need for greater formalisation and governance, pointing to a gap between intent and institutionalisation.

External drivers are also influential. Regulatory pressures and market expectations push SMEs towards sustainability adoption [15]. However, the literature highlights the duality of regulation: while it can provide structure and legitimacy, complex requirements and limited organisational capacity often lead to uneven and compliance-oriented implementation in SMEs [15,16]. Customer demand and supply chain pressures have become particularly prominent. Large corporations increasingly enforce ESG requirements across their value chains, effectively transmitting sustainability standards to SME suppliers [4,8]. Evidence also indicates variation across sectors (e.g., consumer facing sectors compared with B2B services), firm size (small versus medium enterprises), and geography (urban versus peripheral regions), which together shape SMEs’ exposure to and engagement with ESG-related expectations. These contextual differences motivate a cross-country comparative approach.

Competitive advantage and reputational benefits also motivate SMEs to integrate ESG principles. Firms that adopt visible sustainability measures report stronger brand differentiation and improved stakeholder relationships, and evidence suggests sustainability can support SME competitiveness [17,18]. Access to finance is another critical driver: financial

institutions increasingly link lending terms to ESG performance, framing sustainability disclosure as a prerequisite for creditworthiness [19]. However, evidence differs on whether these benefits arise early enough to outweigh short-term costs, with many SMEs realising gains only after reaching basic capability thresholds.

Recent studies also highlight digital transformation as an emerging driver of ESG engagement. Digital tools such as cloud-based reporting systems and data analytics can improve transparency and efficiency, allowing SMEs to monitor environmental performance more cost-effectively [20,21]. This is particularly relevant in countries such as Germany and Ireland, where relatively higher levels of digital readiness can support more advanced ESG integration. Nonetheless, digital enablement remains uneven across sectors and firm sizes; micro enterprises, particularly in traditional sectors, often lack the absorptive capacity to use these tools without targeted support, highlighting the need for tailored interventions.

2.2. Barriers to ESG Implementation

Despite growing incentives, SMEs face persistent barriers that constrain ESG implementation. The most common of these are resource constraints, including limited financial capacity, insufficient human resources, and knowledge gaps. Limited capital restricts investment in sustainable technologies or compliance reporting systems, while small staff sizes mean sustainability duties are often added to non-specialist roles [3,22,23].

A second recurrent challenge is the knowledge and awareness gap. Many SMEs lack familiarity with ESG frameworks, performance indicators, and reporting methods, which complicates materiality assessment and strategic integration [10,24,25]. Data collection and reporting remain challenging due to inconsistent metrics, limited benchmarking opportunities, and perceived administrative burden [26,27]. The governance implications are significant: without role clarity, internal controls, and board-level (or equivalent) oversight, data responsibilities remain ad hoc, elevating compliance risk and stalling learning.

Behavioural and cultural barriers also constrain ESG implementation. Informal management practices and organisational structures often rely on short-term planning that prioritises immediate financial returns over long-term sustainability, resulting in fragmented and reactive decision making [13,16]. Such informality can also reinforce resistance to change, as managers and employees may be reluctant to adopt unfamiliar practices, particularly when benefits are delayed or intangible [6,11].

External barriers add further difficulty. The lack and complexity of social sustainability standards, along with insufficient stakeholder support, can hinder SMEs from implementing ESG practices [16,26]. SMEs may also operate in supply chains where expectations are unclear or inconsistently enforced, limiting incentives to adopt more advanced sustainability practices. Weak institutional guidance and limited access to sector-specific benchmarks further complicate SMEs' understanding of what constitutes adequate ESG performance.

Research on SME workforce and capability development reinforces these findings. Prior studies demonstrate that SMEs frequently experience difficulties in developing the absorptive capacity required to systematically acquire, assimilate, and apply external knowledge, reflecting limited resources, informal knowledge-management practices, and weak internal structures [28,29]. In the context of ESG, such constraints limit SMEs' ability to interpret complex sustainability frameworks, translate external requirements into internal practices, and sustain learning beyond initial compliance. Studies of graduate placement and knowledge-transfer programmes show that external expertise can partially compensate for these limitations but also highlight tensions arising from weak role clarity and constrained organisational capacity [30,31], often resulting in fragmented implementation of complex organisational practices.

2.3. Government and Institutional Support Needs

The literature consistently emphasises that successful ESG integration in SMEs depends on targeted ecosystem-level support. Governments, business associations, and financial institutions can play a pivotal role in overcoming systemic barriers and facilitating transition [16,19]. Such measures can help SMEs move from reactive, fragmented, compliance and risk-driven practices to more proactive, strategic ESG integration.

Key interventions include capacity-building programmes to enhance managerial awareness and technical understanding of ESG frameworks [32,33]. Simplified and standardised frameworks and reporting tools developed by regulatory bodies, such as the VSME, can reduce administrative burden while maintaining transparency [27].

Financial incentives in the form of grants, subsidies, green loans, and tax credits to offset initial investment costs, alongside expanded access to sustainable finance, are also widely recommended [4,16,19].

Finally, networks, partnerships, and knowledge-sharing platforms can enhance SME access to expertise and peer learning [3]. Ecosystem approaches that link universities, industry associations, and public agencies, such as Triple Helix models [34], are commonly proposed and applied in contexts characterised by strong institutional coordination.

Taken together, the literature on drivers, barriers, and institutional supports suggests that overcoming ESG adoption challenges in SMEs requires more than the provision of resources alone. Financial incentives, training programmes, reporting frameworks, and advisory networks undoubtedly play enabling roles; however, their effectiveness depends on how they are interpreted, mobilised, and embedded within SMEs' everyday organisational practice. This points to the importance of mediating tools, rules, and social arrangements that stabilise and translate external supports into workable routines, precisely the kinds of mechanisms foregrounded by practice-based perspectives such as Activity Theory.

Much of the existing literature continues to treat drivers, barriers, and supports as relatively discrete or static variables, which obscures how SMEs actively interpret, negotiate, and sometimes resist ESG demands in the flow of day-to-day activity. Prior studies suggest variation in the relative development of ESG pillars in SMEs, but the underlying mechanisms remain unclear. Variations across countries, sectors, and firm sizes further indicate that ESG engagement is not simply a function of external pressure, internal capability, or the availability of institutional supports, but of how these influences are mediated through organisational tools, routines, stakeholder relationships, and informal structures.

2.4. Activity Theory (AT) as a Lens for Investigating ESG in SMEs

The literature on SME sustainability draws heavily on institutional, stakeholder, and resource-based perspectives, each offering valuable insight but sharing limitations when applied to the dynamic, practice-based realities of small firms. Institutional theory highlights regulatory and normative pressures yet often underplays organisational agency, learning, and informal decision-making. Stakeholder theory maps expectations but tends to treat stakeholder relationships as static rather than negotiated. Resource-based perspectives foreground internal capabilities but give limited attention to how tools, rules, and community interactions mediate the development and enactment of those capabilities in practice.

Together, these perspectives explain why ESG matters and what constraints SMEs face, but they offer less insight into how ESG practices are interpreted, prioritised, and stabilised in everyday organisational activity, particularly under resource constraints. They also struggle to account for divergent adoption trajectories across contexts despite similar pressures. These limitations create the need for a framework capable of examining mediation, contradictions, and learning within real organisational practice.

Activity Theory (AT) provides such a framework by integrating external pressures, internal capabilities, and social mediation into a single systemic model (Figure 1). Rather than replacing existing lenses, AT complements them by foregrounding practice: it examines how sustainability demands are taken up, modified, resisted, or transformed through interactions among subjects, tools, rules, community, and the division of labour as SMEs pursue ESG-related objectives. Originating in the cultural-historical work of Vygotsky and later developed by Leont'ev and Engeström, AT conceptualises human activity as situated within systems of interrelated components shaped by social, historical, and material conditions [35–37]. This perspective is particularly suitable for the study of ESG in SMEs, where sustainability practices emerge not only from strategic intent but also from informal routines, evolving tools, and multiple stakeholder interactions.

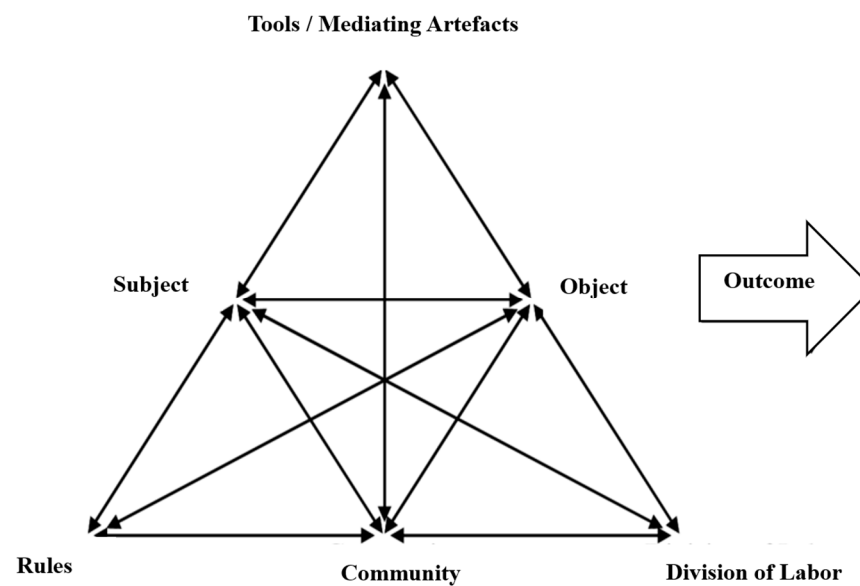


Figure 1. Extended Activity Theory model adapted from [37].

Within this study, the activity system is conceptualised as each SME and its associated stakeholders jointly responding to environmental, social, and governance imperatives. Activity is oriented towards an object, such as improving ESG performance, ensuring regulatory compliance, or achieving competitive advantage and mediated through interactions among:

- Subject: Owners, managers, and employees engaged in ESG activity;
- Object: The ESG-related goals being pursued;
- Tools/Instruments: Training, reporting software, certification schemes, digital systems;
- Rules: Regulatory requirements, supply chain standards, internal policies;
- Community: Customers, regulators, consultants, financial institutions;
- Division of labour: The distribution of ESG responsibilities inside and beyond the firm.

Together, these components form an interconnected system through which ESG practices are enacted in everyday organisational activity [37].

A defining contribution of AT is its emphasis on contradictions, structural tensions within or between components of an activity system, which act not as signs of failure but as drivers of learning and change [37,38]. In SMEs responding to ESG demands, contradictions may arise between short-term financial pressures and longer-term sustainability objectives (object); between complex reporting rules and limited tools or expertise (rules/tools); between stakeholder expectations and constrained organisational capacity (community/subject); or between established informal routines and emerging ESG requirements (division of labour/rules). When supported by appropriate mediating artefacts, such

as simplified frameworks (e.g., VSME), training programmes, digital reporting solutions, advisory supports, or financial incentives, these contradictions can trigger organisational learning and incremental transformation.

AT is particularly appropriate for this study for several reasons. First, ESG adoption in SMEs is shaped by competing priorities, limited resources, informal practices, and evolving institutional pressures, dynamics that AT is designed to capture through its systemic, practice-based lens. Second, AT adopts a developmental perspective focused on learning and change over time, aligning with evidence that SME engagement with ESG often evolves gradually from minimal compliance toward deeper integration. Third, AT foregrounds the social and cultural mediation of practice, making it highly relevant in contexts where owner–manager values, generational influences, and local norms often outweigh formal governance structures. Finally, AT provides a flexible analytical framework capable of accommodating cross-country variation, supporting meaningful comparison across SMEs in Ireland, Germany, Poland, and Türkiye.

Applying Activity Theory enables systematic analysis of contradictions, mediating tools, and learning processes that shape ESG engagement across institutional contexts, providing a practice-based explanation of why adoption varies and how it evolves from compliance toward strategic integration.

3. Methodology

This study adopts a qualitative, multiple-case design to explore how SMEs engage with ESG practices across Ireland, Germany, Poland, and Türkiye. A qualitative approach is appropriate given that ESG adoption in SMEs is a complex, socially mediated, and context-dependent process shaped by institutional pressures, organisational capabilities, and cultural norms. Guided by Activity Theory (AT), the methodology focuses on how subjects, tools, rules, community dynamics, and divisions of labour interact in practice. It also examines how contradictions among these elements shape ESG activity.

The cross-country design enables comparison across institutional environments with differing levels of ESG regulatory maturity and ecosystem support. Ireland and Germany represent more established sustainability infrastructures, while Türkiye and Poland reflect more transitional contexts. Including all four countries allowed examination of variation within a shared analytical framework and aligns with the study's comparative research questions.

Semi-structured interviews served as the primary method of data collection, enabling consistency while allowing flexibility to probe emergent themes. Interviews were conducted online via MS Teams between August and November 2024 and typically lasted 30–40 min. Interviews in Germany, Poland, and Türkiye were conducted primarily in local languages and subsequently translated into English, with priority given to preserving conceptual meaning rather than word-for-word correspondence. Where participants consented, interviews were audio-recorded and transcribed; when recording was not permitted, detailed notes were taken and expanded immediately after the interview, a standard and accepted practice in qualitative research [39,40]. Both transcripts and expanded notes were treated as full qualitative data.

The interview guide was structured around themes widely used in SME ESG research: responsibility and awareness; goals & motivations; current priorities & practices; stakeholders; drivers; challenges & constraints, and support needs. These themes were explicitly mapped onto Activity Theory components (Table 1) to enable exploration not only of reported practices but also of the organisational, cultural, and institutional structures shaping ESG activity. This structure ensured consistency across interviews while still allowing flexibility to investigate context-specific issues as they arose.

Table 1. Research themes and corresponding Activity Theory components.

Research Themes	Activity Theory Component
Leadership (incl. awareness & responsibility) Goals & Motivation ESG Priorities Stakeholders & Drivers Challenges/Constraints Support required	Subject/Division of Labour Object/Outcome Rules, Tools & Mediating Artefacts Community/Rules/Division of Labour Contradictions across components Mediating artefacts/Expansive Learning

To increase analytic transparency and make the analytic process more explicit, Table 2 presents three brief examples illustrating how raw data excerpts were linked to Activity Theory components, how specific types of contradictions were identified, and how interpretive meaning was derived.

Table 2. Examples linking quotations to AT components and contradictions.

Quotation	AT Component	Contradiction	Interpretation
“We don’t have the staff to do this properly, but customers keep asking for ESG information.” (SME, Ireland)	Rules/Community/ Division of Labour	External expectations—internal capacity	Supply-chain/customer pressure exceeds resources, leading to minimal compliance.
“Energy savings are the only part we can actually act on—we can see the cost benefit.” (SME, Poland)	Tools/Object	Short-term survival—long-term sustainability	Tangible tools and visible payback make environmental actions feasible under constraints.
“People want to change, but they’re unsure what to prioritise.” (VET, Germany)	Subject/Tools	Tools—object misalignment	Motivation exists, but lack of practical tools blunts direction and progress.

A purposive, criterion-based sampling strategy [41,42] was employed to ensure participants possessed direct experience with ESG adoption in SMEs. Inclusion criteria required either:

- (i) Active involvement in ESG-related decisions or practices within an EU-defined SME (fewer than 250 employees);
- (ii) Professional responsibility for advising or training SMEs on ESG implementation or reporting.

The sample included micro, small, and medium enterprises; however, most participants represented small enterprises (fewer than 50 employees), with only a small subset from micro and medium enterprises. This distribution reflects typical national SME populations and is acknowledged when interpreting findings, addressing potential size-related bias, e.g., more resource-constrained firms.

To capture these complementary perspectives, participants were drawn from three groups:

- (i) SME owner–managers (firm-level ESG practices);
- (ii) ESG experts (cross-firm, cross-sector insights);
- (iii) VET representatives (capacity building and training perspectives).

Including ESG experts and VET representatives provided broader, cross-firm and cross-sector perspectives. Quotations from these participants were interpreted as external perspectives, not direct organisational accounts, and are clearly differentiated in Section 4. Details of the unified coding approach and respondent-type tagging (SME, expert, VET) are described in the Data Analysis subsection below.

Recruitment occurred through enterprise agencies, professional associations, industry bodies, and education networks in each country. SMEs (Table 3) were primarily from manu-

facturing, services, and food-related sectors. Because manufacturing and food sectors were proportionally more represented, findings may reflect dynamics typical of sectors exposed to stronger regulatory and supply-chain pressures, acknowledging potential sector bias.

Table 3. Participant distribution by country and stakeholder group.

Countries	SMEs	ESG-Experts	VET Educators	Total
Ireland	5	2	5	12
Germany	4	2	4	10
Türkiye	4	4	4	12
Poland	5	3	2	10
Total	18	11	15	44

Geographically, SME participants were largely located in major cities and medium-sized towns rather than rural areas. This urban-leaning distribution may influence reported access to institutional support and sustainability networks. ESG experts and VET representatives drew on experience across both urban and non-urban contexts.

Data were analysed using reflexive thematic analysis [43,44], which emphasises an iterative, interpretive, and researcher-generated approach to theme development rather than a linear or procedural coding structure. The analysis was informed by the study’s research questions and Activity Theory (AT) components as sensitising concepts, while remaining open to unanticipated meanings and patterns emerging from participants’ accounts.

Contradictions were then explored through this AT-informed lens rather than through a rigid coding template. While a unified coding framework was applied across participant types to support analytical coherence, segments were reviewed for indications of tension or misalignment within or between AT components (e.g., object–rules, tools–community, division of labour–rules). Identifying contradictions was primarily an interpretive process consistent with reflexive thematic analysis, with the “Challenges” theme providing the highest concentration of such tensions. These patterns informed the contradiction categories developed in the Findings and elaborated in the Discussion.

Consistent with AT, the analytic process examined how subjects, tools, rules, community, and divisions of labour interacted within each activity system, with particular attention to tensions arising within and between these components. These contradictions highlighted deeper structural pressures, such as capability constraints and competing institutional demands, that shaped SME engagement with ESG practices.

While coding was undertaken by the lead researcher, reflexive team discussions were used to explore interpretive assumptions and to ensure that cross-national differences and similarities were interpreted consistently, rather than to seek coding agreement.

Cross-country coherence was supported through the consistent interview guide, shared sampling criteria, and unified coding structure. A comparative evidence table presented in Section 4 summarises the relative prominence of key themes across Ireland, Germany, Poland, and Türkiye, using qualitative indicators to enhance transparency of comparison.

Ethical considerations were integrated throughout. Participants received study information and provided informed consent, with the option to withdraw at any stage. All data were anonymised; pseudonyms were used in reporting; and materials were stored securely in accordance with GDPR and relevant national regulations.

4. Results

The findings address the three research questions and are organised around five themes that emerged across Ireland, Germany, Poland, and Türkiye: (1) leadership and goals, (2) ESG priorities, (3) stakeholder and drivers, (4) challenges, and (5) support needs. Quotations from

SMEs represent internal organisational practice, whereas quotations from ESG experts and VET stakeholders provide external, cross-firm perspectives on SME ESG engagement.

Triangulation across the three respondent groups was used to strengthen interpretation. Convergent perspectives were treated as confirmations of shared patterns across SMEs and ecosystem actors, whereas divergent perspectives were examined as role or institution-specific differences reflecting expectations, responsibilities, or organisational position.

The thematic structure broadly corresponds to Activity Theory (AT) components. Leadership and goals relate to subject and object dynamics; ESG priorities reflect the role of operational tools and mediating artefacts in structuring practice; stakeholders and drivers align with community and rule structures; challenges capture contradictions within activity systems; and support needs relate to mediating artefacts and expansive learning processes. While the Results present the empirical patterns, a fuller Activity Theory interpretation is developed in the Discussion.

Across the four countries, SMEs reported common structural challenges, particularly resource constraints and gaps in knowledge and skills, alongside differentiated national patterns. Owner–manager influence was strongest in Türkiye and Poland, whereas Germany and Ireland more frequently reflected shared leadership arrangements. Competitiveness was an important motivation for ESG engagement in all contexts, with especially strong emphasis in Ireland.

Energy efficiency was a universal priority across countries. Waste management and health and safety were more prominent in Türkiye, Poland, and Ireland, while employee wellbeing was especially salient in Germany. Customers and government regulation were consistently important stakeholder drivers. Investors and financial institutions were mentioned primarily in Germany and, to a lesser extent, Ireland.

Support requirements followed a similar pattern of cross-national differentiation. Polish participants emphasised awareness and capacity building, while Turkish and Irish SMEs more frequently highlighted financial assistance. German and Irish participants often referred to a combination of financial and capability-building supports. Overall, environmental practices were most developed, selected social practices were evident, and governance remained largely compliance-oriented [10,11].

To support interpretation of cross-country variation, Table 4 summarises the relative concentration of coded evidence within each major theme and selected sub-themes across Ireland, Germany, Poland, and Türkiye. The “high/medium/low” indicators were assigned based on comparative coding density rather than numerical counts and are intended to visualise broad differences in thematic emphasis.

Table 4. Cross-country evidence levels for major themes.

Theme/Indicator	Ireland	Germany	Poland	Türkiye
Leadership & Goals				
Owner–manager influence	Medium	High	High	High
Competitiveness as motivation	High	High	Medium/High	Medium/High
ESG Priorities				
Energy use/efficiency	High	High	High	Medium
Waste management	Medium/High	Medium	Medium	Medium
Health & safety	High	Medium	Low/Medium	High
Employee wellbeing	Medium	High	Low	Low
Stakeholders & Drivers				
Employees as drivers	Low	Low	Low	Medium
Customers	High	High	Medium/High	High
Investors/finance	Medium	High	Low	Low
Government regulation	High	High	High	High

Table 4. Cont.

Theme/Indicator	Ireland	Germany	Poland	Türkiye
Challenges				
Resource constraints	High	High	High	High
Competing priorities	High	Medium	Low	Medium
Knowledge/skills gaps	High	Medium	High	High
Support Needs				
Awareness & capacity building	Medium/High	Medium	High	Medium
Financial support	High	Medium	Medium/High	High

4.1. Leadership and ESG Goals

SME ESG practice was strongly shaped by leadership influence and a mix of competitiveness goals and ethical motivations.

4.1.1. Leadership Influence

Owner–managers emerged as the primary influence on SME ESG engagement across all four countries, consistent with literature that positions leadership as central to shaping organisational culture, e.g., [13]. Their influence appeared particularly strong in Poland and Türkiye, where more informal organisational structures and less institutionalised ESG frameworks may increase reliance on individual leaders:

If there is a clear vision and a supportive culture, something will happen, and opportunities are taken to build internal capabilities. If not, they will just try to gather data for reporting but nothing more.

(VET3, Germany)

Generational perspectives also mattered. Younger leaders, often influenced by family and societal concerns, were more attuned to sustainability:

I inherited this business from my parents; they have no understanding or interest in ESG. But I have three teenagers, and I'm reminded regularly about my impact on the environment and what we are leaving to the next generation.

(VET4, Ireland)

From an AT perspective, leadership influences can be understood in terms of how leaders define the ESG “object” (e.g., compliance, competitiveness, or moral responsibility).

4.1.2. Goals and Motivations

ESG goals across SMEs combined business-oriented and broader societal motivations. Competitiveness was a prominent driver across all four countries, echoing studies linking ESG to market positioning and reputation, e.g., [18]:

Competition is increasingly focused on sustainability and brand prestige and is becoming more important for competitive advantage.

(SME1, Türkiye)

Market access was another key driver, with ESG viewed as necessary for sales and client retention:

Our clients have a high level of environmental awareness. This forces us to act more responsibly and to adopt sustainable practices.

(SME5, Poland)

While competitive advantage and cost/risk reduction were central, many participants also expressed moral commitment to sustainability grounded in personal values and intergenerational responsibility:

They know that this is a world we're passing on to our children. They want to work sustainably, and they want to do the right thing.

(VET2, Ireland)

These findings align with research showing that SMEs often pursue environmental initiatives for cost and risk reduction, while social and governance motives are more variably developed [3,19]. In AT terms, ESG goals constitute the object of SME activity. Contradictions arise when short-term survival pressures conflict with longer-term sustainability ambitions, shaping how SMEs interpret and enact ESG.

4.2. ESG Priorities in SMEs

SMEs' ESG priorities were clustered around practical, high-impact areas. Environmental actions were most developed, social practices were emerging steadily, and governance was often limited to compliance.

4.2.1. Environmental Priorities

Environmental practices were the most frequently cited ESG priority, consistent with evidence that SMEs engage most readily where cost savings are visible, e.g., [3]. Energy efficiency was prominent:

We try to ensure that the energy we use both at the company headquarters and at the construction sites comes from renewable sources.

(SME4, Türkiye)

The most relevant ESG factors for my company would likely include reducing energy consumption in the projects we manage.

(SME1, Poland)

Waste management was also frequently highlighted:

Waste management is something that all SMEs can impact in a massive way in terms of recycling and reusing.

(VET3, Ireland)

Waste management is the leading issue, because it also has financial returns. . . in sectors like textiles and automotive, where product waste is generated.

(Expert2, Türkiye)

In AT terms, investments in energy efficiency and waste-management systems function as mediating tools that make ESG more actionable within SME activity systems.

4.2.2. Social Priorities

Consistent with the literature [6], health and safety emerged as a key social priority, particularly in higher-risk sectors and in Türkiye and Ireland:

Health and safety would probably be first on the page; it's our duty as employers to protect the employee. All our staff have 'Safe Pass' and 'manual handling' certification.

(SME1, Ireland)

Workplace safety is prioritised with training, especially in production.

(SME4, Germany)

Employee well-being and development were also emphasised, especially in knowledge-intensive sectors:

As a Software-as-a-Service (SaaS) provider, social factors are particularly important, especially for attracting and retaining employees.

(SME1, Germany)

We care about our employees, and the company has a desire to improve working conditions and provide opportunities for training and similar activities.

(SME2, Poland)

4.2.3. Governance Priorities

Governance was generally framed as regulatory compliance rather than strategic oversight, confirming evidence that governance is often the weakest ESG pillar in SMEs:

Compliance is a significant area of focus, but SMEs are driven more by obligations than ESG principles.

(Expert1, Germany)

Interpreted through the AT lens, governance represents a weakly mediated domain. Unlike environmental or social practices, governance relies on abstract rules and reporting expectations that are difficult to translate into everyday activity. As a result, contradictions between external demands for transparency and limited internal capacity often remained unresolved, reinforcing compliance-driven rather than strategic governance approaches.

4.3. Stakeholders and Drivers

These patterns of engagement were not internally determined alone but were shaped by interactions with multiple stakeholders operating within SMEs' activity systems. While owner–managers dominated decision-making, employees, customers, regulators, and financial institutions also had influence.

4.3.1. Employees

Employees were identified as important internal stakeholders, particularly younger staff who have expectations for sustainability and ethical practice:

As employees' awareness and knowledge increases, ESG becomes more noticeable in company culture.

(VET1, Türkiye)

Employee perception plays a role, particularly among younger employees who increasingly demand sustainability and question existing practices.

(Expert1, Germany)

4.3.2. Customers

Customer expectations were a powerful driver, particularly among export-oriented and consumer-facing firms, echoing evidence on supply chain and market pressures [4,8]:

Corporate customers are also increasingly green-conscious. They prefer companies that minimise their impact on the environment and climate, use fewer resources, and reduce waste.

(VET1, Türkiye)

Consumers, particularly younger consumers, are very vocal in not wanting to buy products if they're not sustainable. This creates opportunities for SMEs to target generations seeking climate-conscious options.

(VET5, Ireland)

4.3.3. Government Regulation

Government regulation, especially EU directives, was a strong influence. SMEs were increasingly required to adapt to evolving ESG-related compliance demands, reinforcing evidence that regulation can be both a driver and a burden [15,16]:

Awareness is primarily driven by external regulatory/compliance factors.

(Expert1, Germany)

The main driver is regulation, especially evolving EU rules. Export criteria are becoming stricter, forcing SMEs to align with these standards to sustain exports.

(Expert1, Türkiye)

4.3.4. Financial Institutions

Banks and investors increasingly link funding to ESG performance, consistent with evidence on sustainable finance as a rising driver [19]:

All the financial institutions now have targets to reduce their carbon footprint, which they pass on to businesses to improve their chances of getting a loan.

(VET2, Ireland)

The questions from banks or other financial stakeholders are increasing drivers.

(VET4, Germany)

From an Activity Theory perspective, these actors form the community within the SME activity system, shaping ESG engagement through shared expectations, norms, and formal or informal rules that influence how sustainability priorities are interpreted and enacted.

4.4. Challenges (Barriers) to ESG Adoption

SMEs reported structural, cognitive, and cultural barriers that limit their ability to embed ESG practices, reinforcing prior research on resource scarcity, knowledge gaps, and fragmented implementation [13].

4.4.1. Competing Priorities and Resource Constraints

Financial and human-resource constraints were consistently cited, with competing priorities also prominent. Respondents described the difficulty of balancing day-to-day survival with ESG investment:

It's a burden for small businesses in terms of cost. I must pay for the training, and I lose money when staff aren't working.

(SME3, Ireland)

Our business runs on low margins, so additional regulation adds costs and feels more like a challenge than an opportunity.

(SME3, Germany)

Human resource shortages further intensified the challenge, with ESG responsibilities concentrated in one or two individuals:

SMEs have great aspirations to do everything right, but they face constraints around budget, personnel, and resources.

(Expert1, Ireland)

Smaller companies are often overwhelmed, with limited resources and support structures.

(VET4, Germany)

Applying AT, these pressures reflect contradictions between the object of short-term survival and emerging ESG objectives. Where this contradiction remained unresolved, SMEs prioritised minimal compliance. Where mediating supports were available, some SMEs were able to reinterpret ESG as compatible with competitiveness or risk management, enabling incremental learning.

4.4.2. Knowledge, Skills, and Expertise

A lack of ESG-related knowledge and expertise was one of the most consistent barriers. SMEs reported difficulties interpreting legislation, understanding frameworks, and measuring or reporting performance [10,25]:

Education, skills, and awareness are also a big barrier; people don't know what they should be doing.

(VET3, Ireland)

Many SMEs feel overwhelmed and uncertain how to respond, leading them to 'tread water' rather than make progress. Without guidance and resources, they risk being left behind.

(VET4, Germany)

Respondents stressed the need to frame ESG more positively, emphasising opportunity rather than burden:

Businesses need a better understanding of ESG and the opportunities it offers for growth, recruitment, and community benefit.

(VET2, Ireland)

Many see ESG as an unpleasant regulatory obligation. It should be framed as an opportunity to gain customers, attract employees and investors, and benefit the community and planet.

(Expert3, Poland)

These findings align with evidence that SMEs face limited absorptive capacity and therefore depend on external capability-building supports [28,29], including bridging mechanisms such as graduate placement and knowledge-transfer programmes [30,31].

4.4.3. Risk Analysis and Change Management

Several respondents highlighted gaps in risk analysis and change management capability:

ESG risk analysis skills would be beneficial and help develop strategies for ESG.

(SME5, Ireland)

What's missing is broader risk analysis and assessment.

(Expert2, Germany)

Resistance to change from employees or managers was also recurring:

Other people are not happy, with some questioning why we are changing. You will always find someone unwilling to cooperate.

(SME5, Ireland)

In SMEs, there is often a lack of understanding of how to operationalise ESG goals. Many wait for regulatory pressure instead of acting proactively.

(SME1, Germany)

In AT terms, these issues reflect contradictions between established routines and new ESG-related rules and tools that may remain unresolved without deliberate learning processes.

4.4.4. Data, Monitoring, and Reporting

SMEs also struggled with ESG data management and reporting. Respondents pointed to a lack of systems, staff capacity, and expertise in ESG metrics and communication:

Proficiency in ESG reporting standards and communication is needed going forward.

(VET5, Ireland)

There is a lack of sufficient staff to engage in ESG initiatives and a lack of systems and tools to support the collection and monitoring of ESG-related data.

(SME2, Poland)

Limited knowledge also raised concerns about compliance risk and greenwashing:

Without basic environmental knowledge, businesses struggle to meet ESG requirements and risk greenwashing.

(VET1, Poland)

Smaller, family-run enterprises were perceived to lag larger firms, which were more likely to draw on external advisors and adopt structured ESG approaches.

Smaller companies, especially family-owned, lack basic environmental knowledge. Larger companies, on the other hand, are more aware and often work with outside advisors to implement ESG more effectively.

(VET2, Poland)

ESG awareness and engagement were perceived as higher in consumer-facing and regulated sectors, such as food and beverage and manufacturing, due to market and compliance pressures:

Probably more relevant to the food and beverage sector.

(EXP2, Ireland)

Consumer-oriented industries tend to have higher awareness because they are driven by market demands.

(VET3, Germany)

From an Activity Theory perspective, these difficulties reflect mismatches between expanding ESG-related rules and insufficient tools, reinforcing compliance-driven responses.

4.4.5. Rules, Guidelines, and Certifications

Many SMEs relied on external rules, guidelines, and certifications as substitutes for internal ESG strategies [16]. Environmental and quality standards (e.g., ISO 9001 [45], ISO 14001 [46]) were commonly referenced:

We have ISO 9001 certification and several policies within our employee handbook.

(SME1, Ireland)

Environmental certification is an integral part of our overall strategy and a key goal for 2025.

(SME4, Germany)

Our company holds ISO 14001 certification, covering energy use, efficiency, waste management, materials, and nature-related aspects.

(SME1, Türkiye)

Supply-chain requirements were also increasingly important:

Supply-chain pressures are increasing. SMEs dealing with larger companies must demonstrate sustainability and ESG policies.

(VET2, Ireland)

4.4.6. Informal Approaches

Most SMEs described largely informal approaches to ESG, with limited evidence of structured planning consistent with prior research on reactive and fragmented engagement [13]:

Often, SMEs do something, anything, to meet immediate demands, without a clear long-term strategy.

(VET4, Germany)

Approaches remain largely informal, with formal processes used only when required by regulations.

(Expert1, Germany)

Respondents indicated little evidence of SMEs' structured ESG planning:

I haven't observed formal strategies. SMEs often copy practices from larger firms or develop informal approaches with external consultants.

(EXP1, Türkiye)

The company has no formal ESG strategy; regulatory changes are seen as administrative requirements rather than part of business strategy.

(SME4, Poland)

In AT terms, this reflects contradictions where external rules and expectations are not matched by internal tools, division of labour, or shared understanding.

4.5. Support Needs

The literature identifies training, simplified guidance, financial incentives, and networks as key supports that help SMEs move beyond compliance, e.g., [16]. These needs were strongly mirrored across all four countries. In AT terms, they represent demands for new mediating artefacts that can enable expansive learning and help SMEs reframe ESG from an external constraint into a meaningful organisational object.

4.5.1. Awareness and Capacity Building

Awareness raising and capacity building were widely emphasised, including training, tools, and practical guidance:

We need more information. Policies should help small business owners implement ESG in small, practical steps.

(SME2, Ireland)

Clear metrics and a defined logic for reporting are essential.

(Expert2, Germany)

Support is needed through free or low-cost training, guidance on ESG regulation, and tools designed for smaller companies.

(SME1, Poland)

4.5.2. Financial Incentives and Grants

Financial incentives to offset costs were strongly emphasised:

Grants are available to cover some of the hidden costs and training.

(SME1, Ireland)

Financial assistance is crucial, as many SMEs lack resources to hire staff or dedicate capacity to ESG.

(SME1, Germany)

The easiest way to encourage ESG practices is through financial incentives, such as subsidies or tax breaks.

(SME2, Türkiye)

4.5.3. Networking Platforms

Participants also valued networks for peer learning and collaboration:

Networking opportunities provide platforms to share best practices and collaborate on sustainability projects.

(VET5, Ireland)

Establishing networks is crucial, though questions remain about how to organise and implement them effectively.

(Expert1, Germany)

Industry chambers should keep us updated on EU regulations and provide guidance.

(Expert1, Türkiye)

These preferences mirror ecosystem-based and Triple Helix approaches, where universities, industry associations, and public agencies jointly support SME capability-building [3,34]. In AT terms, such support introduces new tools, rules, and community structures that can help SMEs move from reactive compliance to proactive, learning-oriented ESG activity.

Overall, ESG engagement across the four countries reflects recurring patterns of uneven pillar development, strong leadership influence, and persistent structural tensions. While environmental practices were most readily embedded, governance remained weakly routinised, and many SMEs operated with compressed roles and informal structures. These empirical patterns provide the basis for the following discussion, where ESG adoption is interpreted as a mediated and developmental activity system shaped by contradictions and the availability of stabilising artefacts.

5. Discussion

This study examined how SMEs engage with ESG across Ireland, Germany, Poland, and Türkiye and how internal and external influences are translated into organisational practice. The Findings identified five interrelated themes: leadership and goals; ESG priorities; stakeholder and drivers; challenges; and support needs, which together describe how SMEs interpret, operationalise, and sustain ESG activity. Across settings, similar pressures were enacted differently: some contexts emphasised practical operational actions, others reflected stronger finance-driven signals and structured routines, while in more transitional ecosystems ESG activity remained closely tied to owner–manager initiative and capability-building needs.

While these differences were described empirically in the Findings, the purpose of this Discussion is to move from description to explanation. Specifically, it addresses the three research gaps identified in the Introduction: (1) the under-specified nature of governance in SMEs; (2) limited understanding of the mechanisms through which ESG learning and adaptation occur; and (3) insufficient cross-country explanation of how institutional contexts shape SME ESG practice. By applying Activity Theory (AT), ESG adoption is conceptualised not as a static response to drivers and barriers, but as a mediated, developmental activity system.

AT (see Figure 2) is useful because it considers ESG engagement as an interconnected configuration of subjects, objects, tools, rules, community, and division of labour rather than isolated variables. This perspective shifts the analytical focus from “what drives ESG?”

to “how are ESG pressures translated into everyday organisational routines?”, a shift that enables a process-based explanation of uneven ESG integration across contexts and pillars.

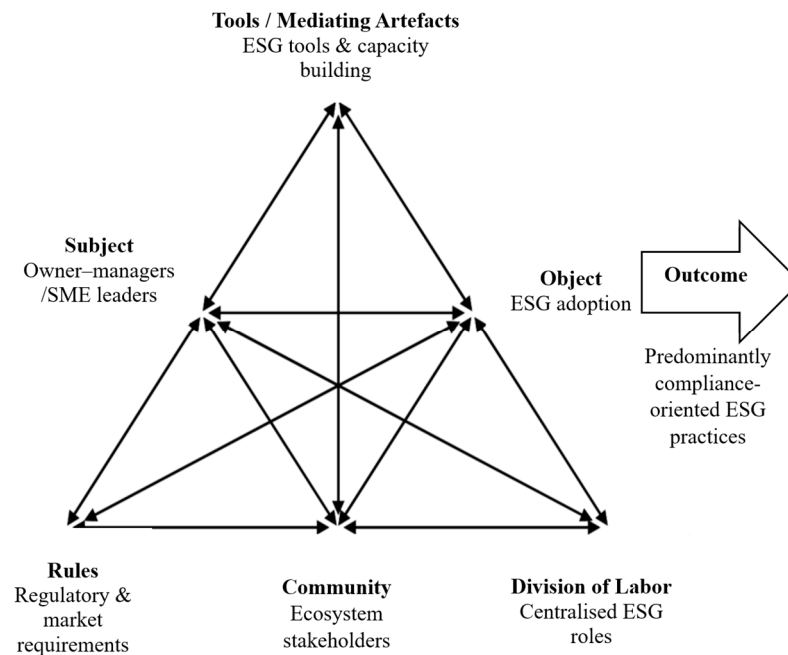


Figure 2. Activity system of SME ESG adoption.

The Findings demonstrated that **leadership and goals (subject & object)** were central to shaping ESG engagement across all contexts. Within an AT framework, owner-managers and senior leaders function as the primary subjects, while ESG-related ambitions constitute the object of activity. Leaders framed ESG goals in different ways: as regulatory compliance; operational improvement; reputational positioning; or long-term strategic transformation. These framings structured organisational attention, investment decisions, and the perceived legitimacy of sustainability initiatives [7,13,18].

Where ESG goals were narrowly defined around reporting obligations, activity stabilised in documentation-led routines [10,11]. Where leaders articulated broader goals linked to competitiveness, resilience, or organisational identity, ESG engagement extended into operational innovation and strategic planning [13,17]. Leadership therefore mediated ESG adoption by constructing the purpose toward which organisational effort was directed.

This finding extends prior leadership research by showing that leadership commitment operates not merely as a motivational variable but as a constitutive mechanism that defines the object of ESG activity. Under resource constraint, object framing becomes decisive in determining whether contradictions generate defensive compliance or developmental learning. In this sense, leadership shapes the trajectory of the entire activity system.

The theme of ESG **priorities (tools & mediating artefacts)** captured how SMEs translated sustainability goals into concrete areas of action. Environmental initiatives, particularly energy efficiency and waste management were most widely embedded, followed by selected social practices such as workforce development and health and safety. Governance remained comparatively underdeveloped, e.g., [10]. From an AT perspective, these priorities reflect the structuring role of mediating artefacts. Environmental and social actions were supported by tangible artefacts: monitoring systems, equipment upgrades, training programmes, and certification processes. These artefacts enabled SMEs to align sustainability with operational efficiency and risk management [3,6,13].

Governance, by contrast, relied on more abstract artefacts, reporting structures, oversight routines, policy frameworks which were harder to institutionalise in resource-

constrained settings. This provides a mechanism-level explanation for the persistent governance gap identified in the literature. Governance remains weak not simply because SMEs lack awareness or resources, but because governance artefacts are abstract, administratively complex, and weakly embedded in everyday operational routines. Without clear role allocation and routinised processes, contradictions between external transparency demands and internal capacity remain unresolved. Thus, uneven ESG pillar development emerges as a structurally mediated outcome of artefact availability and usability, rather than as a simple reflection of managerial preference.

The Findings identified **stakeholder drivers (community & rules)**, particularly customers, regulators, and financial institutions, as major influences on SME ESG activity. Within AT, these actors form part of the community, while their expectations operate as rules structuring organisational behaviour [15,19]. Customer requirements exerted consistent influence across contexts [4,8]. Regulatory frameworks provided legitimacy and direction but were often perceived as administratively burdensome. Financial institutions increasingly linked lending conditions to ESG performance, reinforcing the financial materiality of sustainability engagement.

Importantly, the AT lens demonstrates that stakeholder pressures do not automatically produce deeper ESG integration. Their impact depends on whether suitable mediating artefacts and internal role structures exist to translate rules into practice. The same regulatory signal may therefore stabilise compliance routines in one SME while enabling strategic integration in another. This finding addresses the third research gap by demonstrating that institutional context influences ESG outcomes through mediation. Ecosystem maturity shapes the availability, credibility, and accessibility of advisory, financial, and digital supports, which in turn condition how contradictions are resolved at firm level.

The theme of **challenges (contradictions)** corresponds to what Activity Theory conceptualises as systemic contradictions, structural tensions within or between components of the activity system. Recurrent tensions emerged across cases, including those between long-term sustainability ambitions and short-term financial survival pressures; between complex regulatory expectations and limited internal expertise and tools; between expanding stakeholder demands and constrained organisational capacity; and between formal ESG requirements and established informal management routines.

Rather than treating these as static “barriers,” Activity Theory understands them as generative tensions with developmental potential. The findings show that contradictions do not uniformly inhibit ESG engagement; instead, outcomes depend on how they are mediated.

Where contradictions remained unresolved, such as regulatory complexity without advisory support, SMEs tended to stabilise documentation-led compliance. Where partial mediation occurred through training, finance, or digital tools, ESG became operationally embedded. Where mediation combined with leadership clarity and minimal governance routines, more strategic integration emerged.

This process explanation advances understanding of how ESG learning occurs in SMEs. ESG development is not the direct outcome of pressure intensity but of how contradictions are interpreted, negotiated, and stabilised through artefacts and division of labour. Learning thus emerges from structured mediation rather than from pressure alone.

The Findings highlighted extensive **support needs (expansive learning & mediating artefacts)**, including financial assistance, advisory services, simplified reporting frameworks, training, and knowledge-sharing networks. Within AT, these supports function as mediating artefacts enabling expansive learning and organisational transformation. Fit-for-purpose artefacts, such as simplified standards, sector templates, digital reporting tools, and accessible finance, reduced friction between external ESG expectations and SME

capability. Where such support was available and credible, firms were better able to move beyond reactive compliance toward embedded practice.

The cross-country comparison demonstrates that ecosystem maturity operates as a conditioning mechanism. In more mature ecosystems (Ireland and Germany), embedded advisory, financial, and digital supports more frequently translate external pressure into operational or strategic routines. In transitional contexts (Poland and Türkiye), similar pressures more often stabilise compliance unless targeted mediation is introduced. This mediated perspective explains why ESG engagement varies under comparable institutional pressures.

This comparative insight extends institutional and stakeholder theory by specifying how macro-level ecosystem structures shape micro-level organisational trajectories through mediation. Building on this analysis, synthesising the five themes through an Activity Theory lens reveals three indicative ESG engagement modes: compliance-oriented, operational, and strategic. Compliance-oriented engagement is shaped by narrowly framed regulatory goals, strong stakeholder rules, limited mediating artefacts, and compressed divisions of labour, resulting in documentation-led routines and minimal integration. Operational engagement emerges where tangible artefacts, such as energy-management systems, certifications, or structured training, enable environmental and selected social practices to align with efficiency, cost management, or risk reduction. Strategic engagement, by contrast, develops where leadership framing, mediating supports, governance routines, and stakeholder alignment converge, allowing ESG to become embedded in long-term planning, organisational identity, and competitive positioning. Each mode therefore reflects a distinct stabilisation pattern within the SME activity system, grounded in specific configurations of object framing, artefact availability, stakeholder rules, and division of labour rather than simply differing levels of ESG intensity.

This typology represents a further theoretical contribution. Rather than categorising firms by ESG intensity alone, the modes are linked to systemic configurations that explain how ESG becomes stabilised in practice. By connecting engagement modes to activity system structures rather than isolated variables, the typology offers a foundation for cumulative empirical testing and moves the SME ESG literature toward a more integrative, practice-based explanatory model.

Theoretically, this study advances SME ESG scholarship in four key ways:

1. It reconceptualises ESG adoption as mediated organisational activity rather than a linear response to drivers and barriers.
2. It provides a mechanism-level explanation for the persistent underdevelopment of governance in SMEs.
3. It introduces ecosystem maturity as a conditioning variable shaping whether contradictions yield compliance stabilisation or developmental learning.
4. It develops a theoretically grounded typology of ESG engagement modes linked to systemic configurations.

Practically, the findings suggest the value of investing in artefacts that fit SME realities, alongside minimal roles and routines that help convert external pressures into everyday practice, particularly in governance.

Limitations include analytical rather than statistical generalisation from a multi-country qualitative sample with an emphasis on urban and medium-sized towns; translation choices prioritising meaning equivalence; and sectoral and governance-specific nuances that warrant deeper investigation.

6. Conclusions

Across the four institutional contexts examined, SMEs increasingly recognise the strategic value of ESG but operate under tight resource and time constraints. Engagement trajectories are shaped by leadership framing, the availability of mediating supports, and broader ecosystem conditions, resulting in compliance-oriented, operational, and strategic modes of engagement.

This study set out to examine (1) how SMEs engage with ESG across four institutional contexts; (2) what internal and external factors shape ESG adoption; and (3) how Activity Theory explains variation in engagement trajectories. The findings demonstrate that ESG engagement depends on how regulatory, market, and stakeholder demands are mediated through leadership framing, artefact availability, rules, community relationships, and division of labour within SME activity systems.

Viewed through an AT lens, these patterns reflect mediated activity shaped by objects (purposes), artefacts (tools), rules, community, and division of labour. Familiar contradictions, short-term survival versus long-term aims, complex rules versus limited tools and skills, and external demands versus compressed staffing, do not yield a single trajectory. Cross-country variation reflects differences in ecosystem maturity, which condition whether such contradictions stabilise compliance or enable deeper integration. This perspective moves beyond static driver–barrier lists and provides a coherent explanation for why engagement varies under comparable pressures.

Theoretically, the study advances SME ESG scholarship by reconceptualising ESG adoption as mediated organisational activity, clarifying governance underdevelopment through artefact and role structures, identifying ecosystem maturity as a conditioning factor in contradiction resolution, and developing a theory-grounded typology of engagement modes. Taken together, these contributions directly address the research gaps identified in the Introduction by clarifying governance mechanisms, specifying learning processes, and providing a comparative, practice-based explanation of cross-country variation in SME ESG engagement.

6.1. Recommendations for SMEs

- Integrate ESG into the core business strategy by aligning initiatives with competitiveness, risk management, and long-term value creation.
- Clarify leadership direction and define internal responsibilities for ESG, even where roles are part-time or shared.
- Use practical mediating tools (e.g., certifications, simplified reporting frameworks, and accessible digital solutions) to translate ESG goals into actionable practices.
- Prioritise high-leverage actions: begin with tangible environmental/H&S practices and connect governance tasks to existing operational cycles.

6.2. Recommendations for Policymakers and Ecosystem Actors

- Provide streamlined, SME appropriate reporting standards and guidance, with clear examples and sector-specific benchmarks.
- Expand targeted financial supports (grants, subsidies, green loans, tax incentives) to offset the cost of ESG adoption and reporting.
- Invest in practical capacity building (especially through VET and lifelong learning), including ESG literacy, risk assessment, and reporting capability.
- Strengthen networks through industry associations, universities, and public agencies to support peer learning and context-sensitive implementation.

6.3. Areas for Further Research

Future research should include longitudinal studies tracking how SME ESG practices evolve under shifting regulatory and market conditions; broader comparative studies across additional countries and sectors; quantitative and mixed methods analyses linking ESG engagement to performance and mediating tools; and micro-level investigations into employee and stakeholder agency within SMEs.

In sum, ESG in SMEs is best understood as a mediated and developmental organisational process rather than as a compliance reaction to escalating pressure. Progress depends on how pressures are translated through leadership framing, credible artefacts, proportionate rules, and workable routines within specific institutional ecosystems. Recognising and theorising this mediated character is essential for advancing both scholarship and policy aimed at enabling SMEs to move from compliance toward strategic, value-creating ESG integration.

Author Contributions: Conceptualization, P.G. and N.B.A.; Methodology, P.G. and N.B.A.; Data organization, P.G. and N.B.A.; Writing—original draft, P.G. and N.B.A.; Writing—review and editing, P.G., N.B.A., A.P.A. and Ú.Q.; Supervision, P.G. and N.B.A.; Project management, P.G. and A.P.A.; Funding, A.P.A. All authors have read and agreed to the published version of the manuscript.

Funding: This study is supported by PEARL project (2023-2-TR01-KA220-VET-000182029) which is funded by the Erasmus+ Program of the European Union. The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission and Turkish National Agency cannot be held re-sponsible for any use which may be made of the information contained therein.

Institutional Review Board Statement: Ethical review and approval were waived for this study, as it involved no intervention or collection of sensitive personal data. Participation was voluntary, and all participants were informed of the study's objectives and procedures. The study complied with the related ethics policy in 4.4.2 Privacy, confidentiality, and anonymity and 4.4.3 Data Management and Data Protection of the Research Ethics Policy of Atlantic Technological University.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Data will be made available on request.

Conflicts of Interest: The authors declare no conflicts of interest.

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