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RESEARCH ARTICLE

Business Strategy and the Environment

WILEY

Configurations of sustainability-oriented textile partnerships

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Funding information
Academy of Finland's Strategic Research Council, Grant/Award Number: 327299

Abstract

Firms configure their sustainability-oriented partnerships differently depending on the sustainability issue, partnership types, and mechanisms (product, process, policy, and awareness raising) and target change at various levels (firm, industry, supply chain, and society). We study how sustainability-oriented partnerships in the textile industry are configured by analyzing 444 partnerships using a mixed-method approach. Textile firms partner to tackle environmental issues such as circularity, waste, and sustainable materials, utilizing product and process mechanisms and create firm-level change. In contrast, these firms address social issues such as education and job development, labor and working conditions, poverty, and inequality through cross-sector partnerships that target change beyond firm boundaries. We discuss these findings critically by drawing on and contributing to two literature areas: sustainability-oriented partnerships that study partnership configurations and the sustainability in textiles. Our findings highlight the importance of issue and context specificity when partnering for sustainability.

KEYWORDS
change, issues, mechanisms, partnership configurations, partnerships, sustainability, textile

1 | INTRODUCTION

Sustainability issues are often considered too complex and interdependent for firms to tackle on their own (Hartmann et al., 1999; Niesten et al., 2017). Therefore firms address these issues collaboratively through different types of partnerships (Beyers & Heinrichs, 2020). Partnerships are particularly crucial for progress toward sustainability in the textile industry.[1] Because of the global vertically disintegrated value networks that characterize the textile industry, involving firms of all sizes and market segments, the shift toward more sustainable practice requires change across a broad range of firms and geographies (United Nations Environment Programme [UNEP], 2020). Existing research already shows that textile firms use partnerships to address various sustainability issues and bring about changes within and beyond the firms' boundaries (Beyers & Heinrichs, 2020; DiVito et al., 2020; Moorhouse & Moorhouse, 2017).

However, to date, there have not been any systematic empirical studies showing how textile firms use different partnership configurations to address various sustainability issues, which would also map the dominant issues motivating textile firms to form partnerships. We believe this is a substantial gap that needs to be filled for two reasons. Firstly, a recent report about the industry suggests that "the awareness of sustainability and circularity issues and the need for change in the textile industry has never been higher" (UNEP, 2020, p. 6). Thus,

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Abbreviations: CS, cross-sector partnership; E, environmental sustainability; GHG emissions, greenhouse gas emissions; H&M, Hennes & Mauritz Group; IF, inter-firm partnership; ILO, International Labour Organization; M&S, Marks & Spencer; NGO, non-governmental organisations; PaCt, Partnership for Cleaner Textile; S, social sustainability; WRAP, Worldwide Responsible Accredited Production; WWF, World Wildlife Fund.

[1]In this article, when we refer to the textile industry, we mean an overarching sectoral area that includes the whole value chain from fiber production to yarn and fabric production and finally clothing production and retail.

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evidence of which sustainability issues are addressed by textile firms through partnerships is a valuable contribution. Secondly, progress toward solving sustainability issues has been slow, and the industry is often criticized for lack of action (Boström & Micheletti, 2016). While several empirical studies focus on in-house improvements that can be helpful to guide scholars and industry firms (Daddi et al., 2019; Jia et al., 2020; Wong & Ngai, 2021), there is very little systematic and empirical knowledge about the specific issues that motivate textile firms to form partnerships and more importantly, how these partnerships are configured. It is known that "if intentionally designed to support a paradigm shift, [partnerships] can be a powerful component of the change process" (Jessup et al., 2016, p. 41). Thus, an empirical analysis of various partnership configurations is beneficial to further guide scholarly research and practice by providing state-of-the-art. Our study is positioned to fill these gaps.

Partnerships can be configured in various ways (Jessup et al., 2016; Lin & Darnall, 2015; Malhotra et al., 2005; Stadtler & Lin, 2019). This article mainly focuses on three characteristics that make up these partnership configurations: sustainability issues, partnership types, and partnership mechanisms. Sustainability issues are context specific and may vary from challenges that include water, soil, and air emissions that affect the prosperity of natural environments and communities' health and living conditions. Partnership type considers whether the partners are from within the same sector (inter-firm alliances) or go beyond the private sector and includes parties from public or non-profit sectors (cross-sector partnerships) (Wassmer, 2010). Partnership mechanism refers to the tools that partners use to reach out beyond the partnership boundaries, whether it be through product design and development, process alterations, policy changes, and awareness raising (Stadtler & Lin, 2019). By combining these different characteristics, firms develop various configurations to create social and environmental change at the firm, industry, supply chain, or societal levels (Stadtler & Lin, 2019).

In this paper, we ask: How are sustainability-oriented partnerships in the textile industry configured concerning sustainability issues, partnership types, and mechanisms, and how these partnership configurations are associated with change at different levels? To answer these questions, we systematically analyze the configurations of 444 sustainability-oriented textile partnerships. We conduct a mixed-method analysis. Initially, we use qualitative content analysis to code the specific issues, mechanisms, partnership types, and partnerships' targeted level of change. Using quantitative analysis that includes regression and frequencies, we depict how different partnership configurations are associated with change at different levels. We demonstrate 15 partnership configurations that help textile firms tackle environmental and social sustainability issues.

Our paper offers contributions in two areas. Firstly, we contribute to the scholarly conversation on sustainability issues within textiles by mapping the dominant issues textile firms address through partnerships (Mair et al., 2016; Niinimäki & Hassi, 2011). Secondly, we add to the ongoing conversation regarding partnership configurations in the context of sustainability challenges (Beyers & Heinrichs, 2020; Jessup et al., 2016; Stadtler & Lin, 2019) by unpacking the relationships between issues, partnership type, mechanisms, and level of change. Finally, we provide pathways for partnership management professionals by demonstrating how they could better utilize collaborations to trigger a multi-level and multi-dimensional change.

2 | LITERATURE REVIEW

2.1 | Background: Sustainability issues in textiles

Since the 1980s, the textile industry has changed significantly. The most significant change has been the increase of the speed-to-market as fast fashion became mainstream (Bhardwaj & Fairhurst, 2010). Fast fashion is characterized by the rapid production of apparel, brought to consumers at a relatively low price, leading to a throwaway trend (Bhardwaj & Fairhurst, 2010) and defined as "the retail strategy of adapting merchandise assortments to current and emerging trends as quickly and effectively as possible" (Sull & Turconi, 2008, p. 6). With this trend, clothing production has almost doubled over the last 15 years (Freudenreich & Schaltegger, 2020). Simultaneously, combined with the internationalization of supply chains and export-led growth strategies, manufacturing shifted to developing countries (Taplin, 2014), leading to the emergence of sustainability issues in countries such as India, Bangladesh, and Pakistan (Saha et al., 2021).

In the textile industry, depending on the type of fiber and production process, it is fair to argue that the environmental impacts vary. Generally, the industry accounts for "10% of global industrial water consumption" (Lyu et al., 2021, p. 2). One of the most common fibers used in textile production is a synthetic fiber: polyester. Every year, due to washing clothes made of synthetic fibers such as polyester, 0.5 million tonnes of microplastics are released into the oceans, thus, leading to global water pollution (Niinimäki et al., 2020). Furthermore, the industry is also responsible for nearly 10% of global greenhouse gas (GHG) emissions (European Parliament, 2021). Thus, air pollution and GHG emissions are other important environmental impact areas of the industry (Jia et al., 2020; Niinimäki & Hassi, 2011).

Beyond environmental issues, social sustainability issues are particularly problematic in the overarching textile industry. Social sustainability issues include poor working conditions, labor rights, low wages, child labor, and modern slavery (Carrigan et al., 2013; Mair et al., 2016; Ozdamar Ertekin et al., 2020). Even in the developed world, firms such as Boohoo face modern slavery investigations due to low pay, as little as £3.50 an hour (Duncan, 2020). In the developing world, poor working conditions and low wages in the textile value chain have been a cause for concern since the early 1990s, leading to the anti-sweatshop movement (Schaper & Pollach, 2021). Indeed, textile workers in countries like Vietnam receive low wages of US $44–47.5 per month while not being entitled to any social and health benefits and lacking adequate health and safety standards (Cox, 2015).

In 2013, Rana Plaza in Bangladesh, housing five garment factories supplied to global fast-fashion brands such as Primark, collapsed, killing at least 1132 people and injuring more than 2500 (Williamson &

Lutz, 2019). This disaster manifested these poor working conditions and brought media and public attention to the sustainability challenges. Thus, it led to further scrutiny of the textile industry's unsustainable practices, increasing pressures from NGOs and civil society to address these environmental and societal issues (Ozdamar Ertekin et al., 2020; Thorisdottir & Johannsdottir, 2020).

2.2 | An overview of sustainability initiatives in textiles: In-house and market solutions

Textile firms can use in-house sustainability solutions to improve their social and environmental sustainability standards (Desore & Narula, 2018) as part of their corporate sustainability agendas (de Abreu et al., 2012; Stewart & Niero, 2018). Primarily, firms engage in eco-efficiency initiatives that "either reduce resource use to produce the same output, or to produce more clothes with a given amount of resources as input" (Freudenreich & Schaltegger, 2020, p. 1). Some firms go beyond and explore new sustainable business models that can replace the linear "take-make-dispose" fast-fashion model by engaging with alternative models like second-hand sales, rental models, upcycling, and recycling (Stål & Corvellec, 2018). Though rarer than circular fashion initiatives, some firms, such as Patagonia, encourage their customers to consume less by engaging in sufficiency programs (Freudenreich & Schaltegger, 2020). However, in-house solutions often focus on bringing change at the firm level, that is, enhancing a firm's environmental or social sustainability performance, and fall short of going beyond this level.

Textile firms can also engage in sustainability using the market mechanism, which considers changes in the offering itself (sustainable clothing), the demand (consumers), and the supply side (Lorek & Lucas, 2003). Indeed, a recent review posits five market-driven strategies that help firms improve their sustainability performance: entering new environmental (or social) markets or market segments, introducing new environmentally (or socially) oriented products, redesigning existing products to be ecologically sensitive, advertising environmental benefits/green marketing, and redesigning product packages (Desore & Narula, 2018). Today, many firms develop sustainable clothing "which incorporates one or more aspects of social and environmental sustainability, such as Fair Trade manufacturing or fabric containing organically-grown raw material" (Harris et al., 2016, p. 309), including global retailers such as H&M.

Regarding the supply side of market initiatives, extant literature notes how large retailers often translate the societal pressures they experience to their suppliers and demand more sustainable practices through codes of conduct (Köksal et al., 2017). While market solutions may help legitimize sustainable practices in the supply chain, their effectiveness is often limited because of the power asymmetry that characterizes the textile industry (Morris & Barnes, 2009). This means not all suppliers would be financially and resource-wise able to respond to buyer-driven sustainability standards, leading to an unintended consequence: suppliers' failing to comply and losing the chance to integrate sustainability into their core.

Regarding the demand side of market initiatives, social movements, including the zero-waste movement (Moorhouse & Moorhouse, 2017), eco-fashion driven by anti-consumerism (Joy et al., 2015), ethical fashion (Joergens & Barnes, 2006), and more recently, circular fashion (Corvellec & Stål, 2019), would enable sustainable textile markets to grow by creating awareness and educating consumers. However, consumers' beliefs about sustainable offerings, willingness to pay a higher price, and consumption habits that foster fast fashion are likely to inhibit the expansion of sustainable textile markets (Lorek & Lucas, 2003).

Other than in-house (make) and market (buy) solutions, textile firms also increasingly address sustainability challenges through collaboration (Beyer & Arnold, 2022a; Karthik & Gopalakrishnan, 2014; UNEP, 2020). Therefore, in what follows, we draw on the literature on sustainability-oriented partnerships.

2.3 | Sustainability-oriented partnerships

Amongst making, buying, or collaborating decisions, several studies found that partnerships effectively address environmental and social sustainability issues and improve firms' environmental, social, and economic performance (Dangelico et al., 2013; Dangelico & Pontrandolfo, 2015; Husted & de Sousa-Filho, 2017). Herein, we use the term sustainability-oriented partnerships to refer to firms' collaborations with external organizations to reduce negative or generate positive social and environmental impact (Crane, 1998; Niesten & Jolink, 2020; Stadtler & Lin, 2019; Wassmer et al., 2014).

From a resource-based perspective, involvement in a sustainability-oriented partnership can help firms access new resources and capabilities or leverage combined capabilities to foster social and environmental improvement (Baranova & Meadows, 2017; Clarke & MacDonald, 2019). Partnering with organizations across sectors can help firms unlearn dysfunctional routines and develop sustainable ones thanks to inter-organizational learning in such settings (Baranova, 2022; Donbesuur et al., 2021). Partnerships also provide legitimacy to joining parties because partners publicly acknowledge each other's sustainability efforts and recognize each other's progress (Kishna et al., 2017; Patala et al., 2017).

To create such capability and legitimacy benefits, firms must configure their partnerships effectively (Gutiérrez et al., 2016; Lin & Darnall, 2015; Stadtler & Lin, 2017, 2019). Indeed, one study notes that when firms fail to configure their partnerships in the right structure, they can be "locked in the past or stuck with superficial changes, rather than one engaged in addressing the consequences of changes in demographic, technological, environmental, and economic conditions" (Jessup et al., 2016, p. 41).

Partnerships can be configured in various ways depending on the composition of different characteristics. For instance, one study considers three partnership configurations (project based, formal systems focused, and community grounded) based on partners' focus and function (Jessup et al., 2016, p. 41). This article focuses on three characteristics that make up these partnership configurations, drawing on

the recent work of Stadtler and Lin (2019): sustainability issues, partnership types, and partnership mechanisms.

Firstly, a partnership may address various *issues* ranging from climate change to modern slavery, from biodiversity to local development in deprived regions (Kolk et al., 2008; van Tulder & Keen, 2018; van Zanten & van Tulder, 2018). Selecting which issues to address through a partnership depends on the challenges a particular firm faces, including stakeholder pressures, media failures, boycotts, or other market challenges (Sharma & Vredenburg, 1998).

Secondly, a focal firm may partner with various *types* of organizations from different sectors, such as private, public, and voluntary-civil society (Arya & Salk, 2006; Kolk, 2014; van Tulder & Da Rosa, 2012) hence can engage with both inter-firm and cross-sector partnerships (Gutiérrez et al., 2016; Wassmer et al., 2014). Inter-firm collaborations include partners from the private sector that include customers, suppliers, and even competitors (Ardito et al., 2019; Dahlmann & Roehrich, 2019), while cross-sector partnerships include firms' interactions with NGOs, governments, public and local authorities, universities, and research institutions (Kolk, 2014; Stafford et al., 2000; Wassmer et al., 2014).

Thirdly, partnerships use specific *mechanisms*, which refer to the "tools to reach out beyond the partnership boundaries and facilitate social or environmental change from a cognitive, behavioral, and technical perspective" (Stadtler & Lin, 2019, p. 872). Such mechanisms include process improvements toward sustainability, developing new and sustainable products, engaging in awareness-raising campaigns that may address concerns of marginalized communities and philanthropic initiatives to support various causes, and driving policy change.

Partnerships can help parties develop more sustainable *processes* that can guide organizational change internally, whether collaborative business model innovation processes (Wadin et al., 2017) or more sustainable production or manufacturing technologies (Bönte & Dienes, 2013; Quist & Tukker, 2013). For instance, in textiles, these can be making process improvements to reduce water use.

Partnerships can also be based on *products* as a mechanism (Melander, 2017). For instance, Dangelico et al. (2013) find that sustainability-oriented partnerships allow firms to acquire knowledge from other organizations and design greener products. In textiles, examples of such partnerships may include initiatives that develop new sustainable fibers, such as natural fibers that minimize pesticides (Desore & Narula, 2018).

Another mechanism category is *awareness raising*, which may involve firms to co-develop various competitions and entrepreneurial incubation programs (Murphy, 2010), work with local and national government agencies (Busch et al., 2020), and social enterprises or nonprofits (Gold et al., 2020; Heuer, 2011). For instance, the International Labour Organization (ILO) partners with H&M Group in the capacity of their "Better Work Programme [which] operates in seven countries (Bangladesh, Cambodia, Haiti, Indonesia, Jordan, Nicaragua, and Vietnam) working with about 1,600 factories that employ around 2,200,000 workers" to specifically address "a range of issues including wages, work quality, productivity, and the documentation and recognition of workers' skills" (ILO, 2019).

Finally, firms can implement or influence *policy* change (Jakobsen et al., 2019; Oelze et al., 2016; Vinke-de Kruijf et al., 2014) through, for example, building multistakeholder platforms (Pinkse & Kolk, 2011), developing industry coalitions (Nicklich et al., 2020), and working with governments and public authorities (Stadtler & Probst, 2012). For example, in the EU, the "EU strategy for sustainable textiles" aims to bring about policy-level change. Partnership platforms such as RREUSE—an international network representing social enterprises active in reuse, repair and recycling—aims to inform such policy changes by promoting stricter legislation that enhances textile waste collection and halts the destruction of returned goods (European Commission, 2022).

Sustainability-oriented partnerships address an environmental or a social issue through one of the mechanisms listed above and intend to bring about *change at the firm, industry, supply chain, or societal levels* (Stadtler & Lin, 2019). *Firm-level change* can be conceptualized as partnerships' impact on participating firms' products, processes, practices, capabilities, strategies, or business models (Albort-Morant et al., 2018; Wassmer et al., 2014) and is often associated with the creation of private value (DiVito et al., 2020).

Some partnerships go beyond firm-level change through initiatives that aim to tackle sustainability issues at the *industry level*. For instance, DiVito et al. (2020) found that the TEXALL collaboration sought to drive industry-level change by acting as a catalyst for various firms by developing post-consumer recycled fabrics.

Partnerships can also introduce *supply chain-level change* through initiatives with suppliers to develop new environmentally and socially friendly products, processes, practices, capabilities, and strategies to improve suppliers' sustainability performance (Albino et al., 2012; Neutzling et al., 2018; Oelze, 2017).

Finally, partnerships can also generate *societal change*, whether it be about positive change regarding an environmental or social issue (Selsky & Parker, 2010), by developing pro-sustainability policies, practices, and organizational forms (Ordonez-Ponce et al., 2020).

2.3.1 | Sustainability-oriented partnerships in textiles

In this paper, we specifically focus on sustainability-oriented partnerships in the textile industry. Several factors make the context of the textile industry suitable and worthy of exploration for studying partnerships.

Firstly, sustainability challenges in textiles have long been attributed to the complex buyer-driven global value chain that is long and widespread, with numerous actors of all sizes and shapes (Boström & Micheletti, 2016; Morris & Barnes, 2009). Therefore, to initiate sustainability-related changes, textile firms require close collaboration involving cross-sector and cross-border stakeholders (Beyers & Heinrichs, 2020).

Moreover, compared to other industries, the textile value networks are complex, with many different tiers involved, hinting at the challenge of tracking a material's journey across borders, primarily

TABLE 1 Stages of data collection

Stages		
Searching press releases and news on Factiva	Search terms	Circular or reuse or reusing or recycle or recycling or eco-effective or downcycle or downcycling or upcycle or upcycling or recover or recovering or green or eco-efficiency or eco-efficient or renewable or sustainability or sustainable or ethical or responsible or responsibility or long-lasting or lifetime or sharing or renting or ecological or environmental or cradle to cradle or biodegradable or redesign or remanufacture or remanufacturing or redesigning or repair or transparency or closed loop
	Subject	Corporate/industrial news; partnerships/collaborations
	Industry	Clothing/textile industry; all publications/all authors/all companies
	Language	English
	Search date	October 27, 2020
	Press releases found	1016
Screening	Exclusion	Press releases were excluded if they were not about sustainability and responsibility; did not contain partners from the textile, clothing, and fashion industries; or did not report an announcement of a partnership. Also, repetitive press releases, in other words, reporting the same partnership, were considered a triangulation but excluded unless they reported different information.
	Total	444 partnerships (1361 pages)

since many small firms also operate often within an informal sector as illicit and unregistered businesses (Bulut & Lane, 2011). In such a complex system, partnerships may offer an opportunity for firms to enhance transparency through interactions across boundaries and sectors (de Abreu et al., 2020).

Finally, extant studies on textile partnerships typically emphasize the partnerships' focus on addressing changes outside the boundary of the focal firm, particularly at the supply chain (Dahlmann & Roehrich, 2019; Khurana & Ricchetti, 2016) and industry level (DiVito et al., 2020; Jastram & Schneider, 2015), commonly addressing industrial development, ecology and environment, and labor rights (Beyers & Heinrichs, 2020). However, how partnerships may trigger firm-level and societal-level change has not been focused on. Thus, an overview of how different partnership configurations are associated with varying levels of change is necessary for this context.

Based on extant literature, we expect partnerships to go beyond the firm-level change that most in-house sustainability initiatives target, address failures that cannot be solved through market initiatives, and achieve societal and industrial-level changes through awareness and policy mechanisms (Stadtler & Lin, 2019). Thus, we set our research against this background.

3 | METHODS

We aim to explore the partnership configurations (sustainability issues, partnership types, and mechanisms) and their targeted level of change in the context of sustainability-oriented textile partnerships. To do so, we benefit from qualitative content analysis and quantitative data analysis to explore and analyze partnership announcement texts (i.e., deal text) that are publicly available archival records.

3.1 | Data collection

Archival records are commonly utilized in the strategic partnerships literature due to the availability of databases such as SDC, Bioscan, or Factiva (Schilling, 2009). Like other partnership studies (Lavie & Singh, 2011), we utilize the Factiva database, which provides extensive coverage of textile industries (Caro & Martínez-de-Albéniz, 2015). We searched partnerships with the environmental and social sustainability-related terms in this database's clothing and textile industry section. Our search uses keywords referring to previous studies investigating sustainability-related themes in the textile industry (Beyer & Arnold, 2022b; Jia et al., 2020). Since sustainability and circularity go hand in hand in the textile industry (Franco, 2017; Rossi et al., 2020), we also included circularity-related keywords in our search, such as cradle to cradle, recycle, and reuse (UNEP, 2020). Finally, we included keywords such as transparency, responsibility, or ethical to seek content about social sustainability-related partnerships.

Table 1 summarizes our data collection efforts. After screening all records, we identified 444 relevant partnerships in our database.

3.2 | Qualitative content analysis

We followed a two-stage coding process to explore our database qualitatively. We used Atlas.ti 8 for coding purposes. Initially, we coded partners and specific partnership motivations expressed in the announcement text. We used these partnership motivations to determine how a particular partnership contributed to a specific sustainability issue and further contextualized the purpose of each 444 partnership we analyzed to understand the industry's challenges better. This helped us in our mixed-method approach when we

FIGURE 1 Stages of coding with illustrative examples

returned to our data to develop typologies of configurations. In our second-stage coding, we coded partnership configurations (sustainability issues, partnership type, and mechanism [highest[2]]), sustainability dimension (environmental, social, and both), and targeted level of change.

Figure 1 demonstrates an example of our coding efforts. Our analysis revealed that some partnerships only focused on a single dimension of sustainability, that is, environmental or social. However, some issues, such as sustainable consumption, were more complex, and partnerships focusing on such complex issues often simultaneously addressed environmental and social sustainability dimensions. Furthermore, our analysis also revealed that while some partnerships focused on a single sustainability issue, other partnerships were formed to tackle multiple sustainability issues simultaneously. Thus, while we coded 444 partnerships, our issue count was 574.

In our second coding stage, we specifically focused on sustainability issues. The coding of sustainability issues also entailed two phases. First, we conducted an inductive coding (Saldana, 2009) in which we relied on the leading sustainability challenges highlighted by the partnership announcement text. This resulted in 30 separate issues. Next, we used a deductive approach (Saldana, 2009). Here, we referred to the previous literature to arrive at clear categories of sustainability issues by merging some of the 30 categories we identified (e.g., Beyers & Heinrichs, 2020; de Oliveira Neto et al., 2019; Jia et al., 2020). As a result of this stage, we identified 15 issues. For example, the second-stage code of "cleaner production" originated from several first stage codes ("hazardous chemical," "GHG emission reduction in manufacturing/production processes," "renewable energy," and "water use"). Figure 2 presents the full details of our

coding for sustainability issues, with numbered issues representing the second-stage codes that were used in our analysis.

To ensure the reliability of the coding process, two authors engaged in the coding process and conducted independent coding of the same press releases. As a result, 76% of coding about the mechanisms initially matched. 89% percent consensus about the levels and 92% about the dimensions were achieved. In cases where coding did not match, authors specifically discussed these cases until it was possible to establish a common understanding.

3.3 | Quantitative data analysis

Following qualitative content analysis, we also conducted quantitative data analysis to analyze the configurations of sustainability-oriented textile partnerships. Specifically, we statistically explored the relationships between different characteristics (sustainability issues, partnership types, mechanisms, and sustainability dimensions) and the partnerships' targeted level of change. First, we evaluated the coding frequencies of each of these characteristics, as shown in Table 2.

Second, we conducted detailed frequency cross-tabulations for the following relationships: mechanisms and targeted level of change, mechanisms and sustainability dimension, issues and mechanisms, issues and targeted level of change, and issues and partnership types. We benefited from these cross-tabulations to understand how different characteristics that make a partnership configuration associate with each other. Thanks to these cross-tabulations and the following multivariate analysis, we identified how firms configured their partnerships for different sustainability issues utilizing different dominant mechanisms and targeting different levels of change (as reported throughout our findings).

[2]In some cases, the text indicated that a partnership has more than one level of targeted change; in these cases, we chose to code these partnerships with the highest level.
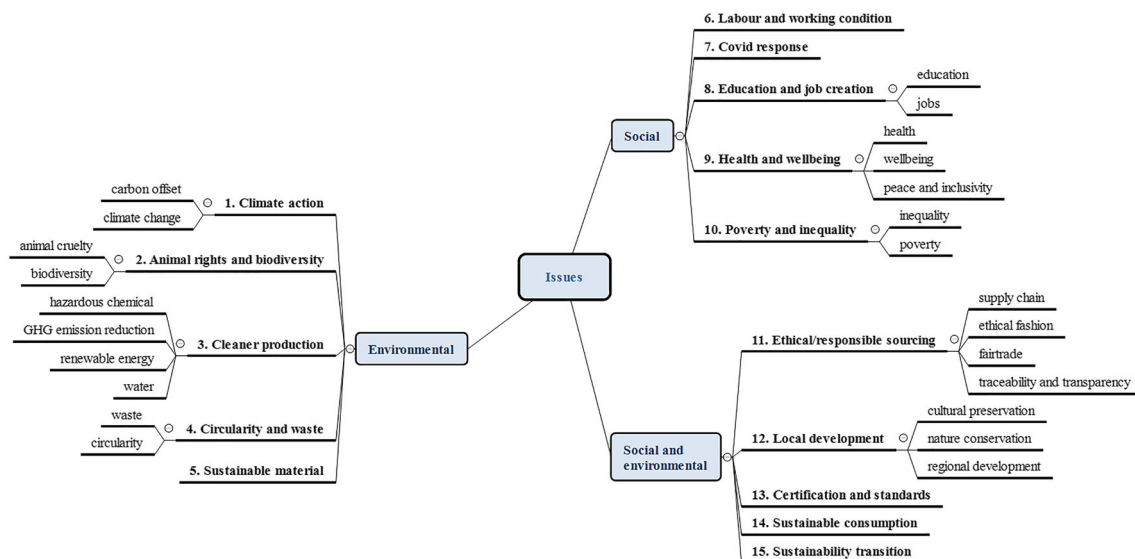
FIGURE 2 List of sustainability issues coded

Third, we moved beyond bivariate to multivariate analysis by employing multinomial logit model estimations, as shown in Table 3. We used this tool to specifically investigate differences in the variables listed, especially across the four levels of targeted change. It tests the statistical significance of covariation between the variables. Notably, a multinomial logit model gives us the advantage over conducting separate logistic regressions for the different levels of targeted change. It allows us to make a series of parallel comparisons to one and the same reference (base) group.

Table 3 reports estimation results. Each column compares the three categories of targeted change with the base category (*firm-level change*). Coefficients represent the change in log-odds associated with a unit change in the corresponding variable. This means, for example, that negative estimates on the *product* throughout imply that the partnerships focused on developing new or significantly improved products are less likely to target any other level of change than the firm level. We may think about coefficient estimates in this way: If we already knew about the partner configuration and sustainability orientation of a partnership but did not know what level of change the partnership targets, the additional information that it utilizes a *product* mechanism would strongly increase the chance that the partnership targets change at the *firm* level. We ran several reduced models to ensure that the key results on mechanisms and sustainability issues are not driven by collinearity (given, e.g., the covariation between sustainability dimensions and mechanisms).

4 | FINDINGS

This section consists of two parts. We first introduce our descriptive and quantitative findings regarding the different characteristics that make up partnership configurations. Then, we provide research insights from the 15 dominant partnership configurations as a result of our in-depth mixed-method analysis with specific attention to sustainability issues.

4.1 | Findings from quantitative data analysis

Generally, of the 444 partnerships, the majority were inter-firm partnerships (57.4%), and the remainder was cross-sector (42.6%). Partnership size varied, with those with two partners constituting most (81.3%), three partners (10.6%), and four and above (8.3%). A majority addressed only the environmental dimension of sustainability (68.2%), followed by the social dimension (17.3%) and both dimensions simultaneously (14.5%). About half of all partnerships in our sample addressed firm-level change (54.1%). The second most common category for a targeted level of change was "society" (17.3%), followed by "supply chain" (14.9%) and "industry" (13.7%). We found that amongst the mechanisms, product design, development, and improvements (38.51%) were the most frequent of all partnerships, followed by process-related sustainability improvements (32.66%), awareness-raising and philanthropic activities (26.58%), and policy changes (2.25%).

Partnerships that targeted *firm-level change* use the *product (64.6%)* or *process mechanisms (30.83%)*. More than two thirds of partnerships with the product mechanism were inter-firm (84%), and the remainder were cross-sector (16%). Compared to partnerships targeting the *firm level*, partnerships targeting the *industry level* are less likely to involve only two partners and are more focused on *social sustainability issues*. Partnerships targeting the *industry* use *awareness-raising (42.6%)* or *process (40.9%)* mechanisms. Similar to partnerships targeting industry-level change,

TABLE 2 Key variables, measurement, and coding frequencies

Variables		Measurement from the text	Code	Coding frequency
Dependent variable: Targeted level of change	Firm	Partnership targeted change at the firm level	1	54.1%
	Industry	Partnership targeted change at the industry level	2	13.7%
	Supply chain	Partnership targeted change at the supply chain level	3	14.9%
	Society	Partnership targeted change at the societal level	4	17.3%
Independent variable: Partnership mechanism	Awareness raising	Partnership was to create awareness, contribute philanthropically, and address concerns of marginalized communities	1	26.6%
	Policy	Partnership aimed to bring about policy change	2	2.3%
	Process	Partnerships focused on various cleaner technologies or organizational processes	3	32.7%
	Product	Partnership focused on developing a new material or a product, fiber, fabric, or collection	4	38.5%
Partnership type	Cross-sector	Partners were from different societal sectors (i.e., private, public, and voluntary)	1	57.4%
	Inter-firm	Partners were both businesses-private sector firms	2	42.6%
Partnership size	When there were two partners		1	81.3%
	When there were three partners		2	10.6%
	When there were 4–10 partners		3	6.1%
	Partnership contained more than 10 partners		4	2.0%
Sustainability issue count	Partnership addressed a single issue		1	50.9%
	Partnership addressed two issues		2	44.1%
	Partnership addressed three issues		3	3.8%
	Partnership addressed four issues		4	0.7%
	Partnership addressed five issues		5	0.5%
Sustainability issues	Climate action		1	1.22%
	Animal rights and biodiversity		2	2.09%
	Cleaner production		3	12.54%
	Circularity and waste		4	24.91%
	Sustainable material		5	23.17%
	Certification standards		6	1.39%
	Ethical/responsible sourcing		7	7.32%
	Sustainability transition		8	6.97%
	Local development		9	1.39%
	Covid response		10	3.48%
	Poverty and inequality		11	2.96%
	Education and job creation		12	5.57%
	Labor and working conditions		13	3.31%
	Health and well-being		14	1.22%
	Sustainable consumption		15	2.44%
Sustainability dimension	Environmental		1	68.5%
	Environmental; social		2	14.2%
	Social		3	17.3%

partnerships targeting the *supply chain* level are more focused on *social sustainability* and often use *process* (63.6%) or *awareness-raising* (24.2%) mechanisms. Partnerships targeting the *society level* stand out by taking the form of *cross-sector partnerships* more often than inter-firm partnerships. Partnerships targeting the *societal* level are also more likely to focus exclusively on *social sustainability issues*, with a vast majority *(85.7%)* using *awareness-raising mechanisms*.

TABLE 3

VARIABLES	INDUSTRY	SUPPLY CHAIN	SOCIETY
Partnership type			
Inter−firm		BASE LEVEL	
Cross−sector	0.35 (0.43)	0.27 (0.47)	1.73*** (0.55)
Partnership size			
1		BASE LEVEL	
2	−2.03* (1.04)	−1.02 (1.40)	−0.51 (1.13)
3	−1.36 (1.15)	0.49 (1.49)	−0.23 (1.57)
4	−0.84 (1.22)	−15.52*** (1.52)	−1.24 (1.43)
Sustainability issue			
Cleaner production		BASE LEVEL	
Carbon offsetting	−17.02*** (1.04)	−0.77 (1.05)	−16.70*** (1.64)
Animal rights and biodiversity	−15.53*** (0.88)	−15.45*** (1.00)	−1.00 (2.21)
Certification−standards	1.10 (1.38)	0.96 (1.24)	−15.58*** (1.61)
Waste and circularity	−0.12 (0.52)	−0.68 (0.61)	0.13 (0.64)
Sustainable material use	−1.12 (0.69)	1.15* (0.67)	−1.18 (0.83)
Local/regional development	18.68*** (1.18)	0.99* (0.55)	19.68*** (0.83)
Sustainability transition	2.22*** (0.70)	0.90 (0.76)	−2.12* (1.25)
Covid response	−14.35*** (0.80)	1.95 (1.33)	3.72** (1.51)
Education and job creation	2.50*** (0.97)	1.12 (1.34)	0.82 (0.93)
Labour and working conditions	1.18 (1.02)	−0.67 (1.12)	−1.02 (1.19)
Health and wellbeing	1.55 (1.00)	−14.86*** (0.79)	1.13 (1.14)
Poverty and inequality	1.50 (1.03)	16.22*** (1.57)	20.07*** (1.42)
Responsible / ethical sourcing	1.48** (0.70)	3.73*** (0.68)	0.06 (0.94)
Sustainable consumption	0.70 (1.24)	−0.73 (1.96)	1.16 (1.36)
Partnership mechanism			
Awareness raising	BASE LEVEL		
Policy	2.03** (1.00)	0.83 (1.03)	0.74 (1.43)
Process	−1.31** (0.58)	−1.46** (0.64)	−4.40*** (0.74)
Product	−2.61*** (0.76)	−3.81*** (0.88)	−5.14*** (1.20)
Issue Sum	−0.72* (0.38)	−0.11 (0.33)	−0.28 (0.57)
Constant	2.24* (1.27)	0.12 (1.66)	1.28 (1.55)

Note: Multinomial logit estimation. Robust standard errors in parentheses
*Significant at the 10% level.
**Significant at the 5% level.
***Significant at the 1% level.

4.2 | Research insights from mixed-method analysis on partnership configurations

Based on the sustainability issues, we identified 15 partnership configurations, as shown in Table 4. We developed these typologies by analyzing the dominant[3] mechanisms, partnership types, and targeted change levels for each identified sustainability issue. For each configuration, we conducted an in-depth qualitative assessment by going back to data to further understand the motivations behind these partnerships, contextualizing our findings and providing examples here.

4.2.1 | Partnership configurations for environmental sustainability issues

We identified five dominant partnership configurations that address environmental sustainability issues. The first configuration centered

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[3]When we find that 50% or more partnerships that focus on a specific issue, utilize a particular mechanism and a partnership type, or address a particular change level, we define these mechanisms, types, and levels as "dominant." For some issues, it was not possible to identify a dominant mechanism, type, or change level. We also report these throughout our findings section.

on "circularity and waste," which appeared in 32.2% of partnerships we studied and 58.04% of these partnerships focused on the *product* mechanism, 71.3% were *inter-firm* partnerships, while 76.2% targeted *firm-level change*. Here, textile firms aimed to develop circular offerings by recycling waste or reusing second-hand clothing. For example, Eastman and Circular Polymers convert post-consumer waste carpets into new materials through chemical recycling.

The second configuration centered on "sustainable materials," which appeared in 30% of partnerships we studied, and 85.71% of these partnerships focused on the *product* mechanism, 83.4% were *inter-firm*, and 90.23% targeted *firm-level change*. Interestingly, a closer look at the partnerships in the two configurations mentioned above suggests two fiber suppliers that use partnerships to diffuse their innovative sustainable fiber solutions, Lenzing (33 partnerships) and Unifi (13 partnerships).

Lenzing and Unifi produce sustainable fibers for a broad range of products, including clothing and footwear. Such versatility allows them to collaborate with many brands. For instance, Lenzing formed partnerships with many known brands, including but not limited to Converse, H&M, Gant, and UGG. Lenzing's flagship product has been TENCEL™ fibers extracted from sustainably grown wood using a closed-loop system that recovers and reuses the solvents used and minimizes the environmental impact of production (Lenzing, 2022). For instance, G-Star Raw, Archroma, and Lenzing announced that they would create a line of circular plant-based dyed jeans and launch a sustainably dyed collection made from upcycled plant waste.

Through partnering with Lenzing, incumbent firms such as G-Star Raw access sustainable resources across their boundaries, demonstrate a transition to circular fashion, and legitimize themselves by partnering with a brand known for cleaner production that relies on a closed-loop process. Lenzing, however, establishes itself as a legitimate, sustainable material partner to incumbents and enhances the legitimacy of its technology while diffusing it through a partnership model. Similar observations can be made about Unifi and its REPREVE fibers from 100% recycled materials, including post-consumer plastic bottles and pre-consumer waste. Companies like Lenzing and Unifi develop products that they claim to be sustainable through innovative and sustainable design and clean production processes that take place in-house. However, the diffusion of these sustainable fiber alternatives appears to rely on inter-firm partnerships, often with fashion giants.

The third configuration centered on "cleaner production," which appeared in 16.2% of partnerships we studied; 62.5% of these partnerships focused on the *process* mechanism, 55.6% were *inter-firm*, and 66.67% targeted *firm-level change*. Some partnerships were formed to tackle the industry's high water consumption. For instance, Archroma and Trusty Trading partnered to launch a sustainable pocketing fabric line that conserves and reduces water usage in the textile industry. Other partnerships in this category addressed textile dying processes' toxicity and chemical hazards by seeking alternative natural dying solutions with a lower ecological footprint, such as the partnership formed by Esquel Group and NetEase.

The fourth configuration centered on the issue of "animal rights and biodiversity," which appeared in 2.7% of partnerships we studied, and 66.7% of these partnerships were *cross-sector*. While 50% of these partnerships targeted *firm-level change*, we could not identify a dominant mechanism since 41.7% of these utilized products as a mechanism and 33.1% utilized process, respectively. Amongst others, firms partnered to explore vegan-friendly fashion, for instance, for faux fur alternatives, such as the partnership between Apparis and Tuleste, or vegan-friendly trainers, such as the partnership between Stella McCartney and Adidas.

The fifth configuration focused on the environmental dimension centered on "climate action," which appeared in 1.6% of partnerships we studied, with 71.43% of these partnerships focused on the *awareness-raising* mechanism and 85.7% using *cross-sector* partnerships targeting *societal change*. Unfortunately, partnerships here often did not go beyond carbon offsetting, and like the partnership between Timberland and Redress, followed the logic of "buy one, plant one tree."

4.2.2 | Partnership configurations for social sustainability issues

We identified five configurations focusing on social sustainability issues. The first dominant partnership configuration focused on "education and job creation," which appeared in 7.2% of partnerships we studied; 71.9% of these partnerships focused on the *awareness-raising* mechanism, and 68.8% used *cross-sector* partnerships. Since 40.6% of these partnerships targeted *societal change* and 31.25% targeted *industry*, we did not observe a dominant level of change. An example of this configuration is between Bulgari and Save the Children, which focused on offering art education to students in underserved communities.

The second configuration centered on "covid response," which appeared in 4.5% of partnerships we studied. Not surprisingly, these were more recent partnerships formed to support relief efforts during the Covid-19 outbreak. Fifty percent of these partnerships focused on the *product* mechanism and 45% on awareness raising. Sixty-five percent of these partnerships targeted societal change, and 55% were *cross-sector*. Partnerships here were formed to provide and distribute face masks or other protective equipment for health workers and other communities, such as the partnership between Urgent Response Network and Ecoshell.

The third configuration centered on "labor and working conditions," which appeared in 4.2% of partnerships we studied, utilizing the mechanism of *awareness raising* (57.9%), *with (73.7%)* using *cross-sector* partnerships to tackle change at different levels, with the most prevalent being *industry* (31.5%) level (though not dominant). Amongst these, Bangladesh Partnership for Cleaner Textile (PaCT), formed by ILO and World Bank International Finance Corporation's Better Work Program, is worth mentioning. Partnerships in this configuration provide a platform for companies to collectively develop guidelines and promote safe work practices and fair wages.

TABLE 4 Partnership configurations in textiles

Issue	Dominant sustainability dimension	Dominant level of change	Dominant mechanism	Dominant type	Issue description	Example 1	Example 2
Circularity and waste	E	Firm	Product	IF	Issue related to recovering value from tangible commodities through reuse and restoration, involving waste reduction by redesigning products, manufacturing procedures, and supply chains to keep resources continuously flowing in a closed loop (Jia et al., 2020; Stål & Corvellec, 2018)	Candiani and Lenzing create a denim fabric made from cotton scraps and wood pulp using Lenzing's efficient closed-loop processes	Eastman and Circular Polymers convert post-consumer waste carpets into new materials through chemical recycling
Sustainable material	E	Firm	Product	IF	Issue related to developing new environmentally friendly fiber or alternative materials that are energy efficient, non-toxic, and recycled or recyclable (Dangelico et al., 2013)	Unifi, Dupont Biomaterials, and Youngone launched a new collection of insulation products that offer sustainable options for cold-weather garments and use post-consumer recycled products that incorporate bio-based materials for insulation	Lenzing and Quoi Alexander designed a new eco-couture using sustainable cellulosic fiber
Cleaner production	E	Firm	Process	IF	Issues related to reducing the textile process's environmental impact include dying technique, water use, and use of renewable energy (Abbas et al., 2020; Cesar da Silva et al., 2021; de Oliveira Neto et al., 2019)	Esquel Group and the Chinese Academy of Science explored the potential of natural dyes collaboratively	Levi Strauss & Co, Scivera, and NimkarTek develop a screening program for tracking hazardous contaminants in commodity chemicals in the global apparel supply chain
Animal rights and biodiversity	E	Firm	-	CS	Issue related to animal welfare protection and biodiversity preservation (Gardetti, 2017)	Kering and Tuleste provide faux fur alternatives in line with the growing vegan fashion	Kering and The Explorers to raise awareness worldwide about the need to safeguard biodiversity using the power and influence of media
Climate action	E	Society	Awareness raising	CS	Issue related to reducing greenhouse gas emissions beyond the production process, such as carbon offset initiatives (Gardetti & Muthu, 2020)	Timberland and Redress support agroforestry projects around the world and plant a tree for each sold item	Amour Vert and American Forests (non-profit) partner to plant new trees within North America for every T-shirt sold

(Continues)

TABLE 4 (Continued)

Issue	Dominant sustainability dimension	Dominant level of change	Dominant mechanism	Dominant type	Issue description	Example 1	Example 2
Education and job creation	S	-	Awareness raising	CS	Issue related to providing access to formal or informal education and creating job opportunities (Moorhouse & Moorhouse, 2017)	Inditex and Caritas partnership through the donation of EUR 8.5 million for the support of programs targeted at job creation in vulnerable sections of society	Gap Inc. and Boys & Girls Clubs of America help youth get in touch with hiring opportunities with stores
Covid response	S	Society	-	CS	Issues related to specific responses supporting the general public during the Covid-19 pandemic (Puig et al., 2022)	Innlife, Sigma Fit, and Ahl Masr Foundation produce a line of protective suits using antibacterial nanotechnology and provide frontline workers protection during Covid-19 outbreak	Skechers and United Way of Greater Los Angeles donate masks to protect frontline workers and the most vulnerable members of the community
Labor and working conditions	S	-	Awareness raising	CS	Issues related to establishing labor standards in producing countries, working conditions, low wages, child labor, and modern slavery (Carrigan et al., 2013; Mair et al., 2016; Ozdamar Ertekin et al., 2020; Peake & Kenner, 2020)	ILO, World Bank International Finance Corporation, Better Work Program, and Bangladesh Partnership for Cleaner Textile improve the working conditions in the garment and textile enterprises	H&M, ILO, and Swedish International Development Cooperation Agency improve conditions by nurturing labor wages and working relations practices and promoting collective bargaining
Poverty and inequality	S	Society	Awareness raising	CS	Issue related to poverty alleviation and inequality reduction (Gardetti & Muthu, 2020)	Samsung C&T and Beanpole give everyone the ability to approach fashion regardless of their physical abilities and improve the quality of life of people who use a wheelchair	Macy's and Clothes4Souls invite everyone to participate in the "Big Give Back: Buy a Coat, and We'll Donate One Campaign" and provide relief through the distribution of clothing around the world
Health and well-being	S	-	Awareness raising	CS	Issues related to promoting physical and mental health (Gardetti & Muthu, 2020)	M&S and Breast Cancer Now raise awareness and raise funds for vital breast cancer research	Lululemon and Dalai Lama Center build capacity for communities to promote mindfulness to foster heart-mind well-being in children and youth
Ethical/responsible sourcing	S and E	-	Process	IF	Issue related to sourcing and procuring materials and services from a set of suppliers in an ethical and	C&A and Bext360 use blockchain to help foster transparency in fashion brands' cotton supply chains	Kering, Albini Group, and Supima create a unique geo-chemical fingerprint univocal to the product's point of origin that cannot be copied

TABLE 4 (Continued)

Issue	Dominant sustainability dimension	Dominant level of change	Dominant mechanism	Dominant type	Issue description	Example 1	Example 2
					socially responsible manner (Kim et al., 2018)		or tampered with, ensuring the highest level of security to the supply chain
Sustainability transition	S and E	Industry	-	CS	Issue related to promoting the transition and transformation of the textile industry toward becoming more sustainable (Chari et al., 2021)	BASF South East Asia and ZDHC Foundation scale up sustainability in the leather, textile, and footwear industry	Browzwear and YKK Corporation drive innovations for more sustainable processes and practices for apparel businesses
Sustainable consumption	S and E	Societal	Awareness raising	IF	Issues related to changing mindsets, lifestyles, ways of living and doing things, and approaches to fulfilling consumer needs more sustainably (Freudenreich & Schaltegger, 2020; Niinimäki & Hassi, 2011)	Vivobarefoot and Betabrand encourage consumers to vote for their favorite concepts to create new shoes that are more sustainable	Burberry and The RealReal encourage customers to keep clothes in circulation for longer
Local development	S and E	Society	Awareness raising	CS	Issue related to offering community support in the local and regional context (de Abreu et al., 2012)	Columbia Sportswear Company and Grassroots Outdoor Alliance support dynamic local conservation projects	Marine Layer and National Park Foundation support America's parks through a limited-edition line and support local communities by building on the collection of cause-driven T-shirts
Certification standards	S and E	Supply chain	Process	IF	Issue related to developing new industry standards and certification schemes (Heinze, 2020; Muthu, 2017)	North Face, Control Union, and Textile Exchange develop a global standard to evaluate and certify its supply chain in the wool industry	Timberland and Omni United develop an industry standard for product footprinting, the Eco Index TM

Note: E/S: Issue classification of environmental or social sustainability dimension. Dominant sustainability dimension. Dominant level of change: >50% of partnerships addressing this issue target this change level. Dominant mechanism: >50% of partnerships addressing this issue use this mechanism.

Abbreviations: CS, cross-sector partnership; IF, inter-firm partnership.

The fourth configuration focused on "poverty and inequality," which appeared in 3.8% of partnerships we studied, utilized the *awareness-raising* mechanism (88.2%), used *cross-sector* partnerships and (94%) targeted *societal* change. For instance, Macy's started a campaign with Clothes4Souls called "Big Give Back: Buy a Coat, and We'll Donate One Campaign." While these philanthropic partnerships were more common, some exceptions went beyond and combined the issue of education and jobs with that of poverty and equality. For instance, the collaboration between the ultra-fast fashion player Asos, Soko Community Trust, and Stitching Academy Kenya aimed to provide women and men in the local Kasigau community with the practical skills and support needed to see sustainable improvement in their lives and lift them out of poverty by equipping them to start their own business in the garment manufacturing.

Finally, the fifth configuration focused on "health and wellbeing," which appeared in 1.6% of partnerships we studied, utilizing (71.4%) the mechanism of *awareness raising* with cross-sector partnerships (71.4%) to tackle change at the *societal* (57.1%) level. Here, too, philanthropic partnerships were observed. An example is a partnership between Marks & Spencer and Breast Cancer Now which aims to raise funds for breast cancer research.

4.2.3 | Partnership configurations for complex issues (both environmental and social)

We identified five dominant partnership configurations that address complex issues which entailed a change in the environmental and social dimensions of sustainability.

The first configuration in this category focused on "ethical/responsible sourcing," which appeared in 9.5% of partnerships we studied, utilizing *process* mechanisms (76.2%), (64.3%) *inter-firm* partnerships, and often targeting *supply chain* change (47.6%—though not dominant). This partnership configuration primarily addressed the need to improve the transparency and traceability of textile supply chains. For example, H&M, M&S, Inditex, Kering, and Canopy teamed up to provide a digital mapping tool for fashion supply chains to reveal the deforestation impacts. These initiatives did not always come from the incumbents in the textile industry. Surprisingly, we also identified some technology giants working on solutions such as blockchain to enhance the transparency of global textile value chains. For instance, Google Cloud and WWF Sweden seek to create an environmental data platform to enable more responsible sourcing decisions in the textile industry.

Another configuration focused on "sustainability transition," which appeared in 9% of partnerships we studied, utilizing awareness raising mechanism (47.5%—not dominant), with (70%) *cross-sector* partnerships and often targeting *industry*-level change (55%). "Sustainability transition" combined multiple sustainability issues we identified in this study, and partnerships simultaneously addressed these through multistakeholder initiatives. This configuration can be exemplified by Ellen MacArthur Foundation's Make Fashion Circular Initiative, Global Fashion Agenda, Fashion for Good, PaCT, Partnership for

Sustainable Textile Initiative, and industriALL. These multistakeholder platforms enabled fast-fashion firms and new entrants to engage in sustainable innovations, often circular fashion and cleaner production, by enabling knowledge sharing and transfer between members and promoting labor rights and improved health and safety conditions.

The third configuration focused on "sustainable consumption," which appeared in 3.2% of partnerships we studied, utilizing (64.3%) *awareness-raising* mechanisms and *inter-firm* partnerships and often targeting *societal* change (50%). For example, Burberry and The Real-Real encourage customers to keep clothes in circulation for longer.

The fourth configuration focused on "local development," which appeared in 1.8% of partnerships we studied, utilized (85.7%) the mechanism of awareness raising and used *cross-sector* partnerships (62.5%) to tackle change at the *societal* (75%) level. For example, Hanes Brands engaged with the National Park Foundation to encourage awareness, exploration, and conservation of America's parks.

The final configuration centered on "certifications and standardization," which appeared in 1.8% of partnerships we studied, utilizing *process* mechanisms (50%), using (62.5%) *inter-firm* partnerships, and often targeting *supply chain* change (75%). The most prominent example that focused on standardization as an issue was the Higg Index, developed by the Sustainable Apparel Coalition, an industry-led multistakeholder platform that aims to improve firms' internal processes of sustainability management. Similar schemes include Fairtrade, which addresses farmers' and employees' wages; Bluesign, which addresses resource efficiency, emissions to air and water, and consumer health and safety; and WRAP, which is established by the American Apparel and Footwear Association to address safe and ethical production. In addition, firms created their own standardization with their cross-sector partners to set an example for others. For instance, VF Corp., together with the Human Society of the United States, developed a global standard to evaluate and certify its supply chain in the wool industry.

5 | DISCUSSION

Our findings resonate with several studies in the area of sustainability-oriented partnerships. For instance, like Beyers and Heinrichs (2020), we also found that firms in the textile industry utilize different partnership configurations to initiate sustainability-related change at different levels. Different from Beyers and Heinrichs (2020), who found that inter-firm partnerships are most common in the context of supply chain relationships, we discovered that inter-firm partnerships are most common when a firm targets *firm-level change* to address the issues of *sustainable materials and circularity and waste*.

Our results also aligned with the findings of Stadtler and Lin (2019) in several ways. Like Stadtler and Lin (2019), we also found that at the *firm* level, *product* mechanism, *supply* chain level, *process* mechanism, and *societal* level, the *awareness-raising* mechanism was typical. However, unlike Stadtler and Lin (2019), we analyzed a single industry, focused on both environmental and social sustainability

dimensions, and focused on partnership configurations based on the specific sustainability issues of the textile industry. Therefore, our study showed that partnership configurations are issue and context dependent.

In a sense, our study showed the urgency of textile firms in getting their share of the pie from the "circular fashion" narrative (Corvellec & Stål, 2019; de Aguiar Hugo et al., 2021; Kant Hvass & Pedersen, 2019; Marques et al., 2020; Moorhouse & Moorhouse, 2017; Pedersen et al., 2019) with the vast majority of partnerships focusing on circularity and waste and sustainable materials (which also include recycled fibers and fabrics). Using partnerships, fast-fashion firms seek to legitimize themselves by aligning with innovative sustainable fiber providers such as Unifi and Lenzing.

We, however, are cautious when discussing the effectiveness of some of these partnerships that address circularity, waste, and sustainable materials. Firstly, we know the circular fashion transition needs to go beyond integrating recycled or sustainable fiber alternatives and should also include changes in the business model by including rental, resale, and repair alternatives to consumers. While there were some partnerships addressing business model alternatives (e.g., between Burberry or Stella McCartney and The RealReal, Reformation, and ThredUp), these were a rarity compared to numerous recycling partnerships. Secondly, to our surprise, partnerships that addressed circularity and waste issues primarily targeted *firm-level* change, except for the multistakeholder platform created by the Make Fashion Circular program of the Ellen MacArthur Foundation. However, the circular transition requires supply chain and industry-level change (Barreiro-Gen & Lozano, 2020; Centobelli et al., 2020), which most partnerships failed to target. Beyond, textile firms miss a great potential to engage in sufficiency initiatives (Freudenreich & Schaltegger, 2020) by not addressing "sustainable consumption" together with "circularity and waste" issues, which would ideally create *societal* change. Thirdly, we highlight the debate on whether all recycled materials can be sustainable. Recently, the Higg Index developed by the Sustainable Apparel Coalition, which was also formed as a result of a partnership (between Patagonia and Walmart), was criticized for rating polyester as sustainable (Eco-Stylist, 2022).

Change at the *industry* level was often targeted through *process* mechanism in multistakeholder *cross-sector* partnerships such as PaCT or Partnership for Sustainable Textile Initiative. As expected, the implications of the globalization of textile value chains and the governance issues in developing countries that lead to various labor and working conditions were addressed. To our surprise, however, some of these initiatives did not go beyond the industry level and target supply chain change. Because to address supply chain level change, it is necessary for local suppliers and many tiers (i.e., local fiber producers, yarn makers, clothing workshops, or their representatives such as industry associations) also to become a part of these multistakeholder partnerships. However, due to a lack of financial and human resources and capabilities, it is difficult for local textile suppliers to join such platforms (Van & Nguyen, 2019). Thus, these multistakeholder partnerships, as well as the certifications and standards developed through them, risk exacerbating the industry's power asymmetry

problem (Morris & Barnes, 2009) if they become spaces of exclusive membership and coalition building for the industry's large buyers and retailers.

Change at the *supply chain* level was targeted through the *process* mechanism and often with the specific issue of *transparency and traceability* of supply chains, thus, *ethical/responsible sourcing*. Our initial expectation was to see partnerships with local manufacturers/producers for yarn or fiber making. As explained above, our database did not present many examples of configurations with local manufacturers/producers. However, our findings showed a technocentric tendency of textile firms to resolve the problems at the supply chain level. Many firms engaged with different blockchain solutions and piloted these to make supply chains more sustainable. While these initiatives are hopeful developments, we note that they fall short in developing country settings due to informal economies (Kümbetoğlu et al., 2010; Ogunsade & Obembe, 2016). Thus, textile firms must develop solutions beyond this technocentric paradigm to include sustainability challenges in developing, and emerging countries where addressing environmental and social challenges are critical.

Our findings showed that partnerships that targeted change at the level of *society* were mainly *cross-sector* partnerships, addressing a *social issue*, often through philanthropic *awareness-raising* mechanisms. Thus, we confirmed the observation of a recent review (Beyers & Heinrichs, 2020), which found that textile firms collaborate with cross-sector partners when addressing social issues. While helpful, these philanthropy-driven partnerships are also limited in value co-creation (Austin & Seitanidi, 2012). Textile firms may consider to leverage their partnerships to co-develop environmental and social innovations (Halme & Laurila, 2009) for societal change, such as found in other industry, for example, food (Riandita, 2022). Moving forward, we should expect the textile industry to engage in partnerships beyond philanthropy when addressing changes at the societal level, as these mechanisms are also often viewed as the initial stages of cross-sector engagement in an evolutionary sense (Austin, 2000; Austin & Seitanidi, 2012).

Finally, compared to environmental issues, textile firms used partnerships much less to address social issues. This may be due to their preference to address social issues through in-house and market solutions. Still, we find that issues such as "labor and working conditions" should require partnerships, especially utilizing the process mechanism and affecting change at the *supply chain* level to reach out to their fabric, yarn and fiber suppliers in the developing world.

6 | CONCLUSION

This article explored configurations of 444 sustainability-oriented textile partnerships. Drawing on studies about partnership configurations (Gutiérrez et al., 2016; Lin & Darnall, 2010, 2014; Stadtler & Lin, 2019), we unpacked the links between different sustainability issues, mechanisms, partnership types and partnerships' targeted levels of change. Specifically, we showed 15 sustainability issues that

textile firms addressed through partnerships. We demonstrated how circularity, waste, and sustainable materials were textile firms' most dominant sustainability issues that motivated them to partner. Doing so, we contributed to the literature on sustainability issues in textiles (Desore & Narula, 2018; Hiller Connell & Kozar, 2017; Muthu, 2017; Shen et al., 2017; Stewart & Niero, 2018).

We also provided an in-depth analysis of 15 dominant partnership configurations and discussed how firms prefer to tackle change at various levels through these configurations based on the combinations of different issues, partnership types, and mechanisms, respectively. Going beyond, our analysis did not only focus on a single dimension (i.e., only environmental or social) of sustainability. It was not restricted to a single partnership type, i.e., inter-firm or cross-sector. This allowed us to show that both inter-firm and cross-sector partnerships might have distinct roles in triggering change at different levels. Inter-firm partnerships may be more feasible to help firms address sustainability challenges at the firm level, often through product and process mechanisms. On the other hand, cross-sector partnerships may be more appropriate to address broader level change through the process, policy, and awareness-raising mechanisms. Furthermore, which partnership configuration a firm will utilize may also depend on the specific issue, as highlighted earlier. Thus, these findings contribute to the ongoing conversation on sustainability-oriented partnerships' configurations (Niesten et al., 2017; Niesten & Jolink, 2020; Stadtler, 2017; Stadtler & Lin, 2017, 2019).

6.1 | Implications for practice

Our findings have several implications for practitioners. Our study shows that to facilitate change for sustainability at different levels, practitioners must orchestrate a diverse portfolio of partnerships configured differently. A particular partnership configuration may help to solve one problem but may not help provide solutions to another. Therefore, our findings echo Jessup et al. (2016): to create systemic change; partnerships should be designed in the appropriate structure not to fail as many partnership initiatives do.

Therefore, especially partnership managers, both in private organizations and public institutions, need to consider the issue specificity, the level of change that they target, and the partnership mechanism that is most appropriate when designing a partnership. Our study demonstrates various partnership configurations from the textile industry. It shows explicitly how partnership managers in textile firms can create an impact by developing partnerships similar to those we discuss while considering the limitations we also listed. Finally, textile firms must build capabilities to manage these partnerships with different configurations. This requires developing partnership management capabilities and capabilities to manage a portfolio of these partnerships (Duysters et al., 2012; Kauppila, 2015; Schreiner et al., 2009). As part of these capabilities, specifically, our study highlights the importance of issue and context specificity in the partnership design and partner selection processes.

6.2 | Future research suggestions

Our results inform several fruitful paths for future scholarship on sustainability-oriented partnerships. First, similar to our context-dependent analysis, the relationship between the targeted level of change and sustainability issues, mechanisms, and partnership types can be explored in other industries. This would help researchers and practitioners see whether and to what degree this relationship depends on the industrial contexts.

Second, our analysis has been limited to the *targeted* level of change. However, we could not test to what extent these partnerships created change in reality. We find it essential to assess whether these partnerships created actual change and impacted these levels. Here, impact assessments of partnerships appear as a fruitful forward (van Tulder et al., 2015).

Third, our findings showed that many companies like H&M and Adidas have already built large portfolios of sustainability-oriented partnerships. Future studies can conduct firm-level portfolio and network analysis to shed light on a portfolio's characteristics that lead to enhanced sustainability performance (Ashraf et al., 2014, 2019).

Our analysis is based on archival data; thus, it cannot capture specific partnership dynamics (Donbesuur et al., 2021). Further work is needed to complement our approach. We hope our study could join others that demonstrated partnership initiatives to tackle sustainability challenges in the textile industry (Beyers & Heinrichs, 2020).

Finally, we also acknowledge that there is not a single conclusive definition and classification of sustainability issues in literature and many approaches co-exist; hence, the list of emerging issues in our study and our procedure of merging and categorizing them may be subject to debate.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this article.

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