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REVIEW ARTICLE

Toward a view of integrating corporate sustainability into strategy: A systematic literature review

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Abstract

In recent years, research on corporate sustainability integration strategies has witnessed a significant growth in interest. However, contributions remain disjointed and fragmented, preventing the emergence of a cohesive understanding of the current research state. This study uses a systematic review of 126 articles from Web of Science (WoS) and Ebsco to extract a seven-dimensional integrated view of corporate sustainability integration strategies. Our review's contributions are threefold: (1) we enrich the corporate sustainability strategies literature by identifying the focuses and themes of recent publications; (2) we address the research's fragmentation issue by presenting the sustainability implementation strategies in an integrated view with the essential interdependencies shown at different hierarchical levels and across organizational dimensions simultaneously, (3) we present the theoretical and managerial implications and discuss in detail the crucial interdependencies of sustainability integration strategies. The study finishes with a conclusion highlighting potential avenues for future research.

KEYWORDS
corporate environmental strategy, corporate sustainability, corporate sustainability integration, strategy

1 | INTRODUCTION

For over three decades, various initiatives such as the United Nations (UN) Paris Agreement on climate change, the 2030 Agenda for Sustainable Development and the Net Zero initiative have enabled organizations to contribute meaningfully to the world's sustainability transformation (Friede, 2019). Integrating corporate sustainability (CS) into an organization's strategy has emerged as the first essential hurdle organizations must overcome to become more sustainable.

CS can be defined as fulfilling the organization's responsibility toward the needs of current stakeholders without compromising its ability to fulfill the needs of future stakeholders (Dyllick & Hockerts, 2002). Attempts to break down this definition in an organizational context over last two decades have found three prominent factors of corporate sustainability: environmental, social, and economic (Cunha et al., 2021; Xie et al., 2019). All three factors need to be integrated into the business for the organization to achieve real progress (Baumgartner, 2014).

CS integration is a demanding process, entailing the continual readjustment of organizations' operational practices and strategic planning (Baumgartner & Ebner, 2010) to embed the sustainability factors into the organizations' existing businesses. Despite the fact that interest in CS has snowballed over the last two decades, fewer sustainable changes have been seen in industries than expected (Friede, 2019). Slow or unsuitable CS integration strategies impede these changes (Engert et al., 2016; Peters & Simaens, 2020). Most existing CS integration frameworks or guidance are either too complicated and abstract to replicate in practice or too general and vague to apply in specific situations (Aguinis & Glavas, 2012; Rosen & Kishawy, 2012).

Strategies have been indicated as a suitable means of integrating CS into organizations on an organization-wide and long-term basis (Galbreath & Galbreath, 2009; Porter & Reinhardt, 2007). In a strategy, organizations consider not only short-term but also long-term impacts. This is a vital premise for approaching CS topics since considering only the short-term outcomes could misrepresent CS initiatives as loss-making or poor decision-making in the present (Calabrese et al., 2019; Oertwig et al., 2017). At the normative level, an organization's strategy focuses on ensuring and enhancing the legitimacy of its activities in the view of stakeholders and society as a whole. This comprises corporate vision and policy, corporate governance, and organizational culture (Bleicher, 1996). The strategic management level's strategy ensures that effectiveness is considered and that long-term objectives can be reached. Lastly, the operational level's strategy ensures efficient CS implementations (Engert et al., 2016).

The prior review studies has identified the scholar interest in the CS integration topic (Amini & Bienstock, 2014; Engert et al., 2016; Salzmann et al., 2005). Studies observed a strong focus of literature on building theoretical frameworks for CS (Amini & Bienstock, 2014; Salzmann et al., 2005), on exploring the linkage between companies' CS performance and companies' financial performance (Amini & Bienstock, 2014; Salzmann et al., 2005) and on identifying the drivers for the CS integration (Engert et al., 2016). The reviews also emphasized that the comprehensive theoretical frameworks on the matter lack empirical validations (Salzmann et al., 2005) and applicability in the practice (Amini & Bienstock, 2014), and call for more future empirical studies (Engert et al., 2016).

Since then, there has been a substantial increase in research interest concerning the integration of (CS) into strategy. Between 2016 and 2022, the number of publications related to CS and strategy in the Web of Science (WoS) database alone has nearly doubled compared to the total number of publications found in the preceding 25-year period since the first matching publication in 1991. Notably, research on strategy in the CS integration process has expanded both in scope and depth. Emerging frameworks and empirical studies deconstruct the complexity of CS integration drivers (Saeed et al., 2019; Smith & Besharov, 2019), and offer companies a more comprehensive approach to managing the increasingly intricate strategies associated with CS integration and their interrelated influences (Anthony, 2019). In 2020, Agarwal and colleagues introduced a multidimensional measure of responsible leadership that integrates ethics into strategy, predicting sustainable organizational outcomes such as employee behaviors toward stakeholders based on the type of responsible leadership employed (Agarwal & Bhal, 2020). Similarly, Winnard et al. (2018) proposed a novel framework to integrate social and environmental sustainability into business strategic decision-making processes (Winnard et al., 2018). As the literature on this subject becomes increasingly abundant, it is crucial to maintain connections between scholars' findings (Friede, 2019; Stouten et al., 2018). To the author's best knowledge, no literature review has explicitly addressed these aspects of CS integration strategies.

More concerning is that, as research expands at a rapid pace, the literature landscape is increasingly disconnected, fragmented, and scattered. Publications aimed at different readerships and specific sustainability matters have led to a growing diversification from the research contribution's communality and the lack of a general understanding. Burritt et al. (2020) pointed out that strategy research has so far addressed sustainability by focusing on "their niche problem" and ignoring the consolidated and integrated effects of all sustainability areas (Burritt et al., 2020). Hence, the growing fragmentation of sustainability integration in strategy research has its origins in the adaptive nature of strategy. Weiser et al. (2020) found through their study that the movement of research from a theory-based conceptualized strategy implementation to a more adaptive conception of strategy implementation caused further fragmentation of the general understanding (Weiser et al., 2020). Thus, a new review of the literature is necessary at the moment to present a more up-to-date picture of the current development of the CS integration strategies and to address the current fragmentation of the literature.

This study addresses these issues by exploring the literature from the last 7 years through a systematic review and classifying the research findings in a cohesive and integrated view. In addition, we excluded studies regarding to organizations, whose financial performance is not the primary goals, as prior studies emphasizes these organization's motivation toward CS integration matters differs substantially from those under significant influence of financial performance commitments (Cho et al., 2021). The contributions of this review are threefold. Firstly, our study assesses the most recent publications between 2016 and 2022 to identify the current focuses of CS integration research. Secondly, our study addresses the potential risks of fragmented literature with an integrated view of the CS integration strategies. This integrated view allocates the proposed integration approaches to relevant themes, concepts and dimensions, enabling future researchers to connect their contributions with existing literature more effectively. Thirdly, our study identifies the intertwined relationships between CS integration strategies and emphasizes the importance of the interdependencies and interrelations between organizational dimensions.

The article is structured as follows. Section 2 describes the research process and method. The descriptive and thematic findings are presented in the following two sections. Section 5 discusses a more detailed description of the integrated view of CS integration into strategy, covering the practical and scholarly implications. The limitations of our research will also be presented in this section. The final section presents the conclusion with several suggestions for future research.

2 | METHODOLOGY

We aim to create an objective, systematic, comprehensive and transparent review of the literature focusing on CS integration in strategy. Therefore, a systematic literature review following the evidence-informed method proposed by Tranfield et al. (2003) and Kraus et al. (2022) was selected. To systematically identify all the scholarly findings relevant to our research and to present an integrated view of the current findings on CS integration into strategy, we applied thematic analysis to subjects and categorized the emerging topics into suitable themes following the guidance from Gioia et al. (2013). The process model contains the

following steps: structured material collection, material evaluation and content analysis, and descriptive review (Gioia et al., 2013).

2.1 | Structural material collection

The literature search was executed in two major online databases of scientific literature: WoS and Ebsco. These two are suitable academic sources for both sustainability and strategic studies, as mentioned in recent studies (Gusenbauer & Haddaway, 2020); and validated through recent literature reviews (Fonseca et al., 2021; Kraus et al., 2020).

To maximize our search results, we specified multiple search terms for each topic: sustainability, strategy and integration (Figure 1). Variants of the terms were captured using the truncation symbol "*."

The terms were searched for in the titles, abstracts, and keywords of papers published since 2016. We begin our search from 2016, as the significant increase in quantity of studies on CS strategies are observed in 2016. In the discussion section, we compare and elaborate on the emerged theories with one mentioned in the prior review studies. Before the first screening process, we also excluded all papers not written in English and those that were not peer-reviewed. In addition, we only considered results from business-related journals based on the Social Sciences Citation Index (SSCI), since the focus of this review is located under business-related subjects in WoS and Ebsco. The last search occurred at the end of January 2023 and returned 775 matching results in WoS and 740 matching results in Ebsco. Eighteen articles were identified as duplications and excluded using Microsoft Excel spreadsheets.

In the second selection phase, the researchers individually read through the titles, abstracts, and author-defined keywords of the extracted publications, filtered them based on the prespecified inclusion and exclusion criteria, and shared and discussed the results to minimize bias. The inclusion criteria aimed to achieve a balance

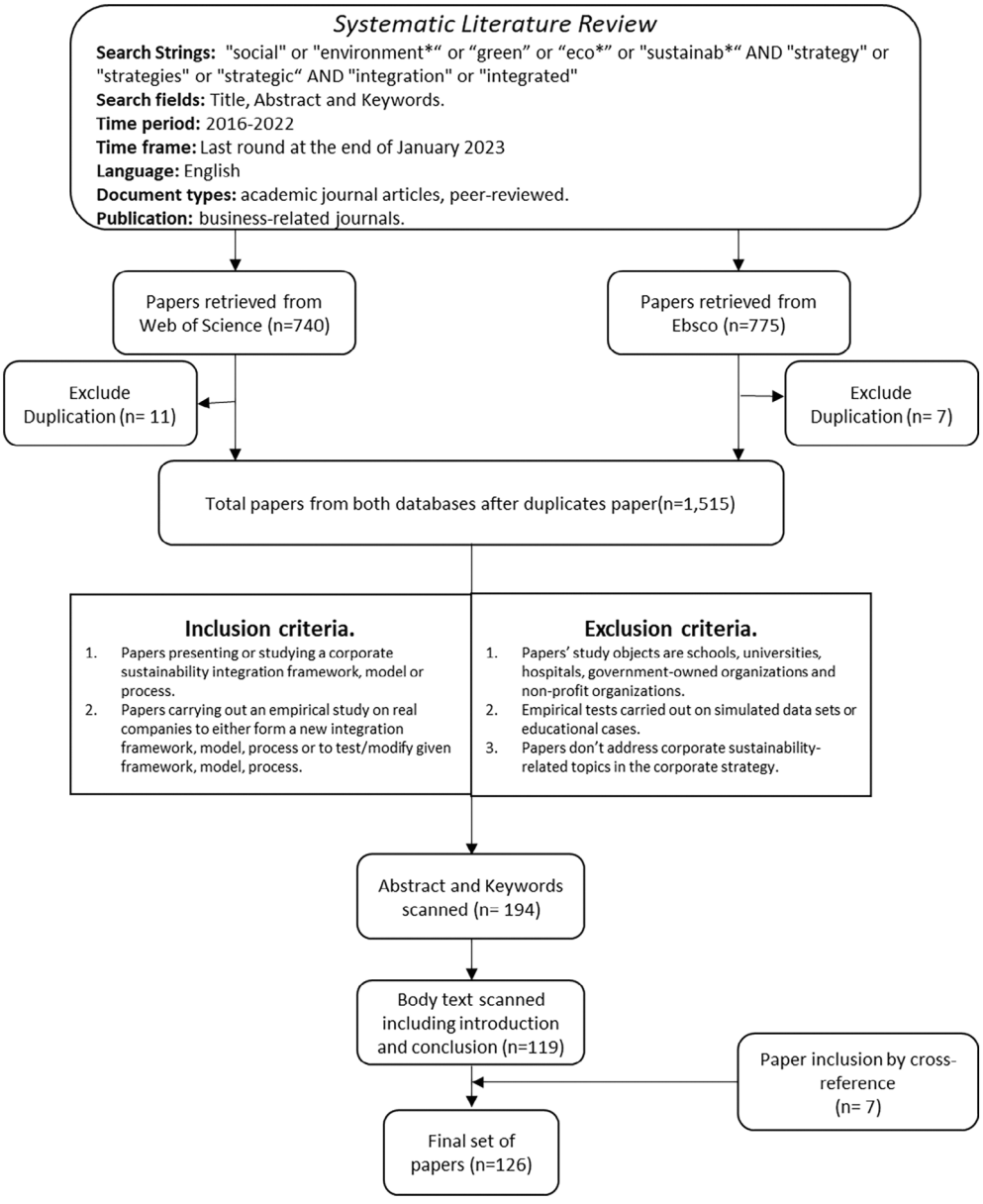

FIGURE 1 Structure of the systematic literature review approach.

between breadth and depth in the findings (Kraus et al., 2020; Tranfield et al., 2003). In addition, we also pursued a strict exclusion strategy to maintain focus on our main research objects (Rumstadt & Kanbach, 2022). We excluded all publications with the research scope on schools, universities, hospitals, government-owned organizations and non-profit organizations, as their unique structure and business purposes varied significantly from our general research observation objects as mentioned in prior section. Secondly, all papers which did

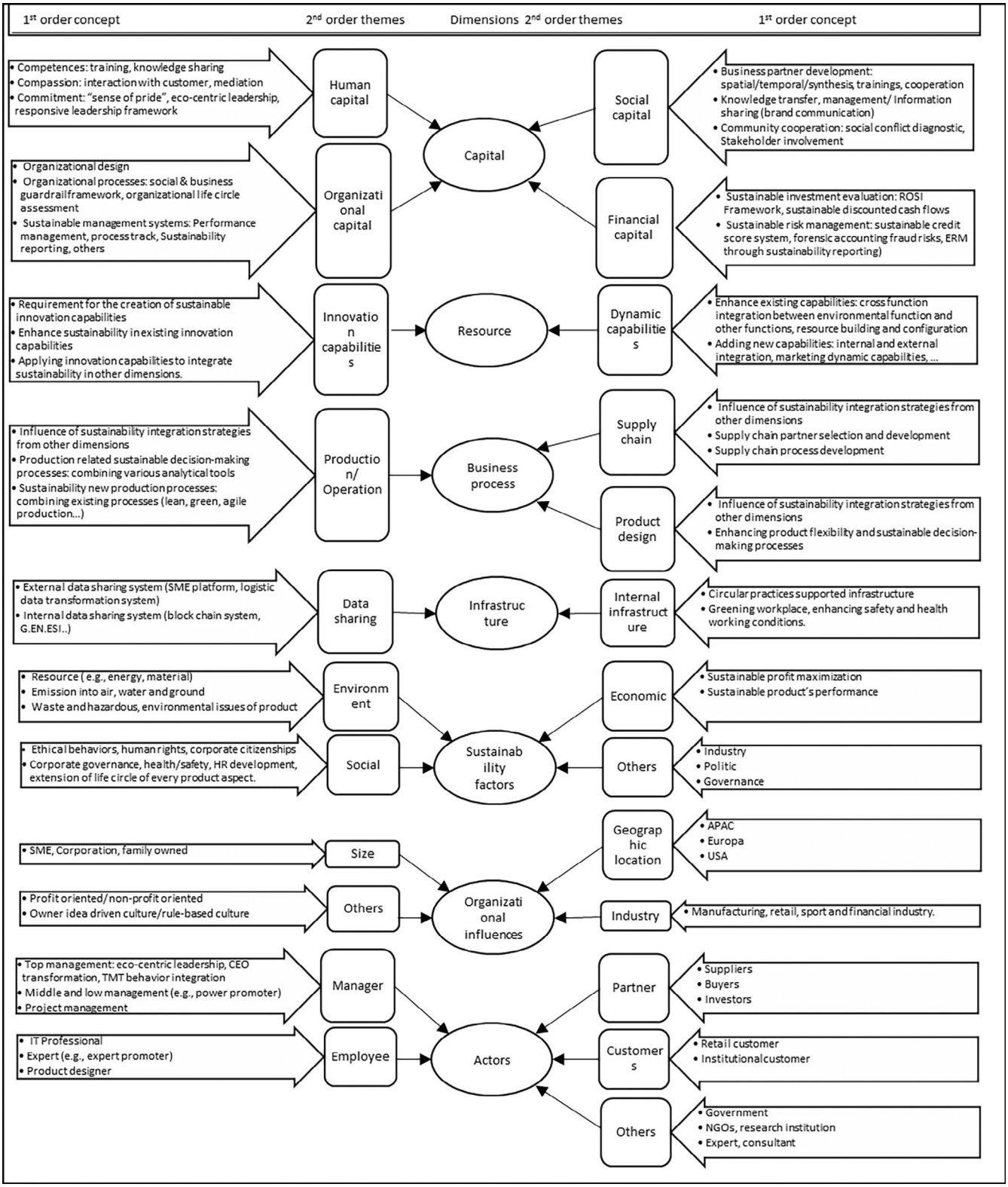

FIGURE 2 Sustainability integration in strategic dimensions derived from second order themes and first order concepts.

not specifically address the integration of CS-related topics in their corporate strategy were removed from the sample. The prespecified criteria helped us filter the results down to a total of 194 publications which remained within scope.

In the third phase of selection, the researchers individually examined the publications in full text. After the discussion of individual results, only 119 publications were jointly agreed to be in scope. By running a backward search on publications mentioned in the texts but not identified in the keyword search, we extracted seven additional relevant publications and included them in the list. The final list for our data analysis consisted of 126 publications.

2.2 | Data analysis

We followed a pattern-inducing technique to make sense of and synthesize the focus and findings mentioned in the publications into meaningful classifications (Gioia et al., 2013). This method was also applied in previous systematic reviews to work with multidimensional concepts and themes (Kohtamäki et al., 2018; Ojansivu et al., 2020). The data analysis followed the multiple assessor method: we grouped the text segments from all articles into meaningful categories based on the similarities of their content. To benefit from multiple perspectives covering both a closeness to and a distance from the data, one researcher collected the data. Meanwhile, the other maintained an analytical distance to ensure the meaningful theory discovery from data (Glaser & Strauss, 2017). The analysis was completed dynamically and iteratively, with individual findings jointly discussed and continuously updated in the primary analysis. When new categories emerged from the data, we compared and discussed how they interrelated with previously discovered categories (Charmaz, 2006). This approach ensured the code's validity and reliability (Kirk & Miller, 1986; Sousa, 2014). The sample's main categories and descriptive information were captured in Microsoft Excel spreadsheets and then further analyzed with the support of the qualitative data analysis program NVivo12.

Our review of the literature revealed 23 themes which emerged inductively and could be allocated to five interactive dimensions and two predefined dimensions. Figure 2 presents the content of the order concepts, themes, and dimensions found through our analysis.

3 | DESCRIPTIVE FINDINGS

Specific patterns and similarities can be identified among the 126 publications in the final sample. The articles were published in 56 journals, with 31% of the publications found in the Journal of Cleaner Production, 11% in Business Strategy and the Environment and 6% in the Corporate Social Responsibility and Environmental Management Journal (Table 1).

The highest number of articles on sustainability integration were published in 2020, with 23 publications (Figure 3). The number of publications has in general grown steadily over the years, although the lowest number of publications was in 2022, which could have resulted from delayed online announcements and availability.

TABLE 1 A summary of the scientific journals identified.

Names of scientific journal	Total publications
Academy of Management Journal	1
Accounting, Auditing and Accountability Journal	1
Administrative Science	1
Administrative Science Quarterly	1
African Journal of Economic and Management Studies	1
Annals of Operations Research	1
Benchmarking	1
British Accounting Review	1
Business Strategy and Development	1
Business Strategy and the Environment	14
Central European Journal of Operations Research	1
Computers and Industrial Engineering	1
Corporate Social Responsibility and Environmental Management	8
Decision	1
Environment, Development and Sustainability	1
European Journal of Operational Research	1
European journal of sustainable development	1
Evaluation and Program Planning	1
Group and Organization Management	1
Industrial Marketing Management	1
International Journal of Logistics Management	1
International Journal of Management Science and Engineering Management	1
International Journal of Physical Distribution and Logistics Management	1
International Journal of Production Economics	1
International Journal of Production Research	3
International Journal of Project Management	1
International Journal of Sustainable Engineering	1
International Journal of Systems Assurance Engineering and Management	1
International Journal of Technology Management and Sustainable Development	1
Journal of Accounting and Organizational Change	1
Journal of Applied Corporate Finance	1
Journal of business and industrial Marketing	1
Journal of Business and Industrial Marketing	1
Journal of Business and Psychology	1
Journal of Business Ethics	1
Journal of Business Research	2
Journal of Business Venturing	1
Journal of Cleaner Production	39
Journal of Computer Information Systems	1
Journal of Developmental Entrepreneurship	1
Journal of Engineering, Design and Technology	1

(Continues)

TABLE 1 (Continued)

Names of scientific journal	Total publications
Journal of Environmental Management	1
Journal of Industrial Ecology	1
Journal of Management and Governance	1
Journal of Management studies	2
Journal of Manufacturing systems	1
Journal of Marketing Communications	1
Knowledge and Process Management	1
Management decision	2
Organization and Environment	2
Procedia CIRP	1
Production Planning and Control	3
Review of International Business and Strategy	1
Supply Chain Management	1
Sustainability	5
Technological Forecasting and Social Change	1
Total	**126**

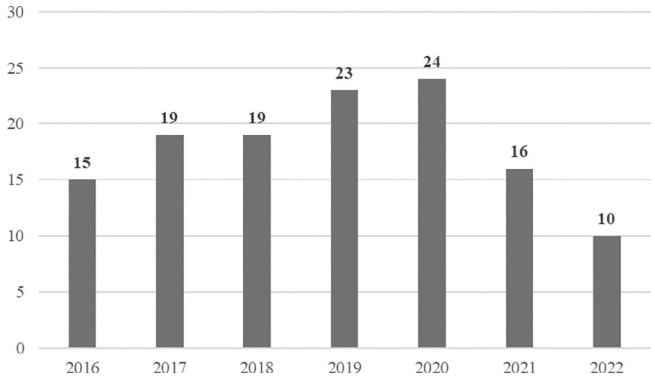

FIGURE 3 Distribution of selected publications per year (2016–2022).

A majority of the empirical studies, comprising more than half (48%), adopt an qualitative approach for their research. The data collection process primarily involves surveys or interviews, supplemented by the utilization of company-provided documents and field observations. In contrast, 44% of the studies employ quantitative approaches, employing regression and *t*-test evaluations. Less than 10% of the studies employ a mixed method, which combines often mathematic models and interview-based validation.

Finally, more than half of the publications addressed sustainability in general in integrating strategy (Table 2). From the sustainability factors, the topics that appeared together most frequently were environmental and economic sustainability (26%). Environmental sustainability is particularly popular as the number of publications focusing solely on environmental factors is more than the total publications considering one of the other two factors alone. This trend could be because research on sustainability integration in the past has been generally based on industry sector data (Hummel et al., 2021), and environmental and economic topics have been the focus of industry organizations' sustainability approaches (Daugaard, 2020).

TABLE 2 Corporate sustainability focus of the selected publications.

Corporate sustainability focus	Total publications
Sustainability in General	62
Environmental and Economic Sustainability	33
Environmental Sustainability	15
Social and Economic Sustainability	6
Economic Sustainability	6
Environmental and Social Sustainability	2
Social Sustainability	2

4 | THEMATIC FINDINGS

We identified capital, organizational capabilities, infrastructure, business processes, actors, influences and corporate sustainability factors as essential dimensions of sustainability integration strategy (Figure 4). These dimensions resonate with prior research: identifying the core of sustainability integration lies in the relationship between internal and external drivers, organizational influences and actors (Engert et al., 2016), the nature of the relationship and the concepts of the corporate approaches and methods (Jones et al., 2018; Silvestre & Fonseca, 2020). By classifying the sustainability integration approaches into suitable dimensions of an organization's structure, we can seamlessly observe the interactions and compare the development of the different integration approaches over time.

4.1 | Research dimension 1: Capital

4.1.1 | Human capital

Human capital is the knowledge and abilities of the employees of an organization (Youndt et al., 2004). Human capital can directly improve social sustainability performance (Süßbauer & Schäfer, 2019) and indirectly support the sustainable transformation of business processes through strategy (Anthony, 2019; Carbone et al., 2019). The approaches to enhancing human capital through strategy are based on three main concepts: competence, compassion, and commitment.

Equipping the workforce with more competencies, both in sustainability and in work-related subjects, is vital for the organization's sustainability transformation (Chiu et al., 2019; Mithun Ali et al., 2019). Compassion can act as a compass for employees to orient toward sustainable decisions and balance environmental and economic sustainability in daily business decision-making (Engel et al., 2020). Finally, commitment is the key ingredient for turning

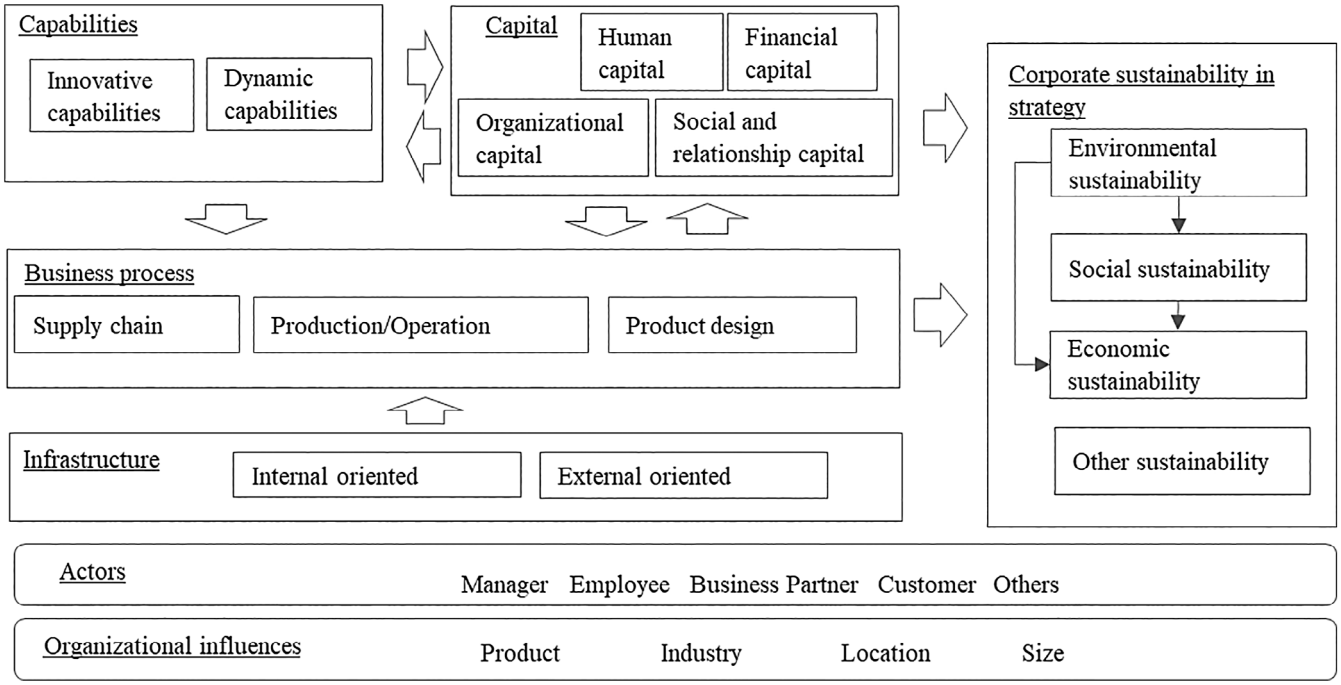

FIGURE 4 An integrated view on corporate sustainability integration in strategy.

sustainability into an internal, widely shared concern and improving the consistency of sustainability behaviors (Douglas et al., 2021).

4.1.2 | Organizational capital

Management systems exist to appropriate and store knowledge at the physical organizational level (Subramaniam & Youndt, 2005) and form an important part of organizational influences. The organizational capital is in accordance with the intellectual capital pillar outlined in the Integrated Reporting (IR) framework introduced by the International Integrated Reporting Council (IIRC) in 2021 (International Integrated Reporting Council, 2021). There are general and specific CS integration approaches in a management system. On the general level, improving existing areas in the management system, such as work-life balance management (Wepfer et al., 2018) and working safety conditions (Padash & Ghatari, 2020), can drive the organizational business processes toward sustainability beyond legal requirements (Battaglia et al., 2016). New approaches such as environmental management systems (Rötzel et al., 2019; Sundin & Brown, 2017) and green reward systems for green activities (Saeed et al., 2019) can create legitimacy for sustainable initiatives (Reihlen et al., 2022; Schrobback & Meath, 2020). Specifically, decision-making processes using analytical frameworks (Beyne, 2020; Kiesnere & Baumgartner, 2019) and performance management tools such as sustainability key performance indicator (KPI) (Hristov et al., 2022), reporting indices (Planko et al., 2017), or sustainability reporting index (SRI) model (Garg, 2017) are the two areas with the most advanced CS integration strategies.

4.1.3 | Social and relationship capital

Social and relationship capital is the information, understanding, skills and abilities embedded within, available through, and derived from a network of relationships in the organization, both internal and external (Subramaniam & Youndt, 2005). The social and relationship capital components are congruent with the social and relationship capital pillar elucidated in the Integrated Reporting (IR) framework put forth by the International Integrated Reporting Council (IIRC) in 2021 (International Integrated Reporting Council, 2021). This knowledge must be grounded in the requirements for sustainability implementation in strategy to succeed (Brix-Asala et al., 2021). Knowledge transfer, management, and collaboration can improve internal sustainability performance when these are incorporated into strategic plans (Widjojo et al., 2020).

4.1.4 | Financial capital

Financial capital is essential to sustainability integration (Neumüller et al., 2016). To ensure that strategy can address sustainability matters and that financial capital remains stable, quantifying sustainability factors and reducing unknown risks related to sustainability are paramount.

To evaluate the profitability of sustainability initiatives, the return on sustainability investment (ROSI) ratio, which is determined by quantifying CS-related factors of the invested company in the return on investment calculation frameworks, could be included in the overall investment valuation (Eckerle et al., 2020). In addition, a longer

discounted period in the project evaluation of reinvestment strategies could prevent the quantitative comparison of sustainability projects with standard projects, since sustainable projects tend to be more profitable in the long run (Kudratova et al., 2018).

Sustainability-related risks are difficult to measure and manage. To reduce sustainability credit risks, a multicriteria sustainable credit score system using the fuzzy best-worst method (BWM) and fuzzy technique for order preference by similarity to ideal solution (TOPSIS) could enable increased transparency on the risk level of invested companies (Roy & Shaw, 2021). Organizations could also benefit from sustainability reporting to reflect the environmental and social risks of internal and external actors in firm performance valuation (Shad et al., 2019). To deal with risks which are more difficult to detect, such as f raud, a comprehensive balance scorecard (internal processes, customer, and learning processes) allows organizations to spot fraud potential more quickly (Yang & Lee, 2020).

4.2 | Research dimension 2: Capabilities

4.2.1 | Dynamic capabilities

Sustainability-oriented dynamic capabilities are "the firm's ability to integrate, build and reconfigure competencies and resources to embed environmental sustainability into new product development to respond to changes in the market" (Dangelico et al., 2017). External stakeholder integration, technology-adaptation capabilities (Gelhard & von Delft, 2016), new knowledge creation (Dangelico et al., 2017), and marketing dynamic capabilities (Butkouskaya et al., 2021) are additional capabilities that can support the organization's sustainable transformation.

4.2.2 | Innovative capabilities

Innovative capabilities can be defined as capabilities "to generate innovations that refine and reinforce existing products and services," as capabilities "to generate innovations that significantly transform existing products and services" (Subramaniam & Youndt, 2005) or as "capabilities to implement creative ideas successfully within an organization" (Zhao et al., 2005). Innovation plays a vital role in enabling CS in an organization (Verdecho et al., 2021). For instance, knowledge management to keep the organization's adaptabilities updated with the changes induced by climate impact (Dooley, 2017; López-Torres et al., 2019).

4.3 | Research dimension 3: Infrastructure

Sustainability-oriented organizational infrastructure is the first building block of a sustainable business ecosystem (Sanchez-Planelles et al., 2022). Sustainability-oriented infrastructure enables organizations to optimize the benefits from data when dealing with sustainability issues. Through information-sharing infrastructure, organizations receive external support (Kong et al., 2021). In standard business operations, an increased number of environmentally friendly behaviors and ecologically responsible business processes can be promoted through green information governance models (Hardin-Ramanan et al., 2018) or by enterprise resource planning (ERP) systems, which allow real-time data flows to be transferred directly from manufacturing to management (Ferrari et al., 2021).

4.4 | Research dimension 4: Business processes

4.4.1 | Product and service design

Integration of sustainability into product design focuses on enhancing the product's flexibility toward the organizational way of doing business. Assuming that the organization has a structural business process, product development could include sustainability factors in design development via a structural approach such as lifecycle assessment (Udokporo et al., 2021) or scenario analysis (Sansa et al., 2019). Applying a "compromising" strategy of allowing either "splitting" the product design to let the customer decide for themselves between sustainability and quality, or "reinterpreting" the values and goals set for the product (Hengst et al., 2020), has also proven to be effective.

For service providers, socially responsible services function as a product differentiation strategy, which will eventually transform the operation toward sustainability (Bruccoleri et al., 2018).

4.4.2 | Production and operations

Production functions can use energy consumption as a trade-off to ensure both lean and green production goals (Baumer-Cardoso et al., 2020). Table 3 summarizes all proposed production process strategic combinations that enable sustainability integration. Sustainability integrated into production and operations can enhance the organization's performance through the following outcomes: (1) reduced waste production (Gholami et al., 2021), (2) better production safety quality (Zhang et al., 2021), (3) better product quality (Karaosman et al., 2020), (4) improved production efficiency and reduced production costs (Gholami et al., 2021), and (5) reduction of environmental emission (Sadiq et al., 2021).

4.4.3 | Supply chain

A sustainable supply chain can improve the overall supply chain's general performance (Fekpe & Delaporte, 2019; Govindan et al., 2019; Huang et al., 2020; Shah & Soomro, 2021) and in particular improve aspects such as project management (Demirkesen & Ozorhon, 2017) and lower negative environmental impact (Anvari & Turkay, 2017; Yavari & Zaker, 2019).

TABLE 3 Sustainable integration models for production strategies.

Authors and year	Production model	Production structure
Ramos et al., 2018	Lean manufacturing Cleaner production	A benchmark based on lean manufacturing and cleaner production to assess the clean production practices
DiBella, 2020	Single/double/tripple loop learning	Loop learning models to assess and identify the most suitable course of action to address climate changes in production
Sadiq et al., 2021	Blue ocean manufacturing (BOM) lean manufacturing	Lean tool o is combined with the four-action framework of BOM to reduce lead time, value-added time and emission.
Gunarathne & Lee, 2019	Cleaner production	A framework to identify the information usage level required of cleaner production strategies (efficiency, consistency, and sufficiency).
Baumer-Cardoso et al., 2020	Lean manufacturing Green production	A simulation model to identify how Lean manufacturing and green production can be integrated.
Umpfenbach et al., 2018	Assortment planning	Mixed-integer linear programming formulation for integrated assortment and supply chain network design models.
Ben Ruben et al., 2017	Lean manufacturing Six Sigma	Lean manufacturing and Six Sigma strategy combined to reduce raw material and energy consumption
Gholami et al., 2021	Lean production Six Sigma	Six Sigma's method systematizes and aligns environmental value stream mapping of Green lean production.

Organizations can adjust sustainable values, goals and green initiatives to align with suppliers and customers through supplier integration and customer integration. The distribution plan can be optimized to enable customers to make more sustainable decisions based on their preferences (Melkonyan et al., 2020). The inventory process can reduce food waste with the support of a radio frequency tracking approach (Green et al., 2017) or with analytical optimizing models such as the Decision-Making Trial and Evaluation Laboratory (DEMATEL) (Mithun Ali et al., 2019), the interpretive structure modeling (ISM) (Magalhães et al., 2021), or fuzzy multicriteria methods (Padhi et al., 2018). The purchasing process can be improved by enabling information sharing between the purchasing department and other business parties (González-Benito et al., 2016; Lo et al., 2018). Reverse logistics with an integrated decision model reduces the transportation time of goods and the associated carbon footprint (Lechner & Reimann, 2020).

4.5 | Research dimension 5: Actors

Different actors should be actively involved in the integration of sustainability into an organizational strategic plan. The role of each actor during the integration process can positively influence development.

While employees are viewed as enablers and judges of the sustainability integration process (de Campos & Simon, 2019; Smith & Besharov, 2019; Wepfer et al., 2018), managers are considered as enablers of sustainability integration (Agarwal & Bhal, 2020). Managers' commitment to sustainability and their related knowledge can influence sustainability integration directly through the manager's behaviors, and indirectly through their influence on employees (Friedman et al., 2016), a situation which was especially evident during market turbulences (Derqui, 2020).

A sustainability promoter has a unique role in enhancing employees' awareness and commitment, and spreading sustainable knowledge (Wolff et al., 2020). Their role in the sustainable integration process changes significantly throughout the integration from actively promoting sustainable initiatives (Süßbauer & Schäfer, 2019) to observing the integration process from the sidelines in the latter phase (Schrobback & Meath, 2020).

Direct business partners need to be involved in the sustainable integration process. Knowledge and information sharing, business development, and collaboration with business partners enable organizations to stay committed to similar sustainability goals and responsibilities (Du et al., 2018). Other external actors, such as local communities, governments and standards providers, are often the observers and judges of organizations (Kücükgül et al., 2022; Sroufe, 2017).

4.6 | Research dimension 6: Organizational influences

The following four main organizational influences significantly impact the organization's sustainability integration choices: product, industry, location and size.

An organization's industry and product range define the focuses of the organization's sustainability integration. While manufacturers direct their efforts toward enhancing sustainability in their production strategy, focal organizations concentrate on the supply chain process. Moreover, certain limitations of sustainability integration are only relevant to specific industries, such as high competition in slow-velocity industries (Dooley, 2017), a lack of resource providers in high fashion industries (Karaosman et al., 2020) and social conflicts in mining industries (Saenz, 2019).

Company size is a controversial factor in CS strategic planning. Corporations could rely on the planned strategy to integrate sustainability, but small or medium-sized companies also need emerging strategies to lead to successful results (Luederitz et al., 2021). Value creation platforms enable small and medium enterprises lacking in resources to support each other and share production and operations knowledge, while these benefits are irrelevant for more prominent organizations with abundant resources and knowledge as they do not usually add value to the sustainability transformation (Widjojo et al., 2020).

The organization's location is another factor which may add particular conditions that favor specific strategies. For example, while social sustainability is a focus in developing countries, environmental sustainability matters receive the most attention in developed countries (Vincze et al., 2021).

4.7 | Research dimension 7: Corporate sustainability in strategy

CS factors determining the focus of the approach to strategy integration vary depending on the integration dimensions. Environmental sustainability in the business processes dimension is related to energy usage, material usage and waste management. Social sustainability differs in the business processes and capital dimensions: In the capital dimension, social sustainability is usually the internal and external harmonizing relationships between different stakeholders, employees' health and safety, customer safety and satisfaction, positive influences on the community and adverse impact; in the business processes dimension, social sustainability has more of an implementation role in supporting organizations to achieve environmental and economic sustainability. Economic sustainability is essential to every organization, focusing on increasing productivity, effectiveness and business stability.

5 | DISCUSSION

5.1 | Theoretical and managerial implications

This review provides significant insights and implications for the CS literature on CS integration into strategy by presenting the emerging integration approaches with their findings and contributions in an organizational context. This review also connects these organizational dimensions by their interdependent relationships and elaborates on the connections' implications for future researchers and practitioners, which will be discussed in detail in the Section 5.2.

Numerous theories are commonly employed in sample studies, particularly those that build upon stakeholder theories. Such studies aim to delve deeper into how specific driver types of corporate sustainability (CS) can influence CS integration strategies. For example, responsible leadership frameworks address the roles of management (Agarwal & Bhal, 2020), while green employee frameworks focus on enhancing sustainable behaviors among employees (Saeed et al., 2019). Additionally, a social conflict diagnostic tool suggests suitable measurements for corporations to address social requirements (Saenz, 2019). These theories and frameworks are based on positive evidence linking internal and external stakeholders to a company's CS performance, as established in earlier literature (Cochran & Wood, 1984; Williams & Seaman, 2016) and the social impact hypothesis (Cornell & Shapiro, 1987) as mentioned in prior review (Salzmann et al., 2005). Moreover, there is a notable presence of new frameworks and theories that apply the resource-based view (Barney, 1991) and sustainable management system. These frameworks acknowledge the potential synergy in managing and integrating multiple CS factors, as well as combining CS processes with other processes such as lean and green manufacturing (Baumer-Cardoso et al., 2020), sustainability-oriented dynamic capabilities frameworks (Dangelico et al., 2017), environmental sustainability performance enhancing social sustainability performance framework (Carbone et al., 2019). Prior to 2016, similar theories were applied in CS studies, such as the positive synergy framework (Salzmann et al., 2005; Waddock & Graves, 1997); resources-based theory were also often applied, especially to identify success factors for strategy as mentioned in prior review (Engert et al., 2016). Lastly, the triple-bottom line framework is one of the most frequently mentioned theories in empirical studies that aim to demonstrate the achievement of integrated CS through proposed approaches (Beyne, 2020; Lo et al., 2018). This framework is also referenced in the corporate sustainability framework as an advanced level of CS sophistication (Amini & Bienstock, 2014).

Moreover, we also provide practitioners with a helpful guild to create CS integration strategies based on the interconnection between organizational dimensions and the existing capital, resources. Our study recognized and emphasized the consideration of the overall organization's capital, capabilities and infrastructure and enable practitioners to measure easier the levels of sustainability they could achieve.

5.2 | Interdependencies of sustainability integration in strategy

To keep pace with the world's rapid sustainability transition, research on sustainability integration in strategy is expanding in complexity, as well as in multidimensional and multilevel connections and interactions. A comprehensive and integrated view of incorporating sustainability factors into an organizational strategy is required. The interdependencies between dimensions of sustainability integration in strategy are detailed here.

The success of sustainability implementation in organizational strategies, especially in the business process dimension, is inextricably linked to organizational capabilities and capital. The commitment of employees strengthens the stability of the sustainability integration in the production strategy, organizational sustainability-oriented capabilities enable the supply chain strategy to react and adjust along with environmental and social changes, and finally, achieving sustainable

goals is only meaningful for an organization with sufficient financial resources to further alleviate the effects (Kayikci et al., 2022). As a result, organizations need to monitor closely those strategic activities involving a wide range of capital and capabilities in their sustainability transformation (Macchi et al., 2020).

Data are a critical foundation for value creation because they provide the organization with a better understanding of reality and the context in which it must define appropriate solutions (Silvestre & Fonseca, 2020). Developing organizational infrastructures such as communication and logistics systems to transmit and store sustainability-related data would thus benefit a wide range of strategic plans in all dimensions, from employee development to green and sustainable operations (Weiser et al., 2020). However, in practice, despite the availability of valuable data, the use of information in some business processes is still minimal due to a lack of sustainability awareness and knowledge (Gunarathne & Lee, 2019).

As intertwined organizational processes are unavoidable in daily business, these interactions could support sustainability integration in the strategic plan and its implementation. In decision-making processes such as supplier selection, production process selection or product characteristic selection, the sustainability level of other business processes can determine choices that are beneficial in the long term. The tight connection between the business processes emphasizes the importance of sustainable transformation in all functions to create an organizational sustainability landscape, as each process is interconnected and influences the others (Macchi et al., 2020).

Finally, the linkages between the sustainability factors are also crucial to making the strategy more sustainable. Environmental and economic sustainability are usually positively correlated, as environmental sustainability is often associated with economic benefits such as lower production costs or limited damage caused by environmental degradation. However, in some cases, economic and environmental factors must compensate for each other: lean production is also green production when reduced economic effectiveness is traded for less water consumption during production (Baumer-Cardoso et al., 2020). In contrast, environmental sustainability has only positively affected social sustainability thus far, as green commitments increase the business partners' trust and reliability (Carbone et al., 2019). Hence, social sustainability also has a positive influence on economic sustainability. On the one hand, internal social sustainability improves employee productivity and organizational communication. On the other hand, external social sustainability improves an organization's social relationships and enhances collaboration outcomes and value creation.

5.3 | Limitations

This systematic literature review is not without limitations. Our findings should be interpreted in light of two limitations. The exclusion of non-English publications and publications in journals not directly related to business may have excluded insightful contributions. We also recognize that, as this review aims to create a general view of CS integration into strategy, our findings may need to be adjusted for specific industry settings upon practical application.

6 | CONCLUSION AND FUTURE RESEARCH

Researchers have studied CS integration into strategy in great depth over the last 7 years. Through a systematic literature review of 126 publications, we have contributed to the CS and strategy literature by connecting and integrating the fragmented scholarly findings into an integrated view. This review demonstrates how the disjointed literature can be linked to form a continuous landscape. Hence, by categorizing the proposed approaches' themes, concepts, and findings into a more cohesive view, prior research contributions could be assigned to appropriate groups, and future researchers can allocate their contributions to existing literature. We identified that CS integration approaches focused mainly on building CS-oriented capital, capabilities and infrastructure, motivating more sustainable business processes to emerge and involving more essential internal and external actors in the process. However, an organization's characteristics must also be considered when planning a new CS integration strategy. Our review also highlighted how intertwined the CS integration strategies are in an organization across the organizational functions and various streams of actors.

The research conducted in this study also finds some potential avenues for future research. Firstly, the success of sustainability integration approaches is usually only measured based on aggregated sustainability performance or a singular sustainability factor's performance. Therefore, the potential conflicts between sustainability factors' benefits in the integration processes are usually neglected (Baumer-Cardoso et al., 2020). Future research on more detailed performance measurement and management of all sustainability factors could significantly benefit the organizational sustainability landscape.

Secondly, the integration of CS into the business processes' strategy remains the main focus of the organization's sustainability transformation goals. However, the proposed production or product design processes are mainly product-oriented, offering little or no insight for service-oriented organizations. Only two studies in our sample have built and tested their models for service providers (Bruccoleri et al., 2018; Douglas et al., 2021). Overall, we see a significant gap in the understanding of sustainability integration in service providers and encourage more research with close attention to service providers' characteristics to improve the applicability of prior developed integration approaches.

Finally, although organizational characteristics have emerged as essential elements in sustainability integration in strategy, the research in this aspect is still in its infancy. Several studies have pointed out the differences in sustainability in strategy between small organizations and corporations. Nevertheless, little is known about these approaches of family businesses or listed organizations in particular (Clauß et al., 2022). Expanding research into various organizational types would undoubtedly enhance our understanding of how sustainability integration in strategy achieves the most benefits.

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