



## A MULTILEVEL PERSPECTIVE ON CORPORATE SUSTAINABILITY PARADOXES IN SMES

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### Abstract

**Purpose.** The transition toward sustainability requires companies to reconcile competing demands across economic, environmental, and social domains, often giving rise to paradoxical tensions. Despite increasing attention to sustainability paradoxes, the context of small- and medium-sized enterprises (SMEs) remains underexplored. This study investigates how SMEs approach corporate sustainability paradoxes across multiple organizational levels, including individual, firm-level, inter-organizational, and systemic dimensions.

**Design/methodology/approach.** Drawing on existing theoretical and conceptual studies, this research develops a framework tailored to SMEs, focusing on the multilevel and multi-process nature of sustainability paradoxes. Empirically, the framework is applied through a single case study of an SME active in the chemical manufacturing sector.

**Findings.** Sustainability paradoxes span the individual, firm, inter-organizational, and systemic levels. Paradoxes are rarely limited to a single level or process but show characteristics of vertical and horizontal interdependence.

**Practical and Social implications.** This research offers managerial guidance for SMEs, emphasizing the role of leadership commitment and strategic vision in addressing sustainability challenges and the need for capability development through training and team building.

**Originality of the study.** The study provides a contextual adaptation of existing paradox frameworks to the underexplored SME context. Through in-depth case analysis, we reveal SME-specific patterns in how sustainability paradoxes manifest and are managed under conditions of resource constraints, informal structures, and concentrated decision-making.

## 1. Introduction

Environmental concerns, regulatory pressures, and shifting consumer expectations (Delbridge et al., 2024; Schulte and Paris, 2024) have brought corporate sustainability (CS) to the forefront of business strategy, aiming to balance economic performance with environmental and social responsibility. Pursuing CS is far from easy as firms must reconcile conflicting demands, such as short-term profitability with long-term sustainability goals, align diverse stakeholder expectations, and innovate under resource constraints (Van der Byl and Slawinski, 2015). These tensions are not just trade-offs but rather paradoxes - contradictory yet interdependent forces that coexist and require simultaneous attention (Smith and Lewis, 2011; Carmine and De Marchi, 2022).

The paradox lens has gained prominence in sustainability research aimed to explore how firms can proactively approach the tensions brought about by CS (Hahn et al., 2014; Heucher et al., 2024). While theoretical and analytical frameworks (See Hahn et al., 2015, 2018; Van der Byl and Slawinski, 2015; Alosi et al., 2023) have been put forward, empirical applications remain limited and mainly centered on large corporations, leaving the small- and medium-sized enterprise (SME) context underdeveloped (Argento et al., 2022; Heucher et al., 2024).

This gap is particularly significant given that SMEs are the backbone of the European economy, representing 99.8% of firms in the European Union and contributing substantially to employment and value creation (Schulze Brock et al., 2025). Although their individual impact might be deemed modest, collectively they contribute significantly to environmental and social consequences (Loucks et al., 2010). Also, due to their flexibility, SMEs are often viewed as more agile and potentially better positioned to pursue sustainability-related opportunities (Hockerts and Wüstenhagen, 2010). Thus, they are critical in achieving improvement in sustainable performances (Biondi et al., 2002).

SMEs differ from larger firms in terms of relationships, strategy, and integration of new practices (Discua Cruz, 2020), and they face distinct sustainability paradoxes due to their unique structural, financial, and operational characteristics (Soundararajan et al., 2018). While large corporations often have dedicated departments and structured strategies, SMEs must face these challenges with limited resources, relying on personal relationships, informal decision-making structures, and through the active management operated by owners (Discua Cruz, 2020). Furthermore, SMEs might engage informally in CS driven by the values of the founders and commit resources and time without explicitly using the CS label (Fitzgerald et al., 2010).

This study investigates how SMEs detect, make sense of, and respond to

CS paradoxes across multiple organizational levels. The research question to be addressed is the following: How do SMEs address the paradoxical tensions of CS in their decision-making and strategic responses across individual, firm-level, inter-organizational, and systemic levels?

To answer this question, we develop a literature-informed analytical framework that integrates organizational levels with paradox management processes and apply it empirically to a European chemical manufacturing SME. This approach reveals context-specific patterns in paradox emergence and management and provides evidence of cross-level dynamics that have remained largely conceptual in prior literature.

The paper is organized as follows. The next section reviews literature on the paradox theory and perspectives on corporate sustainability in SMEs. Section 3 develops the framework. Section 4 details the methodology employed in the empirical study conducted. The case study is presented in Section 5 alongside the empirical results, while their discussion follows in Section 6. The last section presents concluding remarks, theoretical and managerial implications, and limitations.

## **2. Framing the paradox theory in the context of sustainability**

CS refers to the intentional integration of environmental and social considerations into a firm's operations and relationships (Bansal, 2005). Approaches to CS in SMEs vary due to differences in size, resource availability, and managerial priorities (Hockerts and Wüstenhagen, 2010).

Engaging in CS requires firms to simultaneously balance potentially conflicting - but inherently inextricable and interdependent - environmental, social, and economic considerations (Hahn et al., 2014). These contradictions often stem from diverse stakeholders' expectations (Björklund et al., 2024) - as suppliers prioritizing cost efficiency while firms aim to reduce carbon emissions -, generating diverse and sometimes conflicting demands (Hahn, 2015).

Previous literature has framed contradictions emerging from sustainability initiatives as paradoxes, that is the recognition of tensions as interrelated and requiring simultaneous consideration (Carmine and De Marchi, 2022; Björklund et al., 2024), while creating "almost impossible choices" (Putnam et al., 2016: 75). In their seminal work, Smith and Lewis (2011: 382) approached paradoxes as "contradictory yet interrelated elements that exist simultaneously and persist over time". Three core dimensions characterize paradoxes as opposed to tensions, that is, opposition, where elements seem logical in isolation but absurd together, interdependence, and persistence over time (Carmine and De Marchi, 2023). Applying a paradox lens to CS challenges "either/or" approaches, which prioritize one

objective at the expense of others, in favor of a “both/and” orientation that enables organizations to develop innovative strategies simultaneously meeting competing objectives (Björklund et al., 2024; Heucher et al., 2024).

### 3. Framework development

We propose a framework that integrates and adapts existing theoretical perspectives on sustainability paradoxes to the SMEs context. Integration and adaptation rely on the review of constructs from multiple theoretical streams and on their adaptation to new contexts. First, we purposefully selected contributions from complementary research streams; second, we adapted these to account for SMEs-specific characteristics. In particular, we drew on three research streams based the following criteria: a) seminal theoretical contributions providing the conceptual foundation for understanding tensions and their management (Poole and Van de Ven, 1989; Smith and Lewis, 2011; Hahn et al., 2015); b) sustainability management research extending paradox thinking to the corporate sustainability domain (Hahn et al., 2014, 2015; Alosi et al., 2023); and, c) studies on SMEs and sustainability transitions, documenting the organizational characteristics that shape how tensions manifest in this context (Álvarez Jaramillo et al., 2019; Discua Cruz, 2020). From the paradox literature, we identified the recurring analytical dimensions of levels and processes as the framework structure. From the SME literature, we identified the contextual characteristics, as resource constraints, informal structures, and concentrated decision-making, that shape how paradoxes manifest differently than in large corporations.

The proposed framework (Fig. 1) integrates two dimensions: organizational scope (individual, organizational, inter-organizational, and systemic) and process (detecting, sensemaking, and responding). For the scope dimension, we observed that sustainability tensions are consistently examined at multiple levels in the literature. The individual level appears prominently in studies of managerial cognition and sensemaking (Aguinis and Glavas, 2012; Hahn et al., 2014). The firm level is central to most organizational sustainability research (Hahn et al., 2015; Joseph et al., 2020). The inter-organizational level has been explicitly called for as underexplored (Carmine and De Marchi, 2023) and is addressed in supply chain and stakeholder studies (Björklund et al., 2024). The systemic level captures institutional and regulatory pressures emphasized in sustainability transitions research (Delbridge et al., 2024). These four levels represent the primary areas where sustainability paradoxes have been theorized and observed, while also mapping onto the nested structure of SME decision-making.

For the process dimension, we drew on Smith and Lewis (2011), who identify recognition and response as core processes in paradox management, and on Hahn et al.'s (2015) integrative framework, which emphasizes sensemaking as mediating between tension identification and strategic response. The three processes represent the temporal sequence through which organizations engage with paradoxes, from initial awareness through interpretation to action.

The framework provides a lens to investigate sustainability paradoxes in SMEs, where informal structures and routines, resource constraints, and the role of individual decision-makers necessitate adapting existing paradox frameworks. Paradox theory, developed primarily in large firm contexts (Lüscher and Lewis, 2008; Jarzabkowski et al., 2013), has inherent limitations when applied to SMEs. The theory assumes formal organizational processes for paradox recognition, deliberate management strategies requiring dedicated resources and specialized expertise, and distinct organizational processes for detection, sensemaking, and responding. These assumptions may not hold in resource-constrained SMEs where paradoxes operate through implicit, tacit, and relationally embedded processes, and where detection, sensemaking, and responding are often conflated within individual decision-makers due to concentrated authority. The proposed framework addresses these limitations by focusing on how paradoxes emerge and are managed through tacit, experiential, and relationally embedded processes rather than formal analytical frameworks.

### *3.1 The organizational/scope dimension*

The organizational dimension of the framework identifies the different levels at which paradoxes manifest and interact in the context of SMEs: individual, firm, inter-organizational, and systemic.

At the individual level, paradoxes relate to how managers and employees experience and act upon sustainability challenges. In SMEs, decisions about sustainability often rest with individuals - particularly founders or CEOs (Van Gils, 2005; Lee and Klassen, 2008) - who shape strategic direction based on personal values, aspirations, and perception of their role (Aguinis and Glavas, 2012; Dahlmann and Grosvold, 2017). Individual-level paradoxes may arise from conflicting motivations, cognitive frames, or tensions between personal ethics and organizational demands (Hahn et al., 2024), with influence amplified in SMEs due to flatter hierarchies and concentrated decision-making authority.

The firm-level involves internal organizational processes, resource allocation, and teamwork. SMEs often experience paradoxical tensions between advancing environmental and social practices and maintaining op-

erational efficiency (Joseph et al., 2020) or between ensuring product quality and using recycled/recovered raw material (Daddi et al., 2019; Shu, 2022). Organizational culture, leadership, coordination, internal decision-making processes, and formal power are key in managing paradoxes at this level (Hunoldt et al., 2020), highlighting the role of the human resource department and manager in CS paradoxes (Poon and Law, 2022).

The inter-organizational level captures paradoxes emerging from relationships with suppliers, customers, and partners. Sustainability transcends the boundaries of individual organizations and requires collaborative approaches (Inigo et al., 2020). Thus, relations with stakeholders at an inter-organizational level are considered, responding to the call of Carmine and De Marchi (2023), who underlined how this level of analysis has so far been little explored.

The systemic level focuses on the contribution of firms' CS to society, highlighting how firms are influenced by sustainability challenges and contribute to them (Hahn et al., 2015). This allows examination of how SMEs interact with and adapt to external systems. For example, SMEs' compliance with stringent environmental regulations might prompt innovation but also constrain financial resources.

The interconnectedness among levels is recognized and accounted for (Bengtsson and Raza-Ullah, 2025): individual decisions made by SME leaders can cascade, influencing firm-level strategies, shaping inter-organizational relationships, and ultimately contributing to systemic sustainability outcomes. Similarly, systemic pressures, such as new environmental regulations, can drive changes at the inter-organizational level and prompt firm-level adaptations, which are operated by individual actors.

### *3.2 The process dimension*

The process dimension describes how SMEs engage with CS paradoxes, focusing on how they detect, make sense, and respond to them (Hahn et al., 2014; Carmine and De Marchi, 2023).

Detecting involves the scanning and recognition of paradoxical tensions across environmental, social, and economic goals. This process sets the groundwork for how the organization will respond through mechanisms such as operational decisions, strategic planning processes, and interactions with stakeholders. SMEs' capabilities to detect paradoxes are influenced by the entrepreneur's personal awareness, by their possibly limited scanning capabilities, and absence of formal assessment tools, leading to a detection through intuitive and *ad hoc* means, such as personal relationships.

Sensemaking involves interpreting and understanding the identified paradoxes. Paradoxes can be framed as performing, belonging, learning, and organizing (Lüscher and Lewis, 2008; Björklund et al., 2024). Performing paradoxes stem from contradictory stakeholder demands that push organizations to pursue competing goals and strategies. Belonging paradoxes emerge from identity-based tensions and relational dynamics. Learning paradoxes reflect the challenge of leveraging existing knowledge while also updating it and developing specialized sustainability-related knowledge to be able to innovate and adapt to new ideas. Organizing paradoxes focus on structural and process-related issues - balancing collaboration with competition, centralization with decentralization - and requiring firms to adapt structures and existing processes to manage sustainability paradoxes while ensuring full operational efficiency (Björklund et al., 2024). In SMEs, systematic sensemaking and paradox categorization are potentially limited as decisions are often made informally and rely on personal experience rather than structured reporting framework and processes. This means paradoxes may remain implicitly experienced through behavioral patterns and operational frictions rather than explicitly recognized and formally addressed.

Responding involves strategies ranging from acceptance (opposition) or resolution (separation and synthesis) (Poole and Van de Ven, 1989; Smith and Lewis, 2011). Acceptance is chosen when the company cannot take action to resolve tensions or considers it too risky, and means acknowledging paradoxes as persistent and non-resolvable (Smith and Lewis, 2011). Resolution strategies, in contrast, aim to transform the paradox into a manageable situation (Hahn et al., 2015). Separation can refer to space and/or time (Siegner et al., 2018). Structural or spatial separation refers to the allocation of social and commercial responsibilities to distinct organizational units, while time separation is often used at the managerial level to solve the incompatibility between financial and social goals by placing them at different points in time, for instance, by differentiating between short-term and long-term objectives. Finally, synthesis occurs when paradoxical tensions are addressed, trying to generate synergies between them (Siegner et al., 2018). We advance that SMEs, due to their resource constraints, may favor adaptive strategies that blend elements of opposition and resolution, rather than pursuing large-scale structural changes (González-González et al., 2019).

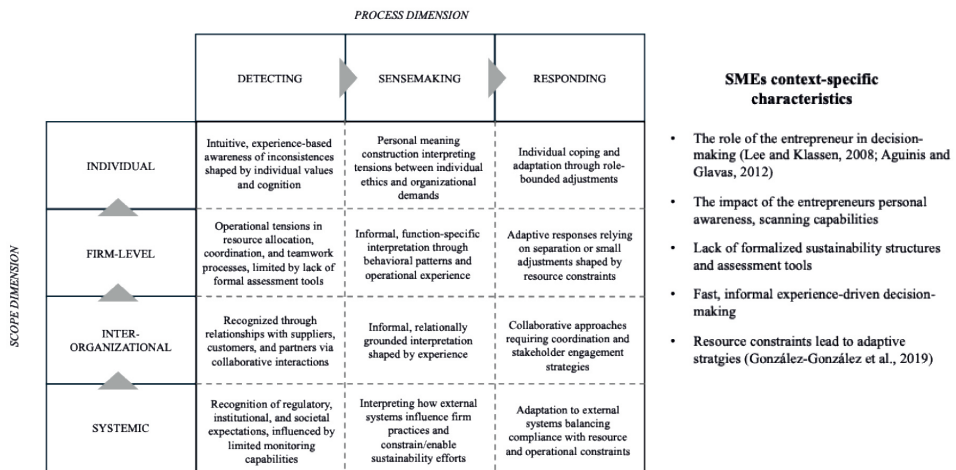
Processes are explored individually, but interconnectedness is also recognized and accounted for as tensions also co-evolve through the interaction among processes (Jarzabkowski et al., 2013): detecting paradoxes triggers sensemaking efforts, while responding feeds back into renewed detection as conditions change.

While detecting, sensemaking, and responding occur across all levels

and serve analogous functions, their manifestations differ in form and mechanisms. At the individual level, detection arises from experiential awareness of inconsistencies in day-to-day work, whereas at the organizational and systemic levels, it reflects more formalized monitoring of sustainability standards and stakeholder feedback. Similarly, sensemaking shifts from personal meaning construction to collective framing processes involving multiple actors, and responses evolve from individual coping practices to organizational routines and systemic coordination. Thus, the processes maintain functional similarity across levels but differ in their mechanisms and degree of formalization (Jarzabkowski et al., 2013; Hahn et al., 2015). The framework holds analytical value as it allows examining how the same process operates differently across levels.

Furthermore, SMEs' characteristics might create important boundary conditions for paradox theory developed primarily in large firm contexts. In resource-constrained SMEs, paradoxes more often remain implicit, experienced through behavioral friction and operational tensions rather than formally acknowledged. Paradox engagement thus relies on experiential judgment and informal coordination, meaning that detection, sensemaking, and responding are frequently conflated within individual decision-makers rather than unfolding as distinct organizational processes.

Fig.1. The resulting framework.



Source: Authors' own elaboration. The grey triangular arrows represent interconnections among levels and processes.

## 4. Methodology

### 4.1 Research design and case study selection

This study adopts a qualitative methodology (Maxwell, 2008) based on a single case study. The framework developed in Section 3 provides the multi-level analytical structure to examine how paradoxes manifest and are managed across organizational levels, while the case study methodology enables the application of the framework and an examination of these dynamics within the SME context.

The empirical setting under investigation is that of *Alfa* (anonymized to ensure confidentiality), a European chemical manufacturer. The case selection strategy followed theoretical sampling principles (Eisenhardt and Graebner, 2007), guided by three main criteria: (1) qualifying as an SME; (2) efforts towards transitioning to a structured CS approach; (3) operating in an industry characterized by inherent sustainability tensions. The suitability of *Alfa* is due, first, to its transitional state, exhibiting both informal, sustainability practices embedded since its foundation and recent formal structuring through its CSR Roadmap, making paradoxes visible across organizational levels. Second, *Alfa* operates in an industry characterized by tensions between environmental impact and product performance requirements, making paradoxical interactions observable in concrete operational decisions. Third, the firm is large enough to experience organizational complexity yet small enough to retain the concentrated decision-making, resource constraints, and informal structures typical of SMEs. This size makes vertical interactions between levels particularly traceable. Fourth, its long-term supplier partnerships and customer relationships provide access to inter-organizational paradoxes.

### 4.2 Data collection

Data were collected through semi-structured interviews, participant observation, a questionnaire, and document analysis (Piekkari et al., 2010). Five interviews were conducted in Autumn-Winter 2024 with purposefully selected informants within the company. Informant selection was guided by a criterion of informational relevance, prioritizing individuals who, due to their organizational position and level of involvement in CSR-related initiatives, were able to provide meaningful empirical insights into the process of integrating CSR into daily work activities. A preliminary meeting with the CSR manager served as the entry point for this selection process. Drawing on his cross-functional oversight of CSR initiatives, he identified and mapped relevant organizational functions based on three criteria:

(1) direct involvement in sustainability-related decisions or initiatives; (2) functional diversity to capture different organizational perspectives (purchasing, HR, innovation); and (3) varying tenure to include both long-term institutional memory and newer perspectives on recent formalization efforts. The resulting sample includes five interviews spanning critical functions: innovation/CSR management, purchasing (2 informants with 30+ and 20+ years tenure respectively), and HR (2 informants with <5 and 15+ years tenure). This mapping also revealed that other departments, such as Quality Control and Sales, were at an early stage of engagement and had not yet been operationally involved, as their participation was planned through future CSR training activities.

Each interview contained open questions covering perceptions of CS, organizational structure and responsibilities, leadership engagement, employee participation, barriers and challenges, interdepartmental coordination, and perceived progress.

To mitigate recall bias in retrospective accounts of events over the previous decade and following Huber and Power (1985), respondents were selected based on tenure and functional diversity to ensure informed recollection. Interviews were designed to elicit detailed, time-specific accounts and were occasionally conducted in pairs to enable collective recall.

The second data source is active participant observation, conducted by one of the authors for two months in Autumn 2024. Observation was casual in nature, without a formal protocol (Yin, 2009) and occurred through direct contact with the CSR manager and participation in the company's activities, meetings with external consultants, internal operational and strategic meetings, and informal interaction. Field notes documented practical and strategic decisions related to *Alfa's* sustainability transition and were shared with co-authors and triangulated with interviews and documents.

Third, a survey was distributed to 87 employees across all organizational functions, yielding 37 complete responses via Google Forms (43% response rate). To ensure confidentiality, no demographic or departmental data were collected, precluding analysis of potential non-response patterns across functions. While the response rate may introduce non-response bias, this was mitigated through triangulation with interview and document data, using the survey primarily to identify broad patterns. Convergence between questionnaire trends (e.g., uneven perceptions of sustainability integration) and interview accounts supports the credibility of interpretations.

The questionnaire consisted of 15 items covering: (1) employees' perceptions of sustainability and its relevance for SMEs; (2) the strategic priority and cultural importance of sustainability within the company; (3) perceived drivers and barriers to adopting sustainability practices; (4) the integration of sustainability into daily work; (5) the importance assigned

to key sustainability areas (e.g., environmental practices, diversity and inclusion, health and safety, work–life balance, communication); (6) the evaluation of existing sustainability initiatives; and (7) the perceived role of employees as contributors to sustainability efforts. Two brief introductory sections recalled key sustainability concepts to ensure meaningful engagement from respondents with limited prior familiarity.

Likert-scale responses were analyzed descriptively (frequencies and means) to identify general trends in CSR awareness, perceived leadership engagement, and the integration of sustainability into daily work practices. Open-ended responses were thematically coded following the same procedure used for interviews, ensuring analytical consistency across data sources.

The questionnaire data were then integrated into the analysis through triangulation: survey tendencies were compared with interview and document evidence to corroborate or contrast emerging themes. For instance, the questionnaire confirmed the uneven perception of sustainability as part of employees' responsibilities and reinforced interview findings regarding limited leadership communication and involvement in CSR. The questionnaire was instrumental in gaining access to the "individual" level of the theoretical framework, capturing the perspective of employees.

Document analysis was conducted using corporate documents (e.g., the CSR roadmap, internal presentations, code of conduct), the company's website, and sustainability reports. These sources served as secondary data sources to verify and contextualize information obtained through interviews, questionnaire, and observation. For example, the website was used to retrieve information about the history of *Alfa* and information concerning the effort of the company on sustainability issues. The code of conduct was used to understand inter-organizational paradoxes emerging when negotiating with suppliers. Document analysis served as a source of factual information and as a means to contextualize data obtained through interviews.

### 4.3 Data analysis

Data analysis followed an iterative coding technique, involving triangulation of primary and secondary data (Patton, 1999; Jonsen and Jehn, 2009). The coding process was conducted manually by both authors using a shared digital workspace. The analysis followed three stages:

1. Open coding: we identified initial concepts related to sustainability paradoxes, generating first-order codes grounded in empirical data. For example, the quote "there is also some resistance from employees and managers towards change and new practices" was coded as behavioral resistance to sustainability integration.

2. Axial coding: we grouped empirical examples into broader thematic categories, creating second-order codes that bridge empirical observations with theoretical concepts. For instance, codes about behavioral resistance, capability gaps, and resource constraints were grouped into the thematic category “detecting internal barriers to sustainability at the individual level”.
3. Selective coding: we refined the second-order themes into higher-order analytical dimensions aligned with the framework. The thematic category above contributed to identifying the paradox of change vs. continuity.

First-order codes were independently identified and then jointly reviewed to ensure no relevant concepts were overlooked. Second-order codes were developed through iterative discussion, with both authors comparing interpretations and refining thematic categories until consensus was reached. The coding structure underwent multiple revisions as we iteratively refined the alignment between emergent themes and our analytical framework. Tensions were first inductively identified from respondents’ descriptions of conflict or ambiguity. In a subsequent analytical phase, these empirically grounded tensions were compared with established paradox typologies (i.e., Björklund et al., 2024) to assess theoretical alignment. The coding structure is provided in Appendix A.

## 5. Empirical results and analysis

### 5.1 *Corporate sustainability in Alfa*

*Alfa* is a medium-sized manufacturing enterprise founded as a family-owned business, active in chemical manufacturing. Its CS trajectory combines long-standing informal practices with recent formalization efforts. Long-tenured purchasing employees emphasized that principles aligned with CS - such as preferring local suppliers and cultivating long-term partnerships - have characterized *Alfa* since its foundation. In contrast, HR respondents indicated that more explicit sustainability structuring has emerged only recently, largely in response to customer expectations.

*Alfa*’s first formal recognition of sustainability commitments occurred in the early 2000s through the achievement of triple certification (ISO 9001, ISO 14001, ISO 45001). This commitment intensified with the development of the “CSR Roadmap 2023–2028”, developed with an external consulting firm. Implementation is distributed across functions: the purchasing department revised supplier selection criteria through a CSR questionnaire, and HR launched initiatives to strengthen work quality and employee engagement.

Internal and external factors drive *Alfa*'s CS trajectory. Internally, employees (30 respondents) cite regulatory compliance as a major driver, but also highlight the strategic relevance of sustainability. The explicit link between CS and innovation - reinforced by the CSR manager overseeing both sustainability and innovation projects, also represents a CS driver. Externally, rising customer demand for sustainable products and evolving market standards and regulations have promoted the company's CS.

Barriers to CS are also evident. Internally, limited human resources, technical skills, and awareness constrain CS. As noted by the purchasing manager. We need training. It is not at all easy to integrate all this into daily activities. Priorities have to be set". Surprisingly, financial constraints were not identified as a direct obstacle to CS; instead, HR respondents emphasized insufficient leadership involvement as a bigger obstacle, as "we can implement initiatives without necessarily having a large budget".

Externally, market demand - while being an important driver - also represents an obstacle, as customers show resistance to sustainability-oriented offerings or a lack of knowledge on the topic. Regulatory pressure, particularly the Corporate Sustainability Reporting Directive (CSRD), simultaneously supports and constrains *Alfa*'s CS. While legitimizing and driving CS efforts, it is rigid, generic, and lacks transparency around non-compliance penalties.

## *5.2 Detecting, sensemaking, and responding to sustainability paradoxes*

Our analysis reveals how sustainability paradoxes manifest and are managed across organizational levels, following the three processes of detecting sustainability paradoxes, sensemaking through characterizing paradox types, and responding by implementing management strategies.

### *5.2.1 The detecting of paradoxes*

At the individual level, a *paradox of change vs. continuity* emerges from tensions between employees' traditional roles and sustainability requirements, with three characterizing dimensions. First, behavioral resistance to change or low motivation, as "People who have been here a long time and are used to doing things as they have always done" (Interview with HR). At the same time, 90% of the respondents to the questionnaire agree that employees can drive change, but half also believe that this requires additional resources. Despite this prevailing continuity orientation, a few respondents, especially newer employees, expressed curiosity and willingness to engage more actively with CS, indicating signals of an emerging change orientation. Second, a capability-intention gap emerged: although

employees recognize the importance of CS, they struggle to translate it into action. Engagement tended to occur only when CS aligned with existing tasks. Third, a resource dimension of this paradox is visible in the multidisciplinary team created for the roadmap implementation. The team comprises members from departments considered crucial for the implementation and management of CS initiatives (i.e., marketing, human resources, purchasing, and sales). While strategically important, its effectiveness appears to be limited by members' existing responsibilities, and it is seen as an acceptable temporary solution by the purchasing team, whereas the HR team believes that, if properly coordinated and monitored, this solution could prove effective, as it would guarantee broader and shared involvement, avoiding exclusive management by a single department.

At the firm level, a *paradox of integration vs. fragmentation* emerges. Although the multidisciplinary CS team signals an integration-oriented approach, the absence of a dedicated CS department complicates responsibility allocation and accountability. An HR respondent notes, "We each work in our own area, and we don't always formalize things. We need regular CSR coordination". Participants described siloed practices and weak cross-departmental coordination; yet, some respondents reported localized initiatives such as training and supplier assessment procedures that partially bridge these divides.

At the inter-organizational level, we identify a paradox between the search for suppliers committed to CS and the time and effort required to assess them - labeled as *paradox of responsible partnership vs. efficiency*. The introduction of stricter CSR criteria and a CSR-focused section in the pre-negotiation questionnaire lengthened supplier evaluation and reduced procurement agility. Moreover, larger suppliers were generally more prepared to meet CSR requirements, whereas smaller suppliers often lacked familiarity with reporting frameworks, making uniform standards difficult to apply across the network.

This paradox is particularly salient in supplier relations, with a purchasing manager noting that "being demanding from this perspective reduces the number of suppliers that can be selected", affecting commercial conditions. Smaller suppliers often struggle with CSR reporting, while larger partners leverage compliance strategically to negotiate commercial advantages. As the purchasing manager explained, "We tell suppliers it takes us long to approve them, but once they are approved, we remain loyal to them". This reflects a paradox between procedural rigor and relational continuity: the company seeks to standardize assessment through supplier questionnaires and audits, yet depends on long-term trust-based relationships to sustain its operations. Thus, inter-organizational paradoxes materialize not only through compliance processes but also through everyday procurement interactions.

At the systemic level, we observe the *paradox of environmental and social responsibility vs. market competitiveness* arising from the conflict between product performance, environmental standards, and price sensitivity. This is evident in the attempt to develop and launch more sustainable alternatives: “We tried launching more sustainable products, like water-based products, [...] But the issue is that the water-based formulation hasn’t been as effective. When it rained, the product ran” (Informant from the purchasing team). This highlights a product-performance gap between sustainable and traditional formulations, particularly in contexts, where high humidity conditions revealed the limitations of the eco-friendlier version. This is further exacerbated by *Alfa* operating in a business “Where we sell consumables, not high-value-added products. You use the thing and then discard it. This means it’s difficult to set high prices on products, even if they are more environmentally friendly” (Informant from the purchasing team). Despite initial struggles, the product was later adapted to a less demanding sector (construction) and remains in the portfolio with gradually improving sales.

### 5.2.2 Sensemaking processes: characterizing paradox types

Our analysis highlights how SMEs interpret sustainability-related tensions by identifying distinct paradox types and characterizing them across organizational levels.

Sensemaking is predominantly observed at the firm-level, where the lack of coordination and leadership in implementing CS emerges as a key challenge. In the sensemaking process, the paradoxical tension already identified between integration and independence, where employees are expected to engage in sustainability initiatives within their respective areas but without formalized guidance or accountability mechanisms, is framed and understood by individuals within the organization. As the sustainability manager described, “In CSR, a demand comes from the board to change something, to achieve some goals; then there should be a phase in which a plan is drawn up to activate the CSR plan. There is a kind of disconnection between the two, which brings out conflicts and tensions”. Employees expressed frustration, which diminished the perceived importance of CS in their daily work. One employee commented, “We need someone who can drive the change and push things forward. Right now, we’re making decisions at our level only”. Others emphasized leadership’s responsibility: “If it is not yet truly concrete at the management level, why should it be concrete for us?”. Thus, the role of leadership emerges as key in shaping how sustainability paradoxes are perceived and managed. In *Alfa*’s case, the absence of strong, coordinated leadership has led to a fragmented approach where

employees operate within their departments, without a “grand picture”.

Following Björklund et al. (2024), belonging paradoxes appear in tensions between the CSR manager’s individual identity and organizational structure, leading to a *paradox of formal responsibility vs. real authority*. The CSR manager experiences frustration with the lack of formal recognition of the role, which is neither included in the organization chart nor formalized in a specific department. He describes feeling “floating on air” and perceives CSRD compliance as his only legitimately recognized role. While tasked with coordinating CS-related initiatives, limited support reinforces a compliance-oriented approach. At the same time, some employees noted growing managerial attention to sustainability communication, suggesting leadership engagement may be evolving unevenly across functions.

Organizing paradoxes appear in two forms at the firm level. First, leadership-related issues and unclear guidance generate a *paradox of strategic intent vs. operational reality* with a disconnect between high-level sustainability ideals and ground-level implementation. A second organizing paradox concerns *external vs. internal communication asymmetry*. A recurring element that emerged from the interviews is the lack of internal communication on CS. While recognizing that the company has launched numerous initiatives in the field of sustainability, the interviewees from the purchasing team point out that these have never been formalized nor adequately communicated internally, preventing the creation of value within the organization and raising awareness among members. Meanwhile, external communication has shifted from a low-profile approach to a more assertive sustainability-oriented stance.

The need to develop CS-related capabilities highlights a learning paradox between the immediate demand for sustainability-related expertise and the time and effort required to build it, which we label the *paradox of capability urgency vs. capability development*. This is evident in the multidisciplinary team that was created to drive CS initiatives, but without providing members with specialized training, and in the expectation placed on the commercial team to integrate sustainability into business practices without adequate training or skills development. This learning paradox reflects a resource misallocation, with leadership recognizing the values of CS and promoting its adoption, yet hesitating to invest in training, leading to a cycle where the lack of human resources with technical skills hinders the adoption of CS practice, knowledge and skills leads to a superficial implementation, which in turn reinforces the perception of CS being a mere compliance activity.

### 5.2.3 Responding to paradoxes

*Alfa* adopts mainly defensive strategies for managing sustainability paradoxes. Paradoxes are detected but not addressed, aligning with the notion of opposition. For example, external communication of sustainability initiatives indicates commitment without fully addressing structural issues. Similarly, CSRD compliance reflects attention to regulatory requirements rather than substantive integration of sustainability into business practices.

Data also shows instances of synthesis and separation. The lack of a dedicated CSR department reflects structural separation, with sustainability-related responsibilities spread across different teams. The marketing department implements a synthesis strategy, addressing the tension between sustainability and competitiveness by introducing additional sustainable product offerings together with traditional ones.

Externally, *Alfa* takes a more proactive stance by fostering collaborative relationships with suppliers and working together with other companies to create value and stimulate innovation. A purchasing team member noted: “Our relationships with suppliers are usually long-term and based on a real partnership. It takes a while to approve a relationship, but once it’s done, we keep being loyal to them and exchange with them on future projects and developments”. This suggests that while *Alfa* defaults to defensive responses internally, it recognizes the potential for synergies in its external partnerships.

Table 1 summarizes the paradoxes identified across levels of analysis and the main ways in which they were managed within *Alfa*.

Table 1. Overview of paradoxes, processes, and responses in Alfa

| Paradox                                                                      | Empirical evidence                                                                                                                                            | Level                | Process                | Response                                        |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------------------|-------------------------------------------------|
| <i>Change vs. continuity</i>                                                 | Employees recognize sustainability relevance but experience continuity of short-term pressures; sustainability enacted “when convenient”                      | Individual           | Detecting              | Opposition / Acceptance                         |
| <i>Integration vs. fragmentation</i>                                         | No central CSR structure; sustainability dispersed unevenly across HR, quality and CSR manager; lack of coordination.                                         | Firm-level           | Detecting, sensemaking | Structural separation                           |
| <i>Responsible partnership vs. efficiency</i>                                | CSR criteria slow down procurement; supplier assessment questionnaire increases workload; tension between speed and responsibility.                           | Inter-organizational | Detecting              | Externally: synthesis<br>Internally: opposition |
| <i>Environmental and social responsibility vs. marketing competitiveness</i> | EU regulatory requirements increase expectations; customers remain highly price sensitive, with limited willingness to pay for sustainability.                | Systemic             | Detecting              | Synthesis                                       |
| <i>Formal responsibility vs. real authority</i>                              | CSR manager is formally responsible for sustainability but lacks decision-making power, resources, and organizational support; experiences “floating on air.” | Individual           | Sensemaking            | Opposition / Acceptance                         |
| <i>Strategic intent vs. operational reality</i>                              | Leadership signals sustainability, but teams face operational constraints and resource shortages                                                              | Firm-level           | Sensemaking            | Opposition / Acceptance                         |
| <i>External vs. internal communication asymmetry</i>                         | Work done on external communication contrasted with limited internal alignment and practices                                                                  | Firm-level           | Sensemaking            | Opposition / Acceptance                         |
| <i>Capability urgency vs. capability development</i>                         | Immediate need for sustainability expertise vs. absence of training; multidisciplinary team without preparation                                               | Firm-level           | Sensemaking            | Opposition / Acceptance                         |

## 6. Discussions

Our study shows that sustainability-related paradoxes are rarely limited to a single level or process, but display interdependencies (Hahn et al., 2014, 2015; Putnam et al., 2016). The analysis reveals how paradoxes cascade and evolve through cross-level and cross-process dynamics. Cross-dimensional dynamics can take two different forms: vertical and horizontal.

Vertical interactions span organizational levels, where the paradoxical tensions identified at one level can influence other levels (Jarzabkowski et al., 2013; Bengtsson and Raza-Ullah, 2025). For example, the *paradox of integration vs. fragmentation* at the firm level creates a downward cascading effect that shapes individual-level experiences of sustainability. The absence of a dedicated CSR department results in fragmented individual accountability, leaving individuals to deal with sustainability responsibilities without formal guidance or support. As a result, individual actors experience frustration and disengagement and tend to act on CS upon convenience.

Horizontal interactions occur across detecting, sensemaking, and responding processes, yet we observe misalignment between detection and response: although *Alfa* recognizes systemic-level paradoxes – such as sustainability standards vs. market pressures – its responses remain defensive and compliance-driven, rather than aimed at exploring more innovative solutions. This misalignment points to incomplete paradox management cycles or to a paradox recognition trap. In resource-constrained settings, paradoxes are experienced through operational friction and recognized, but a lack of formal sensemaking structures impedes translation into action (Lüscher and Lewis, 2008). This suggests that organizational context might determine if detection can convert into response capability.

To unpack how these interconnections operate, we identify three mechanisms through which paradoxes cascade and evolve. These mechanisms emerged inductively from our data and resonate with established insights from paradox and sensemaking research (Smith and Lewis, 2011; Jarzabkowski et al., 2013; Hahn et al., 2015).

1. *Translation through sensemaking* connects individual and collective interpretations, shaping how tensions detected at one level are re-framed and acted upon in another. Individual-level capability gaps create firm-level coordination challenges when formal sensemaking structures are absent as reflected in the CSR manager's attempts to reinterpret sustainability ambiguities and make them operational despite lacking formal authority.
2. *Leadership framing and resource signaling* exert top-down influence across both levels and processes. Symbolic leadership commitment without resource allocation intensifies firm-level fragmentation and

amplifies paradoxes across levels. Firm-level resource allocation decisions amplify inter-organizational paradoxes by constraining the capacity to meet supplier CSR requirements while maintaining operational flexibility, particularly when leadership communicates sustainability as priority but provides minimal tangible resources.

3. *Informal relational diffusion* allows paradoxes to circulate laterally and vertically through everyday interactions, transmitting interpretations and routines that can either reproduce or modify existing tensions. Systemic regulatory pressures create divergent individual-level interpretations when concentrated decision-making lacks formal communication channels. When CSRD requirements are filtered through few actors (board, CSR manager) without formal communication mechanisms, divergent understandings emerge across the organization, as seen in employees' varying interpretations of sustainability responsibilities, which reproduce rather than resolve paradoxical tensions.

Second, the analysis highlights the role of leadership in shaping how paradoxes are interpreted and managed. In SMEs, limited formal structures make leadership engagement key to shifting from reactive adjustments to more proactive strategies. In *Alfa*, the lack of clear strategic coordination and top-level involvement resulted in fragmented actions, reflected in employees' calls for someone "to drive the change and push things forward", pointing to a leadership void that amplifies organizational inertia. Furthermore, the belonging paradox in *Alfa* centers on the CSR manager's struggle to sustain legitimacy and identity within a structure that formally tasks him with coordinating sustainability but offers little actual authority or support. His description of feeling "floating on air", with sustainability reduced to CSRD compliance, reflects more than role ambiguity or resource constraints and illustrates what Carollo and Guerci (2018) term as identity work, that is, the ongoing process of preserving meaning and legitimacy while navigating competing institutional logics; here, the normative expectations of sustainability and the pragmatic logic of efficiency and compliance.

Three features of the CSR manager's experience mark this as identity work rather than simply a structural problem. First, a tension between personal commitment and organizational recognition: he expresses genuine engagement with sustainability values while perceiving that the organization values only compliance outputs. Second, his "floating on air" metaphor represents an active meaning-making attempt to articulate and make sense of his liminal position. Third, there is boundary negotiation between the normative logic of sustainability and the pragmatic logic that governs organizational priorities. In SME contexts, where decision-making authority is concentrated, such individual identity conflicts can cascade into organizational

gridlock and paradox amplification (Spence and Rutherford, 2001).

Third, the analysis shows that SMEs' structural and relational conditions-formal sustainability departments, structured reporting mechanisms, and dedicated resources (Bos-Brouwers, 2010; Soundararajan et al., 2018) - make paradoxes more visible in everyday operations, as employees and managers must reconcile long-term sustainability goals with short-term operational demands in real time. Yet these conditions can enable flexibility and relational coordination. Cross-functional collaboration, though informal and limited in scope, proved crucial in establishing early sustainability initiatives and responding to emerging customer demands.

These conditions explain why *Alfa's* approach mainly reflects defensive strategies, oriented towards preserving the status quo and minimizing reputational or regulatory risks. This short-term approach, or temporal myopia (Daddi et al., 2019), prioritizes immediate conflict mitigation while dismissing long-term sustainability implications.

The predominance of defensive responses in *Alfa* reflects not only resource constraints but also limited organizational reflexivity. When paradoxes remain implicit, as with the *change vs. continuity paradox*, collective sensemaking is inhibited, making proactive management difficult. This holds implications for innovation. The predominance of short-term, risk-averse responses limits experimentation and the development of innovative solutions to sustainability challenges. Yet paradoxes can also serve as a potential source of innovation when organizations engage them proactively. In *Alfa*, innovation projects often emerged indirectly from sustainability pressures, for example, reformulating products or improving process efficiency, rather than from a deliberate innovation strategy. This suggests that sustainability paradoxes can both hinder and stimulate innovation, depending on whether they are managed defensively or integratively, in line with prior research on paradoxical tensions as drivers of creative adaptation (Hahn et al., 2015; Bechtel et al., 2025).

## 6. Conclusions

This study, through the case of *Alfa*, examined how SMEs detect, make sense of, and respond to CS paradoxes across multiple organizational levels.

Two contributions are put forward. First, by adapting and applying a multilevel framework tailored to SMEs, this study addresses calls for contextual adaptation of paradox frameworks (Soundararajan et al., 2018; Carmine and De Marchi, 2023) and provides empirical evidence of how established paradox constructs manifest under SME-specific characteristics, thus validating existing theory in a new organizational context. Second, it identifies how sustainability paradoxes cascade across organizational

levels through three mechanisms: *translation through sensemaking*, *leadership framing and resource signaling*, and *informal relational diffusion*. By examining these mechanisms in the SMEs context, the study shows how organizational structure shapes not just whether paradoxes are managed, but how they propagate vertically and horizontally through the organization, thus consolidating current understanding of cross-level dynamics in settings characterized by resource constraints and informality.

From a managerial perspective, the study points to the importance of leadership commitment and strategic vision as drivers of CS to foster a culture of accountability among middle managers and employees (Madrid-Guijarro and Duréndez, 2024). Yet, it also suggests that leadership commitment as symbolic support alone is insufficient if not translated into feasible expectations, resource allocation, and practical routines and communication channels (Aragón-Correa et al., 2008). Managers should therefore remain actively involved in the process of sensemaking and management by creating spaces such as team reviews, project debriefs, or informal forums, where conflicting pressures can be discussed openly, allowing shared understanding and coordinated responses to emerge. Second, the analysis highlights the importance of capability development (Del Brío and Junquera, 2003; Johnson and Schaltegger, 2016), calling for the development of training programs providing technical knowledge and raising awareness of the strategic value of CS. In SMEs such as *Alfa*, where formal programs are limited, capability building often occurs through day-to-day problem solving and collaboration across functions. To leverage informal learning while providing structure, managers could establish peer-learning sessions to share sustainability challenges, consolidating the dispersed knowledge that typically develops through experience and collective practice, or partner with industry associations to access SME-tailored training modules.

From a policy perspective, our findings suggest that existing regulatory frameworks, such as the CSRD, can generate tensions for SMEs by applying uniform standards to structurally heterogeneous firms. More flexible and proportionate reporting requirements, such as tiered frameworks with simplified metrics for smaller firms or phased implementation timelines would better reflect SMEs' resource realities. Evidence also highlights limited sustainability capabilities and leadership commitment within SMEs (Aragón-Correa et al., 2008) that targeted public programs could help address through subsidized access to industry-specific sustainability toolkits, access to peer-learning networks, or technical assistance programs that help SMEs translate regulatory requirements into operational practices. Finally, since inter-organizational relationships emerged as key enablers of sustainability advancement (Inigo et al., 2020), policy instruments that foster collaboration among SMEs and with larger firms, for example, through network-based funding, supplier development grants, or sector-specific

sustainability consortia, which could strengthen the systemic conditions for sustainability transitions while addressing the supplier paradoxes we identified.

This study also entails some limitations that suggest directions for future research. First, the empirical validation of the framework relies on a single case of a European SME active in chemical manufacturing. Sectoral and regulatory specificities may shape the intensity and visibility of paradoxes and present unique features that limit the practical transferability of some findings to highly regulated sectors. The sector is characterized by stringent environmental regulations and complex technical requirements that generate paradoxes potentially less prevalent in service-based or less regulated industries. Also, the geographical scope presents contextual boundaries. The European regulatory and institutional environment shapes how sustainability paradoxes emerge and are managed in ways that may differ in other regions.

While the single-case design limits statistical generalization, the findings offer analytical generalization relevant to SMEs sharing similar structural and contextual characteristics. Specifically, the framework and mechanisms identified are applicable to manufacturing SMEs transitioning toward formalized sustainability practices, operating in industries with inherent environmental tensions, and characterized by concentrated ownership and informal decision-making structures. The paradox of *integration vs. fragmentation and change vs. continuity* may resonate with SMEs experiencing similar shifts from implicit, values-based sustainability to explicit structured approaches. Future studies could strengthen the framework through comparative case studies that distinguish context-specific patterns from generalizable dynamics across SME populations, including service-based firms, different geographical contexts, and varying stages of sustainability maturity.

Second, the SME under investigation has been, since 2020, part of a larger industrial group. While CS-related practices and commitments existed beforehand, group membership provided additional drivers (attention to the sustainability issues) and structure (new roles). Evidence suggests that the paradoxes predate this affiliation and reflect SME-specific dynamics. Three observations support this interpretation. First, long-tenured employees (purchasing team, HR) consistently traced sustainability tensions to pre-2020 practices, including supplier relationship norms and informal decision-making patterns. Second, the structural features that generate paradoxes in our analysis remain characteristic of *Alfa's* local operations rather than group-level governance. Third, the CSR Roadmap, while developed post-2020, addresses challenges (capability gaps, leadership engagement, cross-functional coordination) that employees described as longstanding. However, we cannot fully disentangle group influence from

*Alfa's* autonomous dynamics, and findings should be interpreted with this caveat in mind. We recognize that this may influence how these paradoxes are handled. As Huse (1994) observes, small firms embedded in broader governance systems often experience a structural paradox of simultaneous independence and interdependence in their relationships with parent structures. Although we did not investigate these dynamics empirically, acknowledging this condition helps delimit the scope of our findings and suggests a potential avenue for future research. Future research could compare sustainability paradoxes in independent SMEs versus those embedded in larger corporate structures.

Third, our data collection directly captured the perspectives of employees and middle managers, without direct access to top leadership. Our understanding of leadership's role is therefore inferred from middle managers' and employees' perspectives rather than directly captured. This limitation points to the need to incorporate all hierarchical perspectives to have a more comprehensive picture of how sustainability paradoxes are perceived, framed, and managed in the company.

Last, our cross-sectional data collection limits our ability to directly observe how paradox responses evolve over time. Reliance on retrospective accounts of early sustainability efforts (i.e., the 2000s ISO certifications and informal practices) are subject to potential recall bias, post-hoc rationalization, and to the influence of current understanding of sustainability. While we mitigated this through triangulation across multiple informants with different tenures and functional roles, and by anchoring recollections to documented events, temporal distance limits the reliability of such reconstructions. Moreover, paradoxes themselves evolve in terms of salience, manifestations shift, and organizational conditions. Our analysis therefore prioritizes current dynamics, where triangulation is strongest through real-time observation, recent interviews, and documents. Findings thus represent a snapshot of how paradoxes manifested at a specific moment in *Alfa's* sustainability transition. Longitudinal research tracking SMEs through the different phases of sustainability transitions could reveal how detection, sensemaking, and responding processes co-evolve, and whether defensive strategies gradually give way to more integrative approaches as organizational capabilities develop.

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## Appendix A: coding structure

This appendix presents representative examples of the coding process, showing the progression from first-order empirical data (direct quotes from interviews, observations, and documents) through second-order thematic interpretation to aggregate analytical dimensions aligned with the paradox framework.

| First-order representative quotes                                                                                                                                                                                                                                                                                                                                                                  | Second-order thematic categories                                                                            | Analytical dimensions                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| <i>"There is also some resistance from employees and managers towards change and new practices" (Interview with HR Team)</i>                                                                                                                                                                                                                                                                       | Detecting internal barriers to sustainability at the individual level                                       | Paradox of change vs. continuity                  |
| <i>"People who have been here a long time and are used to doing things as they have always done" (Interview with HR)</i>                                                                                                                                                                                                                                                                           | Detecting continuity orientation at the individual level                                                    |                                                   |
| <i>"The board has not fully grasped the additional resources that several departments need [...] We need training. It is not at all easy to integrate all this into daily activities" (Interview with purchasing manager)</i>                                                                                                                                                                      | Detecting resource and capability gaps at the firm level                                                    | Paradox of integration vs. fragmentation          |
| <i>"What's really needed is proper CSR coordination. It's crucial because we each work in our own area, and we don't always formalize things" (Interview with HR Team)</i>                                                                                                                                                                                                                         | Detecting and sensemaking of coordination issues at the firm level/lack of CS integration                   |                                                   |
| <i>"Since I started working here [more than 30 years ago], we've always prioritized local or at least national suppliers. [...] But it did cause difficulties. For example, in supplier selection, when you're demanding from this perspective, and now with social and societal aspects as well, it reduces the number of suppliers that can be selected" (Interview with purchasing manager)</i> | Responding to supplier-related tensions at the inter-organizational level                                   | Paradox of responsible partnership vs. efficiency |
| <i>"Approving a supplier takes longer, and it means not everyone can become a supplier for our company. As a result, this can also limit or impact commercial conditions. Because, when there are packaging or safety requirements in the specifications, it means a cost for the supplier" (Interview with purchasing manager)</i>                                                                | Responding to operational challenges at the firm level related to supplier CSR requirements                 |                                                   |
| <i>"We tell suppliers it takes us long to approve them, but once they are approved, we remain loyal to them" (Interview with purchasing manager)</i>                                                                                                                                                                                                                                               | Responding to tensions between procedural rigor and relational continuity at the inter-organizational level |                                                   |

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| <i>"We're in a business where we sell consumables, not high-value-added products. You use the thing and then discard it. This means it's difficult to set high prices on products, even if they are more environmentally friendly" (Interview with purchasing team)</i> | Detecting market-driven constraints at the systemic level                                                                  | Paradox of environmental/ social responsibility vs. market competitiveness |
| <i>"We tried launching more sustainable products, like water-based products [...] But the issue is that the water-based formulation hasn't been as effective. When it rained, the product ran" (Interview with purchasing team)</i>                                     | Responding to performance and market challenges at the systemic level                                                      |                                                                            |
| CSR manager describes feeling "floating on air" and perceives CSRD compliance as his only legitimately recognized role. While tasked with coordinating CS-related initiatives, limited support reinforces a compliance-oriented approach (Field notes and interview)    | Sensemaking of role ambiguity and lack of organizational support at the individual level affecting firm-level coordination | Paradox of formal responsibility vs. real authority                        |
| <i>"We need someone to drive the change and push things forward" (Multiple interview respondents)</i>                                                                                                                                                                   | Detecting leadership void at the firm level                                                                                |                                                                            |
| <i>"In CSR, a demand comes from the board to change something, to achieve some goals; then there should be a phase in which a plan is drawn up to activate the CSR plan. (Interview with sustainability manager)</i>                                                    | Sensemaking of strategic misalignment at the firm level                                                                    | Paradox of strategic intent vs. operational reality                        |
| <i>"We need to inform everyone about our CSR initiatives, explaining what we aim to achieve and how we'll go about it. But it hasn't been done yet. Right now, we are in a kind of ad hoc mode, doing what we can" (Interview with HR Team)</i>                         | Sensemaking of lack of communication at the firm level                                                                     | Paradox of internal vs. external communication asymmetry                   |
| Multidisciplinary team created to drive CS initiatives without providing members with specialized training, and expectations placed on commercial team to integrate sustainability without adequate skills development (Observation and interview data)                 | Detecting learning paradox at the firm level: immediate capability demands without investment in development               | Paradox of capability urgency vs. capability development                   |