

How Firms Combine Sustainability-Oriented Partnerships to Improve Environmental, Social, and Governance Performance: A Qualitative Comparative Analysis Study

Business & Society

1–53

© The Author(s) 2026



Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/00076503261468251

journals.sagepub.com/home/bas

Tulin Dzhengiz¹, Jouni Juntunen²,
Samuli Patala³, and Andra Riandita⁴

Abstract

A partnership portfolio for sustainability (PPS) is the set of partnerships a firm uses to pursue sustainability goals. Although sustainability-oriented partnerships can improve environmental, social, and governance (ESG) performance, we know less about how a firm's full partnership portfolio shapes these outcomes. Drawing on modern portfolio theory and alliance portfolio research, we examine how PPS configurations influence ESG performance. Using qualitative comparative analysis of 979 sustainability partnerships across 35 global fashion firms, we identify multiple pathways to high ESG performance. Firms achieve strong ESG outcomes through either large, issue-diverse portfolios or smaller, focused portfolios that combine geographical reach with interventions across multiple levels of

¹Manchester Metropolitan University, UK

²University of Vaasa, Finland

³Aalto University, Espoo, Finland

⁴University of Stavanger, Norway

Corresponding Author:

Tulin Dzhengiz, Manchester Metropolitan University, Department of Strategy Enterprise Sustainability, All Saints Building, Manchester M15 6BH, UK.

Email: T.Dzhengiz@mmu.ac.uk

change. Neither portfolio size nor partner diversity is universally beneficial; rather, ESG performance depends on configurational fit among portfolio characteristics. These findings challenge assumptions that more partnerships or greater diversity automatically improve ESG outcomes and advance a portfolio perspective of sustainability-oriented partnerships.

Keywords

partnership portfolios, sustainability-oriented partnerships, ESG performance, QCA

Introduction

Companies are increasingly expected by stakeholders to manage the environmental, social, and governance (ESG) issues linked to their operations. ESG performance, in this context, refers to the measurable outcomes of a company's actions in managing environmental impact, social responsibility, and governance practices, often captured through ratings that reflect both achievements and controversies (Aydoğmuş et al., 2022; Chen & Xie, 2022). Integrating ESG considerations into strategy can drive innovation, improve operational efficiencies, and create new market opportunities (Lewellyn & Muller-Kahle, 2024). Strong ESG performance can enhance a company's reputation and stakeholder trust, lower risk, and reduce costs of capital by signalling credibility and long-term commitment to stakeholders (Rekker et al., 2019). Prior research already established that firm-level factors such as robust governance frameworks, transparent reporting, alignment with international standards, investment in environmentally friendly technologies, comprehensive risk management, and strong leadership commitment can positively affect ESG performance (Bruno & Henisz, 2024; Lewellyn & Muller-Kahle, 2024).

Beyond firm-level factors, research on sustainability-oriented partnerships demonstrates that inter-organizational collaborations can facilitate access to new environmental capabilities, promote knowledge sharing, and improve legitimacy that can also lead to enhanced ESG outcomes (Husted & de Sousa-Filho, 2017). However, most studies focus on individual partnerships (dyadic or triadic collaborations or network cases) and their ESG benefits, offering limited insights into how a firm's entire collection of sustainability-oriented partnerships shapes outcomes (Dzhengiz, 2019; Dzhengiz et al., 2024; Wassmer, Pain, & Paquin, 2017). This leaves a critical gap in our understanding (Cicerelli et al., 2025). Because to address grand

challenges, firms typically manage multiple partnerships simultaneously, including value chain alliances with suppliers, customers, and competitors (inter-firm or B2B alliances; Meschi & Norheim-Hansen, 2020; Norheim-Hansen, 2014), as well as cross-sector partnerships with NGOs, governments, and multi-stakeholder initiatives (Dentoni et al., 2015; Henry et al., 2022; Stadtler, 2017). Understanding how these partnerships interact at the portfolio level is therefore essential.

We address this gap by conceptualizing partnership portfolios for sustainability (hereafter, PPS) as the collective set of a firm's inter-organizational collaborations aimed at advancing sustainability goals. To theorize PPS, we draw on analogies from modern portfolio theory that explain investment portfolio decision-making for financial portfolio managers. Just as financial managers diversify investment portfolios to balance risk and return (Fabozzi et al., 2002; Markowitz, 1952), decision-making on PPS configuration requires structuring diverse inter-organizational sustainability collaborations to maximize ESG performance. From this perspective, PPS configurations that drive ESG performance resemble an "efficient portfolio" where firms balance diversification (e.g. across sustainability issues, geographies, and targeted levels of change) with strategic coherence. A portfolio perspective, thus, helps explain not only why certain PPS configurations outperform others but also how different combinations of portfolio characteristics, rather than individual factors alone, interact together to shape ESG outcomes.

Therefore, studying PPS requires an approach that matches the theoretical nature of portfolio design. Firms face choices not only about whether to diversify their PPS, but also about how much and which combinations of diversity to assemble, given coordination and implementation constraints. Research on stakeholder heterogeneity and sustainability innovation suggests that engaging diverse stakeholders can generally improve sustainability outcomes (Cicerelli et al., 2025; Juntunen et al., 2019). However, the intuition that "more diversity is better" becomes theoretically incomplete once we move from single collaborations to portfolios, where benefits of diversity can be offset by fragmentation, governance complexity, and diluted managerial focus. This is why the portfolio approach is helpful, as it highlights the possibility of both under-diversification and over-diversification as sources of risk (Koumou, 2020), and directs attention to the idea that high ESG performance may lie on an "efficient frontier" reached through different mixes of size and diversity. Accordingly, our research question asks: *how do specific configurations of PPS (combinations of size and different diversity dimensions) influence firm-level ESG performance?*

Answering this question, however, requires understanding that portfolio attributes are not independent or simply additive. In portfolio settings, the

effect of any one condition depends on the combination in which it appears. As a result, maximizing a single diversity dimension alone is unlikely to produce the desired outcome, while maximizing all dimensions simultaneously is rarely feasible. Correlational approaches can therefore be limited in capturing the interdependencies central to portfolio design (Campbell & Fiss, 2026). ESG outcomes also involve substitutability, in that some portfolio diversity dimensions may compensate for others while still leading to the same result, reflecting equifinality (Campbell & Fiss, 2026). This points to the value of configurational methods. Furthermore, recent work further emphasizes the importance of intentionality in method choice (Campbell & Fiss, 2026). ESG performance is a highly intentional and normative goal, shaped by regulatory demands, stakeholder expectations, and investor concerns over risk, returns, and firm valuation. For these reasons, we model PPS configurationally and utilize qualitative comparative analysis (QCA) to identify distinct combinations of portfolio size and diversity associated with high and low ESG performance, showing when diversity dimensions complement, substitute for, or become counterproductive to one another across scales.

To investigate our question that focuses on the link between PPS configuration and ESG performance using a QCA approach, we select the fashion industry. Fashion, particularly fashion retail, is a sector under scrutiny for its environmental and social impacts (Saha et al., 2021), whereby ESG considerations are increasingly more important (Kim & Yang, 2026) and firms are increasingly engaged in partnerships as a response to rising stakeholder expectations and regulatory pressures (Beyers & Heinrichs, 2020; DiVito et al., 2021). We build a database of 979 publicly announced partnerships across 35 global fashion firms to answer our research question. Our QCA analysis finds three PPS configurations linked to high ESG performance: (1) large, issue-diverse portfolios, (2) large portfolios combining diversity of issue, geography, and targeted change levels, and (3) smaller but strategically focused portfolios with diversity of geography and targeted change levels. By contrast, low ESG performance arises in (1) small portfolios that target change in differing levels but lack scale, and (2) large but narrowly composed portfolios that lack multiple forms of diversity, thereby presenting homogeneity in inter-organizational sustainability relationships.

These findings contribute in three ways. First, they introduce a portfolio lens to sustainability-oriented partnerships by moving beyond counts of collaborations or dyadic analyses to demonstrate how the interaction among portfolio-level attributes such as issue and geographical diversity would shape ESG outcomes. This shifts attention from “more partnerships for sustainability” (Dangelico & Pontrandolfo, 2015) to configurational fit at the portfolio level, showing that both large and diversified as well as small but

strategically focused portfolios can lie on the efficient frontier of ESG performance. Second, the study extends alliance portfolio research by demonstrating that partnership portfolios influence not only commercial but also ESG outcomes. Using QCA and drawing analogies from modern portfolio theory, we demonstrate that strategic balance and configuration matter more than scale or portfolio diversity alone for enhanced ESG outcomes. Third, we advance ESG performance research (Lewellyn & Muller-Kahle, 2024) by identifying inter-organizational antecedents, specifically the structural configuration of PPS.

Theoretical Background

In this article, we draw on modern portfolio theory (Markowitz, 1952) as an analogical reference point to explain portfolio-level trade-offs between diversification benefits and coordination risks. Modern portfolio theory offers a portfolio-level, systemic way of thinking, which allows us to examine how PPS configurations relate to ESG performance. The logic of this theory is that performance reflects how financial assets move in relation to one another. By combining different types of assets, investors should lower total risk without necessarily reducing expected returns (Fabozzi et al., 2002; Figge, 2004; Figge et al., 2021). We borrow three ideas from here that support our analogical reasoning. First, “risk–return balance” is the core idea that, for constructing an investment portfolio, investors choose options that maximize the expected return for any given level of risk (Markowitz, 1952). The idea of efficient frontier emerges here, representing the set of portfolios that deliver the highest expected return for a given level of risk. Second is the idea of “diversification” which allows spreading exposure across different assets that do not move in tandem lowers risk (Fabozzi et al., 2002). Third, “interaction effects” are critical. A portfolio’s risk–return profile is shaped by how its elements work together, not just by each element’s standalone attributes. In other words, what matters is the portfolio’s overall configuration and aggregate profile and not any single asset in isolation (Figge et al., 2021). Beyond finance, this logic has already been used in business and society research. For example, some scholars have utilized this theory to show how organizations and policymakers can think of sustainability choices as portfolio choices, where different options carry different returns and risks, and where diversification can reduce vulnerability and that returns may be financial, ecological, or non-market, and that these can include ecosystem services, biodiversity protection, climate regulation, or other social benefits (Matthies et al., 2019). In the growing circular economy literature, scholars explicitly borrow this

theory to explain how group-level combinations of heterogeneous resource users can raise eco-efficiency (Figge et al., 2021).

We adopt a similar lens to study PPS. Thereby, we next expand first on how these ideas resonate with the literature on alliance portfolios to further situate our theoretical foundations in the partnership literature.

Modern Portfolio Theory and Alliance Portfolio Research

Modern portfolio theory has shaped strategic management research on alliance portfolios, where firms, like investors in financial portfolios, strategically diversify inter-organizational relationships to optimize performance (Hoffmann, 2005). In the context of commercial alliance portfolios, Srivastava and Gnyawali (2011, p. 798) find that “portfolio theory provides a useful lens through which to evaluate trade-offs based on the elements of a portfolio and their mix and to examine synergy among them. A superior portfolio with a diverse and unique mix of valuable resources helps a firm to cope with uncertainties and risks in innovation.”

Alliance portfolio configuration is generally viewed along two main analytical lenses: the structural dimension and the relational dimension (Wassmer, 2010). Structural approaches focus on attributes such as portfolio size and various dimensions of portfolio diversity, while relational approaches examine dynamics like power, trust, and the strength or closeness of ties between partners (Wassmer, 2010). In this article, mirroring modern portfolio theory’s structural lens on financial portfolios, we study PPS through their structural characteristics. Alliance scholars have frequently examined such structural characteristics using regression models to understand how they influence financial or market performance (see Table 1 in Supplemental Online Appendices). Characteristics such as organizational diversity, geographical diversity, and portfolio size have generally been linked to firm performance and innovation. Portfolio diversity including dimensions such as cognitive (Nooteboom, 2007), industrial (Chung et al., 2019; Penney et al., 2020), organizational (Degener et al., 2018; Garcia Martinez et al., 2017; Hagedoorn et al., 2018), or functional (Jiang et al., 2010; Piening et al., 2016), exhibits either positive or inverted *U*-shaped effects on performance. Similarly, geographical diversity influences performance depending on factors such as tie strength and technological capabilities (Bahlmann, 2015; Oerlemans et al., 2013). Portfolio size also affects innovation (Deeds & Hill, 1996; Shan et al., 1994) and financial performance (Goncalves & Gonçalves, 2008; Zhang et al., 2020).

Analogous to the logic of modern portfolio theory, a firm’s alliance portfolio is a set of concurrent inter-organizational relationships whose size,

diversity, and combination of these characteristics (i.e. configuration) shape innovation and market performance (Wassmer, 2010). The three ideas from portfolio logic resonate also with alliance portfolio research findings. First, alliances create returns through value and inflows of knowledge, resources, and capabilities, yet they also introduce coordination, relational and knowledge leakage risks (Kale et al., 2000). For instance, increasing portfolio size further raises monitoring burdens, highlighting the need for balancing risks and returns (Andreviski et al., 2013; Hoffmann, 2007; D. Lee et al., 2017; Van Wijk & Nadolska, 2020). Second, is the idea of diversification, which also resonates with the variety in technology, partner type, geography, and resources in an alliance portfolio that generally improves outcomes but can flatten or invert when portfolio complexity outstrips managerial capacity (Cobeña et al., 2017; A. S. Cui & O'Connor, 2012; Wuyts & Dutta, 2014). Third, interaction between different portfolio elements or attributes also resonates, because performance reflects how different types of alliances in different settings in a portfolio interact and create synergies (Wassmer, 2010). This is true particularly for the interactions between size and forms of diversity, with certain configurations unlocking synergistic effects (Degener et al., 2018; Mani et al., 2022).

Modern Portfolio Theory and Sustainability-Oriented Partnerships

As summarized above, while portfolio logic aligns closely with alliance portfolio research, there still remain two distinct gaps in our knowledge. First, past studies overlooked how portfolio attributes such as size and various forms of diversity interact in complex ways, due to the dominant approach of linear regressions, which assumes independent and additive effects. In portfolio settings, however, isolating average net effects can mask how one attribute's ESG contribution depends on the simultaneous presence of others (e.g. size enabling diversity, or diversity becoming counterproductive beyond certain combinations), and it can obscure multiple viable portfolio designs that achieve similar ESG outcomes.

Second, the relationship between portfolio configuration and ESG performance remains largely unexplored, even though ESG outcomes strongly shape investor assessments and firm behaviour (Aouadi & Marsat, 2016; Dremptetic et al., 2019). Given that PPS represent a firm's ensemble of inter-firm and cross-sector partnerships (Dzhengiz et al., 2024), whose configuration influences ESG performance and supports sustainability objectives (Wassmer, Pain, & Paquin, 2017), this gap is worth further exploring.

Although empirical research on PPS remains limited, emerging studies on sustainability-oriented partnerships highlight conditions underpinning future inquiry into their ESG implications (see Table 2 in Supplemental Online Appendices). These insights suggest that portfolio diversity enhances legitimacy, innovation, and resource access, often coupled with geographic centralization and multi-issue engagement (Dai & Wang, 2021; Jeong & Ko, 2016; Van Tulder & Da Rosa, 2012). Austin (2003, p. 55) highlights that “achieving portfolio balance involves a search for diversity in number and size to avoid overdependency, even if all collaborations are of the same type. But having a mix of partnerships across the continuum can increase the robustness of a collaboration portfolio.”

Yet, to our knowledge, only a few recent, exceptional studies have examined the link between PPS with ESG or environmental performance (Cicerelli et al., 2025) and even less is known about how portfolio size, diversity, and their structural interplay jointly shape ESG performance. To address this gap, we develop a configurational framework.

A Configurational Framework for Studying PPS and ESG Performance

Drawing inspiration from configurational studies (Furnari, 2014; Greckhamer et al., 2018; Lankoski & Ollila, 2024), Figure 1 demonstrates the configurational puzzle we explore. This figure has iteratively been developed from the literature on alliance-portfolio structure and performance (see Tables 1 and 2 in Supplemental Online Appendices), integrating three attributes commonly examined in alliance portfolio literature (organizational (partner-type) diversity, geographical diversity, and portfolio size) with two additional attributes distinctive to sustainability-oriented partnerships (diversity of sustainability issues and diversity of targeted level of change). Reading through the portfolio lens, the framework treats high ESG performance as the desirable outcome (analogous to returns) and focuses on how combinations of portfolio attributes (i.e. portfolio configurations) shape ESG outcomes. Because PPS design involves interdependent trade-offs among size and multiple diversity dimensions, we theorize PPS in terms of alternative configurations (i.e. distinct recipes through which portfolios reach high (or low) ESG performance), rather than as separable predictors with uniform effects across firms (Furnari, 2014; Greckhamer et al., 2018). Collectively, these conditions capture PPS diversity along four dimensions (partner type, geography, issue, targeted change levels) and the portfolio size which shapes when diversity is enabling

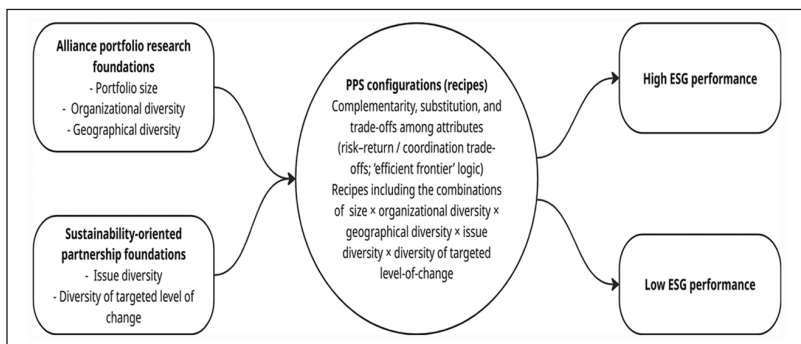


Figure 1. Configurational Puzzle Linking PPS to ESG Performance.

Note. PPS = partnership portfolio for sustainability; ESG = environmental, social, and governance.

versus overextending in terms of ESG. We focus on these five conditions as the minimal, theoretically coherent set that captures PPS structure.

Portfolio Size. Portfolio size is defined as the number of partnerships a firm maintains at any given time (Faems et al., 2012; Wassmer, 2010). Prior findings have shown varying impacts of portfolio size on performance. Some find larger portfolios can enhance performance via resource and knowledge gains (Lahiri & Narayanan, 2013), yet performance often peaks at moderate portfolio size due to rising coordination burdens, showing an inverted *U*-shaped relationship (Deeds & Hill, 1996; Zhang et al., 2020), with effects varying across settings (Faems et al., 2012; Wassmer, 2010). The number of alliances in a portfolio varies widely, from double digits to 350 (A. S. Cui & O'Connor, 2012). For instance, Wassmer et al. (2010) note that airline firms typically build portfolios with over 10 partnerships.

Importantly, treating size as a stand-alone structural attribute is limiting because more alliances can mean very different levels of complexity depending on what the portfolio contains and other factors such as the firm's capability to manage alliance portfolios (Heimeriks et al., 2009). Portfolio diversity (e.g. partner, resource, sectoral and geographic heterogeneity) increases coordination between different teams and across partnerships and integration demands, and evidence shows that the benefits of diverse portfolios hinge on portfolio-level managerial capacity such as coordination routines, proactive partner selection, and internal value-creation and capture capabilities (Cabello-Medina et al., 2020; Degener et al., 2018; Duysters et al., 2012; Garcia Martinez et al., 2017). Accordingly, we expect portfolio size to

interact with portfolio diversity. As portfolios grow, diversity's upside is amplified only when firms and their partnership management teams are able to orchestrate the resulting complexity. Thus, we next turn to portfolio diversity elements.

Organizational (Partner-Type) Diversity. Engaging different organizational forms, such as private for-profits, NGOs, governments, local authorities, research institutions, and multi-stakeholder platforms, tends to enhance performance by broadening resources, learning, and adaptability to stakeholder expectations (Baum et al., 2000; Cobeña et al., 2017; Degener et al., 2018). However, organizational diversity also increases cognitive and coordination complexity, because partners differ in goals, governance expectations, and operating logics (Babiak & Thibault, 2009; Gray & Purdy, 2018). Accordingly, organizational diversity tends to be most beneficial at moderate levels and can become value-destroying when overextended, unless firms have strong portfolio-level coordination routines and sharing mechanisms to integrate knowledge across heterogeneous ties (Hagedoorn et al., 2018), thereby, showing an inverted *U*-shaped relation with performance (Garcia Martinez et al., 2017).

Geographical Diversity. Spreading partnerships across geographical regions supports market access and complementary knowledge, and helps adapting to local requirements (Lane et al., 2001; Lavie & Miller, 2008). In PPS, geographical spread can reduce ESG exposures across locations, however, when size, partner-type diversity, and geography all expand simultaneously, cognitive and administrative loads on teams that manage these alliances and partnerships can overwhelm the benefits.

Diversity of Targeted Level of Change. This refers to the “intended” scope of partnership impact, ranging from firm-level learning to industry, supply chain and societal transformations, shaping how PPS contribute to sustainability outcomes at different levels (Dzhengiz et al., 2023; Stadler & Lin, 2019). Firm-level change revolves around value capture through learning and knowledge exchange (Albort-Morant et al., 2018), often manifested in joint efforts toward product and process innovation. In contrast, broader-level transformations such as reconfiguring supply chains or influencing consumer behaviour are geared toward the creation of public value (Dzhengiz et al., 2023). Because efforts to drive change across these levels require distinct and diverse mechanisms and activities, they also tend to involve different types and numbers of partner organizations (Riandita, 2022).

Issue Diversity. This refers to the range of environmental and social issues addressed within PPS, requiring firms to incorporate multiple grand challenges simultaneously in their PPS such as climate action, biodiversity, circularity and waste reduction, social equity, or poverty (Ashraf et al., 2017). Sustainability issues demand action at both organizational and societal levels, involving corporate and non-corporate partners; thus, issue diversity is likely to interact with diversity in targeted levels of change and organizational diversity. For multinational firms, addressing a variety of issues also requires operating across geographies spanning subsidiaries and supply chains, thus indicating interactions with the geographical diversity of PPS.

In our framework (as shown in Figure 1), portfolio approach provides a widely understood logic that clarifies why the “diversity is always beneficial” assumption in the wider business and society research can be incomplete. For instance, ESG research often treats diversity as broadly advantageous because it can expand stakeholder coverage and legitimacy and provide access to heterogeneous resources and perspectives (Harjoto et al., 2015; Paolone et al., 2024). Similarly, work on stakeholder and alliance portfolio diversity and sustainability innovation shows that bringing together a varied set of stakeholders and alliances can enhance sustainability performance (Cicerelli et al., 2025; Juntunen et al., 2019).

However, a portfolio lens also emphasizes the risk–return trade-off. As portfolios expand through newly added partners and diversity dimensions, expected benefits (reach, learning, resilience) can rise, but so can coordination costs, diluted focus, risk of mission drift, and credibility risks, suggesting that more partnerships or more diversity is not necessarily always advantageous. Therefore, portfolio approach articulates two claims that directly motivate our configurational approach: (i) under- and over-diversification whereby diversification is valuable only up to the point where marginal benefits are outweighed by governance and coordination burdens; and (ii) interdependence among elements which highlight the implications of any one diversity attribute (e.g. organizational, geographic, issue) depending on how it interacts with others, including portfolio size. Larger portfolios amplify both the potential value of diversity and managerial demands required to manage it. This is why a configurational approach is appropriate for our research. In what follows, we explain how this aligns with our methodological choice.

Methods

This article investigates how various PPS configurations, as shown in the configurational puzzle in Figure 1, influence ESG outcomes. To embrace this

configurational nature, we adopt a case-oriented approach, employing QCA for systematic case comparisons (Ragin, 1987; Rihoux & Ragin, 2008). Instead of traditional correlation methods, QCA emphasizes the interdependence of conditions leading to outcomes and excels in evaluating complex causal relationships, especially for a modest number of cases, blending theory with in-depth case knowledge (Fiss et al., 2013; Misangyi et al., 2017). Our model is shaped by prior literature (see Tables 1 and 2 in Supplemental Online Appendices), incorporating specific case insights where required (Basurto & Speer, 2012). Given that PPS-ESG connection involve causal complexity, intentionality and equifinal pathways as explained in earlier sections, QCA provides an appropriate method for systematically examining how different combinations of conditions shape ESG outcomes.

Empirical Context: Fashion Sector

The fashion industry, one of the most polluting sectors, faces urgent sustainability challenges, including water pollution, greenhouse gas emissions, hazardous chemicals, exploitative labour practices, and human rights abuses (Saha et al., 2024). Given its complex, multi-tiered global supply chains, achieving sustainability improvements requires collaborative efforts. Inter-firm and cross-sector partnerships have emerged as critical mechanisms to address these issues, fostering circularity, improved labour conditions, and responsible sourcing (Beyer & Arnold, 2022). However, navigating these partnerships involves managing tensions across the portfolio while ensuring value creation (DiVito et al., 2021). The structure of sustainability-oriented fashion partnerships varies by sustainability issue, partnership type, and intervention level (Dzhengiz et al., 2023). Studies show that inter-firm partnerships commonly address circularity and waste management through product and process innovations, while cross-sector partnerships with NGOs and regulatory bodies focus on labour rights and fair working conditions (Beyers & Heinrichs, 2020; Dzhengiz et al., 2023). Therefore, the fashion sector, characterized by its complex and diverse partnerships, offers a particularly suitable context for our research.

Data Collection

We built a comprehensive database of fashion firms' ESG performance and sustainability-oriented partnerships. To do so, we had to select a number of firms whose ESG performance (our outcome condition) is available and then collect data about their PPS. We did this in four stages.

In the first stage, we used the ESG score for our outcome condition (Khaled et al., 2021; Rajesh, 2020). Given the lack of other reliable indicators or publicly available sources for assessing fashion firms' ESG performance, the ESG score was the most suitable measure. We relied on the ESG data from Refinitiv's Eikon database, which provided extensive coverage of textile firms' ESG metrics. We screened the footwear, apparel, textile and leather goods industries using the TRBC industry names. In addition, we created an additional screening criterion to identify those firms with an ESG score available. This brought down the number of firms to 195.

Next, in the second stage, we needed to access partnership-related data on fashion firms in order to assess their portfolio complexity. In line with the strategic alliance literature, which frequently relies on archival records from databases such as SDC, Bioscan, or Factiva (Schilling, 2009), we chose Factiva because of its extensive coverage of the textile and fashion industries (Caro & Martínez-de-Albéniz, 2015) and its established use in alliance and partnership research (Lavie & Singh, 2011). Within Factiva, we searched for sustainability-related keywords (e.g. "circular," "sustainable," "responsible," "recycling") within the subject categories Corporate/Industrial News, focusing specifically on "Partnerships/Collaborations" related news and press releases to identify announcements for the industrial category of clothing and textiles. This procedure produced 1,016 documents covering 444 partnerships initially (see Table 3 in Supplemental Online Appendices for detailed search criteria).

The initial Factiva search builds on a related study (Dzhengiz et al., 2023) which analyzed sustainability-oriented textile partnerships at the partnership level. In that study, "individual partnerships" were the unit of analysis, and the objective was to develop a typology of individual partnership configurations. In contrast, the present study reconstructs and substantially extends this archival foundation by shifting the unit of analysis to the "firm-level partnership portfolios," merging partnership data with Refinitiv Eikon ESG scores, and systematically triangulating media-reported partnerships with company sustainability reports and press releases. These additional steps enable us to build a firm-level database suitable for configurational analysis of portfolio characteristics and ESG performance.

Subsequently, as a third step, we integrated the above-mentioned two separate datasets from both Factiva and Refinitiv EIKON to create a unique database for this article. This merger aimed to pinpoint firms that maintained substantial PPS and had accessible ESG scores. In total, we identified 44 firms with sustainability-oriented partnerships records on Factiva that also had ESG scores available. To ensure that our cases represented meaningful

partnership portfolios, we followed prior alliance portfolio research guidance and included only firms with at least 10 sustainability-oriented partnerships over the past 10 years (Lahiri & Narayanan, 2013; Schilling & Phelps, 2007; Wassmer et al., 2010). After screening, of the 44 firms, only 35 firms met our threshold, meaning, ESG scores available and PPS ≥ 10 .

In our concluding fourth step, to reinforce the integrity and completeness of our data, we have further reviewed, screened and web-scraped additional data of these firms. This entailed exploring each firm's website, particularly press releases, announcements and news related web pages, and downloading or scraping alliance deal texts directly from these pages. Thanks to this approach, we were able to verify and triangulate the partnership data collected from Factiva database (444 partnerships mentioned above). This effort further brought to light other partnerships that had been announced directly on company websites, announcements and press releases that had not been covered in our initial Factiva search (535 more partnerships not covered in initial Factiva sources). Therefore, this step added to the completeness and uniqueness of the database developed for this research.

In summary, we identified 979 sustainability-oriented partnerships of these 35 firms from 2,097 documents between 2012 and 2022 to assess PPS's configurations' cumulative influence on ESG performance. This expanded dataset more than doubled the number of partnerships identified in the earlier phase (Factiva search) and enabled us to move from analyzing individual partnerships to examining firm-level portfolio configurations.

Table 1 summarizes our data collection efforts.

Measures: Their Coding and Operationalizations

Our study investigates six conditions as shown in Figure 1: portfolio size, geographical diversity, organizational diversity, issue diversity and diversity of targeted level of change, along with the outcome condition, ESG performance. We chose these conditions because they meet the criteria of theoretical relevance, empirical robustness, and parsimony (see our detailed reasoning in Supplemental Online Appendices Table 4). These conditions including portfolio size, geographical diversity, organizational diversity, issue diversity, and diversity in targeted level of change, are grounded in established literature on alliance portfolios and sustainability-oriented partnerships, making them theoretically meaningful. Additionally, they exhibit sufficient variation across our cases, enabling us to avoid sparsity and ensure a meaningful configurational analysis, while also maintaining the simplicity required for a clear and interpretable model (Fiss, 2011). While ESG performance was directly obtained from Refinitiv EIKON, the remaining conditions were

Table 1. Data Sources and Purpose of Data Collection.

Sources	Number of documents	Purpose
Factiva	1,016	To gather information about textile/fashion firms' sustainability-oriented alliances
Refinitiv Eikon	43	To gather information about textile/fashion firms' ESG profiles, environmental and social sustainability scores
Company's sustainability reports, press releases, announcements, news	1,038	To triangulate the information from Factiva using the company's resources, and to add additional partnerships that may not be reported in Factiva

Note. ESG = environmental, social, and governance.

qualitatively coded, and the overall database was manually created by the research team.

To build our dataset, following established QCA approaches in management research (Bettinazzi et al., 2024; Leppänen et al., 2023; Schifeling & Soderstrom, 2022), we employed a manual qualitative coding protocol. Two authors and a research assistant coded the dataset using predefined rules and manually reviewed and coded documents listed in Table 1. We held regular alignment meetings and jointly coded an initial sample to ensure consistency across the coding team. Inter-coder reliability was calculated on a subset of the data (Dzhengiz et al., 2023) focusing on agreement scores on different coding categories. For instance, we achieved 89% initial agreement on the level of change and 92% consensus on sustainability issues between authors, thereby aligning with the reliability benchmarks reported in other QCA studies within the field that used similar approaches (Leppänen et al., 2023).

For each company-partnership pair, we extracted key information into MS Excel, including partner names, dates, organization type (e.g. for-profit, NGO, university, government, or multi-stakeholder), and partnership type (inter-firm or cross-sector). We also coded partnership geography, sustainability issues (e.g. biodiversity, circular economy, cleaner production, transparency and traceability, sustainable consumption), and the targeted level of

change (firm, industry, supply chain or society). Coding was based on a careful reading of the partnership announcement (deal) text and grounded in prior research (for the coding framework and illustrative examples of our qualitative coding, see Table A1 in Appendix A). Our coding outcomes were then aggregated to derive portfolio-level conditions, ensuring that individual partnership level data accurately reflected portfolio level measures. We explain this process further next.

ESG Performance (Outcome). We measured ESG performance using the ESG scores from Refinitiv Eikon (previously Thompson Reuters EIKON). ESG scores consider partnerships as a binary factor. Since all our selected firms had partnerships, ESG score calculation posed no methodological issues.

Portfolio Size. Drawing on earlier studies (Lahiri & Narayanan, 2013; Wassmer, 2010; Zhang et al., 2020), we measured portfolio size as the total number of sustainability-oriented partnerships a firm formed over the past 10 years. Only firms with at least 10 partnerships were included. Prior research shows that small portfolios limit access to network externalities, risk diversification, and innovation (Schilling & Phelps, 2007) whereas portfolios exceeding 10 partnerships foster knowledge spillovers, resource flexibility, and resilience (Lahiri & Narayanan, 2013). Industry evidence further suggests that firms managing more than 10 partnerships are more likely to develop formal alliance management capabilities, sustaining impact within their ecosystems (Wassmer et al., 2010). Therefore, this threshold captures genuine portfolios rather than isolated relationships, as noted in the “Data Collection” section.

Organizational Diversity. We coded each partnership in the PPS based on partners’ organization type: FPO (for profit organizations), NGO (non-governmental organizations), GOV (for public authorities, local/regional or municipal authorities, and government organizations), UNI (for universities and academic institutions) and MULTI (for multistakeholder partnership where we observed two or more types of societal stakeholders involved). We, then, calculated partner diversity using the Blau Index (Blau, 1977) which is commonly used to assess portfolio diversity and measure heterogeneity of categorical diversity variables, where for any given diversity variable: $D = 1 - \sum p_i^2$ (Jiang et al., 2010; Rindova et al., 2012). Here, D represents the degree of diversity, p represents the proportion belonging to a given category, and i is the number of different categories (Jiang et al., 2010, p. 1140).

Geographical Diversity. To assess the geographical diversity of a PPS, we calculate the “cross-border partnership participation proportion,” following a similar approach to previous studies (Kim, 2017; Lévesque & Murray, 2010). This metric is defined as the proportion of the firm’s total partnerships that are cross-border in nature. Specifically, it is quantified using a binary (YES/NO) variable that indicates whether each partnership in the portfolio involves cross-border collaboration.

Issue Diversity. Through our qualitative coding, we identified 17 issues in total in the PPSs we studied: biodiversity and non-humans, certifications-standards, circular economy, cleaner production with action on water and chemicals, crisis response (covid pandemic, wildfires, earthquakes), education, emissions reduction—carbon offsetting-climate action, employment and labour conditions, general sustainability transition efforts through coalitions, health and wellbeing, nature conservation, poverty and hunger, renewable energy, social justice and equity, supply chain, transparency and traceability, sustainable consumption and sustainable materials-products. We have conducted this coding abductively, back and forth moving from our own data and prior studies that had identified sustainability issues in the fashion industry (Beyers & Heinrichs, 2020; Dzhengiz et al., 2023; Saha et al., 2024). We began by coding each individual partnership announcement according to the specific issues it addressed, allowing for multiple issues to be coded per partnership. This resulted in a table with 17 issue columns, where each issue was coded as “1” if addressed in the partnership and “0” if not. At the partnership level, this enabled us to capture the breadth of issue engagement for each focal firm. We then aggregated this information at the firm level to analyze the overall composition of each company’s PPS. First, we calculated how many of the 17 issues were addressed in total across a firm’s entire portfolio, providing a count of unique issues engaged. Then, we calculated issue diversity at the portfolio level using a proportional measure, defined as the number of unique issues addressed across a firm’s portfolio divided by the total number of possible issues (17). This yields a score between 0 and 1, indicating the extent to which a firm’s PPS engages with the full range of identified issues. A higher score reflects greater breadth of sustainability issues engaged across the firm’s PPS.

Diversity of Targeted Level of Change. Using prior studies (Dzhengiz et al., 2023; Stadtler & Lin, 2019), partnerships were coded based on their targeted level of change. “Firm” denoted partnerships that only intended to create company-level change. “Industry” represented partnerships targeting industry stakeholders (Stadtler & Lin, 2019). “Supply chain” focused on vertical

supply-chain stakeholders, mainly if the deal text contained keywords such as supply chain, suppliers, distributors, upstream/downstream partners, logistics, vertical, and supply on the supply chain elements (Stadtler & Lin, 2019). Finally, “Society” indicated those addressing broader societal level change, and a deal text was coded like this if it contained keywords like end consumer(s), community, and society (Stadtler & Lin, 2019). When calculating this diversity variable, we assumed that the proportions of partnerships at each level carry the same weight. We used the Shannon Diversity Index to calculate this condition.

QCA Process

Calibration is important in QCA as it determines the set membership of a specific case, for example, determining if a given company qualifies for inclusion within the high ESG performance group. Rather than resorting to rigid categories, as in the case of either in or out (0 or 1); fuzzy set analysis, specifically fsQCA, offers a more nuanced approach. It enables classification based on both distinct categories and degrees within those categories, which means a case can have a partial membership, yielding scores anywhere between 0 and 1 (Fiss et al., 2013, p. 52). During calibration, original interval-scaled values are transformed into the fuzzy-value scales. For calibration decisions, we followed the approach used by Schifeling and Soderstrom (2022) and Marques et al. (2025) and leveraged prior case knowledge, and discernible value breakpoints. Following the direct method (Rihoux & Ragin, 2008, p. 85), we calibrated both the outcome and its conditions.

The calibration thresholds are presented in Table 2 below and the calibrated values in Table B1 in Appendix B.

Configurational Analysis

In QCA, it is crucial to determine whether certain causal conditions, or their combinations, are either necessary or sufficient for a specific outcome. A necessity analysis looks for conditions that must always be present for an outcome to occur; without these conditions, the outcome would not appear. On the other hand, a sufficiency analysis identifies which combinations of conditions will result in the outcome when they are present. Our analysis encompassed both necessity and sufficiency analysis, employing the QCA (version 3.22; Dusa, 2018) and SetMethods (version 4; Oana et al., 2020) packages for *R*. We assessed necessity with a consistency threshold of 0.9 and coverage of 0.6 (Schneider, 2018; Schneider & Wagemann, 2012). We did

Table 2. Calibration Thresholds.

Condition/Outcome	Thresholds for fuzzy set calibration			Measure descriptives of the final dataset			
	Full out	Cross-over point	Full in	Mean	SD	Min	Max
<i>Portfolio size</i>	11.5	21	50	27.97	20.21	10	103
<i>Organizational diversity</i>	0.09	0.28	0.4	0.20	0.13	0.00	0.40
<i>Geographical diversity</i>	0.1	0.67	0.96	0.63	0.25	0.07	1
<i>Issue diversity</i>	0.5	0.66	0.95	0.73	0.15	0.47	1
<i>Diversity of targeted level of change</i>	0.5	1.25	1.3	1.19	0.26	0.32	1.38
<i>ESG performance</i>	24	62	78	61.88	19.21	24.40	91.73

Note. Values on this table are descriptives of the final sample of portfolios of the 35 focal firms analyzed, meaning, have ESG scores available and PPS ≥ 10. ESG = environmental, social, and governance.

not find any necessary conditions for high ESG performance or low ESG performance.

For sufficiency, a 32-row truth table was generated (see Table C1 in Appendix C) detailing five conditions. Each row showcases conditions culminating in high ESG performance. We implemented the Enhanced Standard Analysis (ESA; Schneider & Wagemann, 2012, pp. 200–211) to bypass logical contradictions. For negative outcomes, contradictory simplifying assumptions, which could justify both outcomes, were removed. To address contradictory truth table rows and consistency issues, we used PRI cut-off. PRI values below 0.5 indicate significant inconsistency (Greckhamer et al., 2018) and the PRI consistency cut-off should be on the same level as raw consistency scores (Pappas & Woodside, 2021). Consequently, for both positive and negative outcomes, we set the frequency threshold at 2, the PRI cut-off at 0.8 and the consistency cut-off at 0.8. We made directional assumptions in the analysis, following the earlier findings, particularly assuming that the presence of high geographical diversity is associated with a high-performance outcome (Lavie & Miller, 2008; Silva Queiroz et al., 2023; Wang & Bao, 2017). For the negative outcome, we assumed that this condition is absent.

To deepen the analysis in our configurational assessment, we distinguished between core and periphery conditions in line with established QCA methodological practice (Fiss, 2011). Core and peripheral conditions were identified by comparing the intermediate and parsimonious solutions (Fiss, 2011). Conditions that appeared in both the intermediate and parsimonious solutions

were interpreted as core, while those appearing only in the intermediate solution were interpreted as peripheral (Fiss, 2011). In configurational analysis, a condition is “don’t care” situation when: it appears with both presence and absence across configurations that lead to the same outcome (e.g. high ESG performance; Fiss, 2011, p. 407).

Robustness Checks

Robustness checks were also conducted in our analysis. We drew from the protocol proposed by Oana and Schneider (2024) and determined the sensitivity ranges for calibration and frequency cut-off. To calculate the sensitivity ranges in which the initial solution (IS) stays the same, we used `rob.calibrange` function of `SetMethods`. We find that the solution stays the same, and the interpretation of the solutions persists with relatively significant cross-over point changes of the conditions. We conducted check with `rob.inclrange` and `rob.ncutrange` for finding similar ranges for consistency threshold value and for the frequency cut-off value (Greckhamer et al., 2018).

We noticed that the parsimonious solution for negative outcome is very robust for consistency threshold changes, and the solution stays the same if the raw consistency threshold is specified within the 0.75 to 0.83 range. The positive outcome is more sensitive in this regard, and the solution stays the same within 0.8 to 0.87 range. The results are sensitive for frequency cut-off value but with 35 cases, it is not justified to place the frequency threshold at 3, for example. Using the `rob.fit()` function, we obtained the four robustness parameters. The `RF_cov`, `RF_cons`, `RF_SC_minTS`, and `RF_SC_maxTS` are all close to 1 for the analysis of the positive outcome. Therefore, the initial solution demonstrates a high level of robustness to the changes that were tested (see Table D1 in Appendix D).

Findings and Discussion

In this section, we first present our QCA findings, detailing three configurations of PPS that led to positive outcomes (high ESG), as well as two configurations associated with negative outcomes (low ESG), as summarized in Table 3 below. The positive solution covers 71% of high-ESG cases (consistency 0.85); the negative solution covers 58% of membership (consistency 0.89), suggesting similarly reliable yet more narrowly distributed causal pathways. Subsequently, we elaborate on each configuration with empirical and qualitative examples of PPS combinations and ESG outcomes. Moreover, following recent guidance on configurational and hybrid theorizing (Campbell

Table 3. Results.

Configuration name	Configurations leading to high performance			Configurations leading to low performance		
	E1a	E1b	E2	L1	L2	
Large portfolio size	●	●	⊗	⊗	●	
High organizational diversity	⊗		⊗	⊗	⊗	
High geographical diversity		●	●	⊗	⊗	
High diversity of targeted level of change		●	●	●	⊗	
High issue diversity	●	●	⊗		⊗	
Strong cases under the configuration	Hanes Brands, Inditex, Lands' End, Columbia Sportswear, Gap Inc, Nike, PVH Corp	Nike, PVH Corp, Burberry, H&M, Kering, Lululemon, Ralph Lauren	Capri Holdings, Fast Retailing	Boohoo Group, OVS SpA, Tapestry Inc, Guess, Ted Baker, Under Armour	Aritzia, Skechers, Vera Bradley	
Consistency	0.89	0.93	0.84	0.88	0.9	
Unique Coverage	0.11	0.13	0.11	0.41	0.08	
Solutions consistence	0.85			0.89		
Solution coverage	0.71			0.58		

Note. Black circles "●" indicate the presence of a condition, and circles with "⊗" indicate its absence. Large circles indicate core conditions, small ones, peripheral conditions. Blank spaces indicate "don't care" situations.

& Fiss, 2026; Cornelissen et al., 2021), we discuss and articulate theoretical implications of these recipes.

Configurations Resulting in Positive Outcomes

The results indicate the existence of two distinct configurational groups, demonstrating the existence of equifinality. Large and diverse PPS (a breadth strategy) and focused and well-targeted portfolios where strategic selection of partnerships pays off in ESG scores. In line with configurational logic, we interpret each solution as a causal recipe, rather than as evidence of independent or additive effects of individual portfolio attributes.

Large and Diverse Portfolios: Diversification Benefits (E1a, E1b). The first two configurations leading to a positive outcome, E1a and E1b, are both characterized by large portfolio size and issue diversity, which appear as core conditions. In E1a, high ESG performance arises when large portfolio size and high issue diversity are core present, organizational diversity is peripherally absent, and geographical diversity and diversity of targeted level of change are “don’t care” situations. Whereas in E1b, high ESG performance is driven by the core presence of portfolio size and issue diversity, supported by the peripheral presence of geographical diversity and diversity of targeted level of change, while organizational diversity is a “don’t care” situation. In this configuration, the conjunction of large portfolio size and high issue diversity reflects economies of scale in partnering, consistent with experience that firms gain in developing and managing PPS. The fact that issue diversity is core further underlines the sustainability-specific nature of PPS, highlighting that fashion firms must engage with a broad set of interrelated issues to achieve high ESG performance.

These two configurations feature a diverse mix of firms. For example, in E1a, Inditex maintained a relatively large portfolio of 59 partnerships: 36 with NGOs, 5 with universities, 1 with a government authority, and 17 with multistakeholder cross-sector partnerships. Many of Inditex’s collaborations focused on diverse social or humanitarian causes that are dominated by cross-sector partnerships rather than inter-firm alliances. For instance, partnerships with Doctors Without Borders, Red Cross, and Oxfam for aid and philanthropic activities, as in the following example (Inditex, 2015): “*The collaboration of Inditex with Doctors Without Borders forms part of the social investment of the Group, which includes social programs in collaboration with non-profit entities with experience in the geographical area in which they are carried out.*” In E1b, another well-known fashion retailer appears: H&M. H&M had 103 partnerships: 18 with FPOs, 27 with NGOs, 4 with

government authorities, and 54 with multistakeholder partnerships. H&M's partnerships spanned a very high range of sustainability issues, from environmental concerns like water use (CEO Water Mandate), circularity (Ellen MacArthur Foundation), and sustainable cotton farming (BCI), to social goals such as workers' rights (Better Work and The Global Deal; H&M, 2025). Some of these partnerships, like the one with the NGO Canopy, aimed to make supply level change (Memberships and Collaborations, 2026): *"The Canada-based NGO Canopy works with the forest industry's biggest customers and their suppliers to develop business solutions that protect the world's ancient and endangered forests. We work with them to ensure our viscose does not contribute to the deforestation of ancient or endangered forests."* H&M also engaged in partnerships that aimed impact at societal level with organizations like WaterAid and industry level change with organizations such as the Microfibre Consortium, thus, providing a PPS that targets impact at various levels through distinct relationships in different geographical settings.

E1a and E1b also reflect trade-offs and substitutability in how firms configure their PPS. They show that organizational diversity is not a necessary nor a core condition within these recipes for achieving high ESG performance. When it is absent, firms can narrow their geographical scope and concentrate partnership activity at a specific level of change and still achieve strong ESG outcomes (E1a). Alternatively, firms can reach similar results by keeping the same core (large portfolio size and high issue diversity) while adding only peripheral breadth in geographical reach and a modestly higher diversity of targeted level of change (E1b). The relatively high unique coverage of these configurations (0.24) indicates that most high-performing firms in our sample experiment with permutations around these shared core conditions.

Reflecting on these findings with literature, what we found mirrors the portfolio logic: diversification spreads ESG risk and enhances performance (Elton & Gruber, 1997; Fabozzi et al., 2002). Like uncorrelated financial assets stabilize returns in modern portfolio theory, portfolios diversified across issues buffer failures in any single initiative focused on singular issues and enable systemic impact when supported by portfolio size. Our results align with work arguing that balanced, diverse portfolios bolster ESG outcomes (Albino et al., 2012; Austin, 2003), and with meta-analytic evidence linking portfolio diversity to performance (D. Lee et al., 2017). Alliance portfolio studies often find that geographical diversity (Lavie & Miller, 2008) and, contingently, organizational diversity, improve performance when supported by coordination/technology capabilities (Cobena et al., 2017; Degener et al., 2018; Oerlemans et al., 2013). In contrast to some of this literature, our

E1 configurations highlight the non-necessity and non-core nature of high organizational diversity, highlighting contingency across diversity types (Jiang et al., 2010) and echoing cautions about excessive organizational diversity and inverted-*U* effects (Garcia Martinez et al., 2017; Nooteboom, 2007). Echoing Wassmer et al. (2014), our result that issue diversity—rather than organizational diversity—is core implies that PPS which deliberately spans contradictory or trade-off-laden issues enables balancing sustainability-related risks across issues and, in turn, strengthens ESG performance, aligning with some arguments of Van Tulder and Da Rosa (2012). Thereby, we contribute to this conversation by showing that when firms develop and manage sufficiently large PPS and diversify across sustainability issues, they create buffering capacity that helps them absorb weaknesses in individual collaborations such as relational and issue-specific risks which can contribute towards ESG performance.

Focused and Well-Targeted Portfolios: Strategic Selection Pays Off (E2). E2 represents a distinct pathway to high ESG performance, demonstrating that strong outcomes can emerge from a different combination of conditions than in E1a and E1b. For E2, high ESG performance is driven by the core presence of high geographical diversity and high diversity of targeted level of change, alongside peripheral absences of organizational diversity, portfolio size, and issue diversity. Like E1b, E2 features high geographical diversity and high diversity of targeted level of change, but in this configuration, as core conditions. Unlike E1b, portfolio size and issue diversity are peripherally absent in E2 (with organizational diversity also peripherally absent), so while E1b relies on a large, broadly issue-diverse portfolio, E2 reflects a smaller, strategically focused set of partnerships, suggesting that large portfolios help manage broad issue diversity, whereas smaller portfolios can still deliver strong ESG when concentrated on fewer issues in different geographies.

An example of E2 configuration, Fast Retailing (Uniqlo) maintained a modest portfolio of 20 partnerships. Fifteen of these were multistakeholder cross-sector partnerships, spanning firm, industry-, supply chain-, and societal-level change. Capri Holdings further exemplifies the E2 configuration, with 11 partnerships (9 multistakeholder and cross-sector), Capri focused on collaborations with established industry coalitions or platforms (e.g. Sustainable Apparel Coalition, Leather Working Group, ZDHC) to drive systemic change in supply chains and develop enhanced environmental practices. Its emphasis on process improvements (e.g. chemical elimination, traceability) and involvement in global coalitions reflects a strategy to enhance ESG performance through a few globally impactful and legitimacy orientated multi-level partnerships.

Reflecting on these findings with literature, this configuration, too, aligns with portfolio logic whereby a concentrated portfolio of high-value, uncorrelated assets can also be efficient. Therefore, high performance is not exclusive to large portfolios. In this sense, E2 demonstrates that portfolio quality or fit matter more than sheer size (Hoffmann, 2005), challenging the assumption that “more is better” when it comes to the number of partnerships (Lahiri & Narayanan, 2013). Moreover, geographical diversification, present in E2 (but absent from low-performing configurations) emerges as a salient condition within this recipe. By exposing firms to diverse stakeholder expectations and regulatory contexts, geographical diversity strengthens ESG performance (Lavie & Miller, 2008). We also find that diversity of targeted level of change whereby balancing firm-level initiatives with industry, regional, or system-level goals (Dzhengiz et al., 2023; Stadtler & Lin, 2019) and its interaction with geographic diversity are critical when portfolios are small. Thereby, we contribute by showing that when firms lack large partnership portfolios, ESG gains can still emerge if they selectively orchestrate a smaller set of partnerships that span multiple geographies and target diverse levels of change.

Configurations Resulting in Negative Outcomes

We identified two configurations associated with low ESG performance—L1 and L2—both marked by low organizational and geographical diversity, though differing in other key dimensions. Importantly, these low-ESG configurations are not mirror opposites of the high-ESG recipes, underlining the asymmetry of configurational causality.

Small and Ambitious Portfolios (L1). In L1, low ESG performance is characterized by the core absence of portfolio size and geographical diversity, the peripheral absence of organizational diversity, the peripheral presence of a higher targeted level of change, and issue diversity as a “don’t care” situation. L1 includes firms like Boohoo Group, Vera Bradley, Under Armour, and OVS. For instance, Boohoo maintains 11 partnerships. Of these, 10 are cross-sector partnerships, and within this group, 5 are multistakeholder partnerships with organizations such as Textile 2030, the Microfibre Consortium, and the Slave Free Alliance. Still, Boohoo faces criticism for modern slavery concerns, heavy polyester use linked to microplastics, and an ultra-fast fashion model lacking circularity. Its partnerships, focused on philanthropic efforts like mental health awareness and charitable donations, appear more reactive than strategic. Although Boohoo targets multiple levels of change (18% firm, 27% industry, 18% each for supply chain and societal), the

limited portfolio size raises questions about the depth and integration of impact, as coalition memberships alone does not guarantee ESG progress nor does it enable integration of learnings from diverse partnerships into the core business. Other L1 firms, like OVS and Ted Baker, show similar patterns. OVS, including legacy brands like Stefanel, has 11 partnerships—mostly multistakeholder partnerships—and targets change efforts across all levels. Ted Baker's 18 partnerships also span NGOs, FPOs, and multistakeholder partnerships. L1 shows a key tension: high diversity in targeted level of change without geographic breadth with small portfolios underperforms (relative to E2), suggesting that ambition pursued in isolation leads to lowered ESG performance.

This finding resembles the concentration of resources into correlated, risky assets which can magnify exposure to failure rather than balancing risk and return (Fabozzi et al., 2002). Our findings highlight that when firms attempt to drive change ambitiously in different levels spanning across their firm, industry, supply chains and society but with narrowly constructed portfolios (L1), the result is a poorer ESG performance. This pattern is consistent with the left side of the widely observed inverted *U*-shaped diversity–performance relationships across cognitive, industrial, technological, functional, and geographic dimensions (Chung et al., 2019; Nooteboom, 2007; Piening et al., 2016). Meaning, too little diversity undermines outcomes despite diversity in the targeted level of change. Prior research shows that portfolio diversity in functions, objectives, and logics enables learning, ambidexterity, and social innovation (Ashraf et al., 2019; Dai & Wang, 2021; Jeong & Ko, 2016; Josserand et al., 2018; Wassmer, Li, & Madhok, 2017), so the absence of different forms of heterogeneities makes ambition (diverse targeted levels of change) unsupported, specifically, if the number of engaged partners (portfolio size) is also low. Thereby, we contribute here by showing that when firms pursue driving change in multiple levels through narrow and spatially constrained (geographically concentrated and not spread) portfolios, this becomes weakly supported PPS, limiting learning, reach, and implementation depth, which undermines ESG performance, particularly in sectors like fashion.

Large but Undiversified Portfolios (L2). In L2, low ESG performance arises with core absence of geographical diversity, diversity of targeted level of change, and issue diversity, alongside peripheral absence of organizational diversity and peripheral presence of a large portfolio size. L2 indicates that a lack of PPS diversity on all dimensions hinders ESG performance. Furthermore, L2 depicts high portfolio size as a peripheral condition, showing that a large portfolio alone would not be able to compensate for various forms

of portfolio diversity. Meaning, “more of the same” partnerships with all diversity conditions absent leave no buffer against ESG shocks and relational risks, and cannot support firms to build resilience through partnerships. For example, Skechers holds 27 partnerships (primarily with NGOs), with 78% focused on social issues and 93% aimed at societal change, reflecting low issue diversity and low diversity in targeted change levels. Even though its portfolio is not small, this example shows that a relatively large portfolio alone does not ensure high ESG performance. Compared to high-performing configurations like E1a and E1b, which combine size with issue and/or geographical diversity and high diversity in targeted change levels, L2 lacks the necessary portfolio diversity.

This configuration resembles extensive but poorly diversified asset collections, where risk is amplified rather than mitigated (Fabozzi et al., 2002). Firms with large PPS that lack portfolio diversity are generally associated with low ESG performance. While it is often assumed that larger portfolios or greater heterogeneity are generally beneficial, for instance, for greater innovation performance (Lahiri & Narayanan, 2013), even large portfolios can fail on ESG performance without meaningful diversification that creates configurational fit. This result extends prior work (Wassmer et al., 2014) by emphasizing that it is not portfolio size alone but its interaction with different diversity dimensions (Dai & Wang, 2021; Wassmer, Pain, & Paquin, 2017) that drives ESG outcomes, highlighting again that more is not necessarily better for ESG performance. Thereby, we contribute to this conversation by showing that when firms expand partnership portfolios without meaningful diversification across different factors, they accumulate redundant rather than complementary relationships, reducing the portfolio’s ability to generate learning, resilience, and ESG improvement.

Conclusion

In this section, we discuss the theoretical contributions and practical implications of our findings. We, then, provide ideas for future directions that can address our limitations.

Theoretical Contributions

First, we contribute to the sustainability-oriented partnerships literature (Niesten & Lozano, 2015; Stadler & Lin, 2019) by shifting attention from portfolio size and generalized notions of “benefits of collaborations” (Albino et al., 2012; Dangelico & Pontrandolfo, 2015; Delmas et al., 2011) or recent conversations around the benefits of partnership portfolio diversity (Cicerelli

et al., 2025) and dyadic analyses (Riandita et al., 2025) to the strategic balance among issue, targeted level of change, and geographical diversity, introducing portfolio logic and configurational lens that specify which structural attributes and combinations affect ESG performance. Our results show that high ESG does not hinge on any single condition but on compensatory interactions, with the key interaction between portfolio size and diversity. A breadth strategy (E1a/E1b)—large portfolios plus high issue diversity—and a focus strategy (E2)—high geographical diversity and higher diversity of targeted level of change—offsetting smaller portfolios with limited issue diversity. These patterns align with diversification and interaction logics of modern portfolio theory. Issue diversity and portfolio scale mitigate relationship-specific risk, while geographic spread curbs context-/market-specific risk. Finally, we find that organizational diversity is non-essential and non-core for ESG performance (peripheral absent in E1a/E2; don't care in E1b), problematizing and shifting the conversation from “more partnerships” or “organizationally diverse portfolios” to the idea of configurational fit.

Second, our study enriches the alliance portfolio literature (Cobeña et al., 2017) by demonstrating that portfolio configurations impact not only commercial results but also ESG outcomes, joining others utilizing QCA (S. Cui et al., 2021; Ferrigno et al., 2021) and unpacking how diverse structural portfolio characteristics collectively influence ESG performance through multiple pathways. In alliance portfolio research, we revisit the effects of size and diversity by showing that portfolio coherence and configurational fit are more important than the sheer number of partnerships, aligning with some of the recent research (Cobeña et al., 2017). Complementing this point, Cancela et al. (2026) recently show that alliance portfolio coordination and inter-organizational learning enhance firm-level sustainability; we extend on this by identifying the specific configurational pathways through which portfolios translate into superior ESG outcomes.

Third, our study also contributes to the literature on ESG performance (Bruno & Henisz, 2024; Lewellyn & Muller-Kahle, 2024) by showing the inter-organizational factors that influence ESG performance through PPS. Prior ESG research has established a clear set of firm-level antecedents associated with higher ESG performance, such as firm size (Bissoondoyal-Bheenick et al., 2023), corporate governance quality and ownership structures (Aydoğmuş et al., 2022), and media visibility and disclosure (Albitar et al., 2022). Our contribution is to add a complementary set of inter-organizational antecedents of ESG by showing that the structural configuration of PPS, firms partnership portfolios to diverse tackle sustainability issues in diverse geographies, systematically shapes ESG outcomes. Therefore, we move the conversation beyond firm-level capacities alone to show when and how those

capacities translate into superior ESG performance through the design of PPS that contain a diverse set of inter-organizational relationships.

Practical Implications

Managers take into consideration designing partnership portfolios to the ESG “efficient frontier” by choosing a route, either breadth or focus, and balancing size (number of partnerships they manage) with the right mix of diversities. When resources and managerial capacities allow, building large portfolios that can address a diverse set of sustainability issues, adding geographic spread and multi-level change where feasible can contribute towards ESG performance. When scale is constrained, particularly as firms are increasingly operating with limited number and capacities in their sustainability teams under the stress of the current polycrises and sustainability backlash, pursuing smaller portfolios that are geographically diverse and target multiple levels of change can equally support their ESG performance. In this instance, focusing on specific issues where they can create impact in locales that matter for their operations rather than diversifying the issue breadth would be a strategy to enable high ESG performance. Managers should view organizational (partner-type) diversity as optional rather than a goal in itself. Moreover, managers can review on a simple dashboard of their partnerships (size, issues, geographies, targeted levels of change, industries) and reflect on this regularly to avoid two traps that lead to low ESG: small portfolios that chase many change levels without breadth, and large portfolios with little diversity (“more of the same,” in other words, redundancies in their partnerships).

Limitations and Future Directions

While our study advances understanding of how PPS configurations shape ESG performance, several of our limitations provide opportunities for future research. First, our QCA approach, while well-suited to capture causal complexity, with the given data set and case number, is inherently constrained by the number of conditions. The selected conditions are a result of an extensive iterative process and the conditions established the most theoretically meaningful model aligning with QCA best practices that emphasize theoretical grounding, empirical differentiation, and parsimony to enable interpretable configurational claims (Fiss, 2011; Greckhamer et al., 2018). However, these dimensions do not represent the full range of structural and relational features that may influence ESG outcomes. There is a wide range of structural and relational conditions that could be included in configurational models. Future

studies should seek to expand the analysis to include additional diversity dimensions such as cognitive, technological, industry and functional diversity, as well as relational dynamics including trust, coordination, and power asymmetries (Dzhengiz, 2020).

Second, the study's reliance on secondary data limited our ability to capture the underlying processes of collaboration such as how partnerships are governed, managed, and evolve over time. Qualitative methods such as interviews and case studies could show how relational mechanisms interact with structural configurations to produce ESG outcomes. Similarly, social network analysis may offer valuable insights into how structural positions and interdependencies within partnership ecosystems contribute to ESG performance.

Third, we recognize that our analysis does not include firm-level antecedents known to influence ESG outcomes such as corporate governance quality, leadership commitment, innovation capacity, financial health, and stakeholder engagement. Future research could integrate these intra-organizational and firm level variables with inter-organizational portfolio configurations to build a multi-level understanding of ESG performance.

Fourth, our study is cross-sectional and does not capture temporal dynamics in portfolio evolution. Longitudinal designs could trace how firms adjust portfolio size and diversity over time (Dzhengiz et al., 2024), whether shifts in configuration correspond to sustained ESG improvements, the opposite (ESG shaping the portfolio as well), or potentially, co-evolutionary patterns (Castro et al., 2014).

Fifth, we acknowledge sectoral and contextual boundaries. Our sample is largely concentrated in the apparel, fashion, and textile sector, a field that has been a latecomer in standardized ESG and impact reporting. Consequently, ESG scores served as a pragmatic but imperfect proxy for sustainability performance (van Zanten, 2025). Hence, rather than using sustainability performance, we directly discussed "ESG" performance implications. We caution that ESG performance does not necessarily equate to actual sustainability or impact. Future studies should examine how different PPS configurations influence sustainability or impact performance which are distinct outcome conditions from ESG scores, and test whether these patterns generalize across sectors or institutional environments. Moreover, recent studies show that when rater methodology makes ESG scores more value-relevant, firms adapt strategy, investment, and disclosure to the ESG ratings, especially where they have the capacity and freedom to do so (Tarnaud & Zakriya, 2025). Therefore, we believe future research can benefit from exploring the impact of ESG ratings and ESG performance on PPS configurations too.

Finally, while our results suggest which types (or configurations) of PPS may yield higher ESG performance outcomes, we do not claim that high ESG firms are inherently more sustainable. Future work should explore how PPS configuration influences risk perception, stakeholder scrutiny, and legitimacy construction, integrating perspectives from reputation studies, impression management and institutional theory to explore further the PPS-ESG dynamics in a critical light.

Acknowledgments

We want to thank Minna Halme, Kai Hockerts, Matthew Allen, and Gunnar Leymann for their friendly feedback on the earlier versions of this manuscript. We benefited from various paper development workshops before submission, providing us with further insights and feedback to enhance our article. Specifically, we would like to thank the organizers and participants of SE&I Virtual Brown Bag of Copenhagen Business School and participants who joined the presentation of this work at the GRONEN conference and the Sustainability in Business (SUB) meeting at Aalto University School of Business. We also would like to thank participants of our presentation at AOM ONE 2023 and CRRC 2023 and we have also done our best to incorporate their helpful suggestions and feedback. Last but not least, we owe a big thank you to Tessa Kauppinen for her time working on this project as a research assistant. Without her support, it would not be possible to co-develop this large database.

ORCID iDs

Tulin Dzhengiz  <https://orcid.org/0000-0001-7909-6612>

Jouni Juntunen  <https://orcid.org/0000-0001-8137-8985>

Samuli Patala  <https://orcid.org/0000-0001-6009-748X>

Andra Riandita  <https://orcid.org/0000-0003-4988-5287>

Funding

The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research was supported by the Academy of Finland's Strategic Research Council's grant no. 327299 Sustainable textile systems: Co-creating resource-wise business for Finland in global textile networks/FINIX consortium.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Disclosure of AI Use

We used Grammarly and ChatGPT-5 (Enterprise) only for language editing and proofreading to correct grammar, spelling, and stylistic clarity. These tools were not used for data collection or analysis. The authors take full responsibility for the content and any remaining errors.

Supplemental Material

Supplemental material for this article is available online.

References

- Albino, V., Dangelico, R. M., & Pontrandolfo, P. (2012). Do inter-organizational collaborations enhance a firm's environmental performance? a study of the largest U.S. companies. *Journal of Cleaner Production*, 37, 304–315. <https://doi.org/10.1016/j.jclepro.2012.07.033>
- Albitar, K., Abdoush, T., & Hussainey, K. (2022). Do corporate governance mechanisms and ESG disclosure drive CSR narrative tones? *International Journal of Finance & Economics*, 28(4), 3876–3890. <https://doi.org/10.1002/ijfe.2625>
- Albort-Morant, G., Leal-Rodriguez, A. L., & De Marchi, V. (2018). Absorptive capacity and relationship learning mechanisms as complementary drivers of green innovation performance. *Journal of Knowledge Management*, 22(2), 432–452. <https://doi.org/10.1108/Jkm-07-2017-0310>
- Andreuski, G., Brass, D. J., & Ferrier, W. J. (2013). Alliance portfolio configurations and competitive action frequency. *Journal of Management*, 42(4), 811–837. <https://doi.org/10.1177/0149206313498901>
- Aouadi, A., & Marsat, S. (2016). Do ESG controversies matter for firm value? Evidence from international data. *Journal of Business Ethics*, 151(4), 1027–1047. <https://doi.org/10.1007/s10551-016-3213-8>
- Ashraf, N., Ahmadsimab, A., & Pinkse, J. (2017). From animosity to affinity: The interplay of competing logics and interdependence in cross-sector partnerships. *Journal of Management Studies*, 54(6), 793–822. <https://doi.org/10.1111/joms.12273>
- Ashraf, N., Pinkse, J., Ahmadsimab, A., Ul-Haq, S., & Badar, K. (2019). Divide and rule: The effects of diversity and network structure on a firm's sustainability performance. *Long Range Planning*, 52(6), Article 101880. <https://doi.org/10.1016/j.lrp.2019.04.002>
- Austin, J. E. (2003). Strategic alliances: Managing the collaboration portfolio. *Stanford Social Innovation Review*, 1(2), 49–55.
- Aydoğmuş, M., Gülay, G., & Ergun, K. (2022). Impact of ESG performance on firm value and profitability. *Borsa Istanbul Review*, 22, S119–S127. <https://doi.org/10.1016/j.bir.2022.11.006>
- Babiak, K., & Thibault, L. (2009). Challenges in multiple cross-sector partnerships. *Nonprofit and Voluntary Sector Quarterly*, 38(1), 117–143. <https://doi.org/10.1177/0899764008316054>

- Bahlmann, M. D. (2015). Geographic network diversity: How does it affect exploratory innovation? *Industry and Innovation*, 21(7–8), 633–654. <https://doi.org/10.1080/13662716.2015.1012906>
- Basurto, X., & Speer, J. (2012). Structuring the calibration of qualitative data as sets for qualitative comparative analysis (QCA). *Field Methods*, 24(2), 155–174. <https://doi.org/10.1177/1525822x11433998>
- Baum, J. A. C., Calabrese, T., & Silverman, B. S. (2000). Don't go it alone: Alliance network composition and startups' performance in Canadian biotechnology. *Strategic Management Journal*, 21(3), 267–294. [https://doi.org/10.1002/\(SICI\)1097-0266\(200003\)21:3<267::AID-SMJ89>3.0.CO;2-8](https://doi.org/10.1002/(SICI)1097-0266(200003)21:3<267::AID-SMJ89>3.0.CO;2-8)
- Bettinazzi, E. L. M., Jacqueminet, A., Neumann, K., & Snoeren, P. (2024). Media coverage of firms in the presence of multiple signals: A configurational approach. *Academy of Management Journal*, 67(1), 150–177. <https://doi.org/10.5465/amj.2020.1791>
- Beyer, K., & Arnold, M. G. (2022). Examining the social side of sustainability in the debate on business model innovations in the textile, clothing and fashion industry: A typology based on the value chain perspective. *International Journal of Innovation and Sustainable Development*, 16(3–4), 322–371. <https://doi.org/10.1504/Ijsd.2022.123908>
- Beyers, F., & Heinrichs, H. (2020). Global partnerships for a textile transformation? A systematic literature review on inter- and transnational collaborative governance of the textile and clothing industry. *Journal of Cleaner Production*, 261, Article 121131. <https://doi.org/10.1016/j.jclepro.2020.121131>
- Bissoondoyal-Bheenick, E., Brooks, R., & Do, H. X. (2023). ESG and firm performance: The role of size and media channels. *Economic Modelling*, 121, Article 106203. <https://doi.org/10.1016/j.econmod.2023.106203>
- Blau, P. M. (1977). *Inequality and heterogeneity: A primitive theory of social structure* (Vol. 7). Free Press New York.
- Bruno, C. C., & Henisz, W. J. (2024). Environmental, social, and governance (ESG) outcomes and municipal credit risk. *Business & Society*, 63(8), 1709–1756. <https://doi.org/10.1177/00076503231220541>
- Cabello-Medina, C., Carmona-Lavado, A., & Cuevas-Rodriguez, G. (2020). A contingency view of alliance management capabilities for innovation in the biotech industry. *BRQ-Business Research Quarterly*, 23(1), Article 2340944420901050. <https://doi.org/10.1177/2340944420901050>
- Campbell, J. T., & Fiss, P. C. (2026). Tackling the complexity challenge: When and how to engage in configurational and hybrid theorizing. *Academy of Management Review*. Advance online publication. <https://doi.org/10.5465/amr.2024.0187>
- Cancela, B. L., Santos, C., & Coelho, A. (2026). Green strategies for circular economy and sustainable supply chains. *Corporate Social Responsibility and Environmental Management*, 33(1), 675–693. <https://doi.org/10.1002/csr.70195>
- Caro, F., & Martínez-de-Albéniz, V. (2015). Fast fashion: Business model overview and research opportunities. In N. Agrawal & S. A. Smith (Eds.), *Retail supply*

- chain management* (pp. 237–264). Springer US. https://doi.org/10.1007/978-1-4899-7562-1_9
- Castro, I., Casanueva, C., & Galan, J. L. (2014). Dynamic evolution of alliance portfolios. *European Management Journal*, 32(3), 423–433. <https://doi.org/10.1016/j.emj.2013.06.006>
- Chen, Z. F., & Xie, G. X. (2022). ESG disclosure and financial performance: Moderating role of ESG investors. *International Review of Financial Analysis*, 83, Article 102291. <https://doi.org/10.1016/j.irfa.2022.102291>
- Chung, D., Kim, M. J., & Kang, J. (2019). Influence of alliance portfolio diversity on innovation performance: The role of internal capabilities of value creation. *Review of Managerial Science*, 13(5), 1093–1120. <https://doi.org/10.1007/s11846-018-0281-4>
- Cicerelli, F., Colombelli, A., Niesten, E., & Ravetti, C. (2025). The role of alliance portfolio diversity for corporate decarbonization, circular economy and eco-innovation. *Journal of Technology Transfer*, 1–50. <https://doi.org/10.1007/s10961-025-10304-9>
- Cobeña, M., Gallego, A., & Casanueva, C. (2017). Heterogeneity, diversity and complementarity in alliance portfolios. *European Management Journal*, 35(4), 464–476. <https://doi.org/10.1016/j.emj.2016.12.005>
- Cornelissen, J., Höllerer, M. A., & Seidl, D. (2021). What theory is and can be: Forms of theorizing in organizational scholarship. *Organization Theory*, 2(3), 26317877211020328. <https://doi.org/10.1177/26317877211020328>
- Cui, A. S., & O'Connor, G. (2012). Alliance portfolio resource diversity and firm innovation. *Journal of Marketing*, 76(4), 24–43. <https://doi.org/10.1509/jm.11.0130>
- Cui, S., Li, L., Tang, Y., & Li, C. (2021). *Exploring the diversity of alliance portfolio and firm performance based on the QCA method*. 2021 IEEE 6th International Conference on Cloud Computing and Big Data Analytics (ICCCBDA). <https://doi.org/10.1109/ICCCBDA51879.2021.9442558>
- Dai, Q., & Wang, L. (2021). Functional diversity of alliance portfolio and corporate social responsibility. In S. Taneja (Ed.), *Academy of management annual meeting proceedings* (pp. 1–37). Academy of Management.
- Dangelico, R. M., & Pontrandolfo, P. (2015). Being “Green and Competitive”: The impact of environmental actions and collaborations on firm performance. *Business Strategy and the Environment*, 24(6), 413–430. <https://doi.org/10.1002/bse.1828>
- Deeds, D. L., & Hill, C. W. L. (1996). Strategic alliances and the rate of new product development: An empirical study of entrepreneurial biotechnology firms. *Journal of Business Venturing*, 11(1), 41–55. [https://doi.org/10.1016/0883-9026\(95\)00087-9](https://doi.org/10.1016/0883-9026(95)00087-9)
- Degener, P., Maurer, I., & Bort, S. (2018). Alliance portfolio diversity and innovation: The interplay of portfolio coordination capability and proactive partner selection capability. *Journal of Management Studies*, 55(8), 1386–1422. <https://doi.org/10.1111/joms.12396>

- Delmas, M., Hoffmann, V. H., & Kuss, M. (2011). Under the tip of the Iceberg: Absorptive capacity, environmental strategy, and competitive advantage. *Business & Society*, 50(1), 116–154. <https://doi.org/10.1177/0007650310394400>
- Dentoni, D., Bitzer, V., & Pascucci, S. (2015). Cross-sector partnerships and the co-creation of dynamic capabilities for stakeholder orientation. *Journal of Business Ethics*, 135(1), 35–53. <https://doi.org/10.1007/s10551-015-2728-8>
- DiVito, L., van Wijk, J., & Wakkee, I. (2021). Governing collaborative value creation in the context of grand challenges: A case study of a cross-sectoral collaboration in the textile industry. *Business & Society*, 60(5), 1092–1131. <https://doi.org/10.1177/0007650320930657>
- Drempetic, S., Klein, C., & Zwergel, B. (2019). The influence of firm size on the ESG score: Corporate sustainability ratings under review. *Journal of Business Ethics*, 167(2), 333–360. <https://doi.org/10.1007/s10551-019-04164-1>
- Dusa, A. (2018). *QCA with R: A comprehensive description* (1st edition 2018 ed.). Springer International Publishing.
- Duysters, G., Heimeriks, K. H., Lokshin, B., Meijer, E., & Sabidussi, A. (2012). Do firms learn to manage alliance portfolio diversity? The diversity-performance relationship and the moderating effects of experience and capability. *European Management Review*, 9(3), 139–152. <https://doi.org/10.1111/j.1740-4762.2012.01034.x>
- Dzhengiz, T. (2019). *Organisational value frames and sustainable alliance portfolios: Bridging between the theories*. Corporate Responsibility Research Conference (CRRC).
- Dzhengiz, T. (2020). A literature review of inter-organizational sustainability learning. *Sustainability*, 12(12), Article 4876. <https://doi.org/10.3390/su12124876>
- Dzhengiz, T., Henry, L. A., & Malik, K. (2024). The role of partnership portfolios for sustainability in addressing the stability-change paradox: Dong/Orsted's transition from fossil fuels to renewables. *Business & Society*, 63(7), 1518–1557. <https://doi.org/10.1177/00076503231211214>
- Dzhengiz, T., Riandita, A., & Broström, A. (2023). Configurations of sustainability-oriented textile partnerships. *Business Strategy and the Environment*, 32(7), 4392–4412. <https://doi.org/10.1002/bse.3372>
- Elton, E. J., & Gruber, M. J. (1997). Modern portfolio theory, 1950 to date. *Journal of Banking & Finance*, 21(11–12), 1743–1759. [https://doi.org/10.1016/S0378-4266\(97\)00048-4](https://doi.org/10.1016/S0378-4266(97)00048-4)
- Fabozzi, F. J., Gupta, F., & Markowitz, H. M. (2002). The legacy of modern portfolio theory. *The Journal of Investing*, 11(3), 7–22.
- Faems, D., Janssens, M., & Neyens, I. (2012). Alliance portfolios and innovation performance: Connecting structural and managerial perspectives. *Group & Organization Management*, 37(2), 241–268. <https://doi.org/10.1177/1059601112441246>
- Ferrigno, G., Dagnino, G. B., & Di Paola, N. (2021). R&D alliance partner attributes and innovation performance: A fuzzy set qualitative comparative analysis. *Journal of Business & Industrial Marketing*, 36(13), 54–65.

- Figge, F. (2004). Bio-folio: Applying portfolio theory to biodiversity. *Biodiversity and Conservation*, 13(4), 827–849. <https://doi.org/10.1023/B:Bioc.0000011729.93889.34>
- Figge, F., Thorpe, A. S., & Manzhynski, S. (2021). Between you and I: A portfolio theory of the circular economy. *Ecological Economics*, 190, Article 107190. <https://doi.org/10.1016/j.ecolecon.2021.107190>
- Fiss, P. C. (2011). Building better causal theories: A fuzzy set approach to typologies in organization research. *Academy of Management Journal*, 54(2), 393–420. <https://doi.org/10.5465/Amj.2011.60263120>
- Fiss, P. C., Marx, A., & Cambré, B. (2013). Configurational theory and methods in organizational research: Introduction. In P. C. Fiss, B. Cambré, & A. Marx (Eds.), *Configurational theory and methods in organizational research* (Vol. 38). Emerald Group Publishing Limited.
- Furnari, S. (2014). Interstitial spaces: Microinteraction settings and the genesis of new practices between institutional fields. *Academy of Management Review*, 39(4), 439–462. <https://doi.org/10.5465/amr.2012.0045>
- Garcia Martinez, M., Zouaghi, F., & Sanchez Garcia, M. (2017). Capturing value from alliance portfolio diversity: The mediating role of R&D human capital in high and low tech industries. *Technovation*, 59, 55–67. <https://doi.org/10.1016/j.technovation.2016.06.003>
- Goncalves, F. R., & Gonçalves, V. d. C. (2008). Strategic alliances and competitive performance in the pharmaceutical industry. *Journal of Medical Marketing*, 8(1), 69–76.
- Gray, B., & Purdy, J. (2018). *Collaborating for our future: Multistakeholder partnerships for solving complex problems*. Oxford University Press.
- Greckhamer, T., Furnari, S., Fiss, P. C., & Aguilera, R. V. (2018). Studying configurations with qualitative comparative analysis: Best practices in strategy and organization research. *Strategic Organization*, 16(4), 482–495. <https://doi.org/10.1177/1476127018786487>
- Hagedoorn, J., Lokshin, B., & Zobel, A. K. (2018). Partner type diversity in alliance portfolios: Multiple dimensions, boundary conditions and firm innovation performance. *Journal of Management Studies*, 55(5), 809–836. <https://doi.org/10.1111/joms.12326>
- Harjoto, M., Laksmana, I., & Lee, R. (2015). Board diversity and corporate social responsibility. *Journal of Business Ethics*, 132(4), 641–660. <https://doi.org/10.1007/s10551-014-2343-0>
- Heimeriks, K. H., Klijn, E., & Reuer, J. J. (2009). Building capabilities for alliance portfolios. *Long Range Planning*, 42(1), 96–114. <https://doi.org/10.1016/j.lrp.2008.10.005>
- Henry, L. A., Rasche, A., & Möllering, G. (2022). Managing competing demands: Coping with the inclusiveness-efficiency paradox in cross-sector partnerships. *Business & Society*, 61(2), 267–304. <https://doi.org/10.1177/0007650320978157>
- Hoffmann, W. H. (2005). How to manage a portfolio of alliances. *Long Range Planning*, 38(2), 121–143. <https://doi.org/10.1016/j.lrp.2005.03.001>

- Hoffmann, W. H. (2007). Strategies for managing a portfolio of alliances. *Strategic Management Journal*, 28(8), 827–856. <https://doi.org/10.1002/smj.607>
- Husted, B. W., & de Sousa-Filho, J. M. (2017). The impact of sustainability governance, country stakeholder orientation, and country risk on environmental, social, and governance performance. *Journal of Cleaner Production*, 155, 93–102. <https://doi.org/10.1016/j.jclepro.2016.10.025>
- Inditex. (2015). *Inditex is contributing €2.5 million to help Médecins Sans Frontières*. <https://www.inditex.com/itxcomweb/jo/en/press/news-detail/c916f6a5-94cd-45d8-9e91-a034bfd39efd/inditex-is-contributing-25-million-to-help-mdecins-sans-frontires>
- Jeong, H. J., & Ko, Y. (2016). Configuring an alliance portfolio for eco-friendly innovation in the car industry: Hyundai and Toyota. *Journal of Open Innovation: Technology, Market, and Complexity*, 2(4), 1–16. <https://doi.org/10.1186/s40852-016-0050-z>
- Jiang, R. J., Tao, Q. T., & Santoro, M. D. (2010). Alliance portfolio diversity and firm performance. *Strategic Management Journal*, 31(10), 1136–1144. <https://doi.org/10.1002/smj.869>
- Josserand, E., Kaine, S., & Nikolova, N. (2018). Delivering sustainability in supply networks: Achieving networked multi-stakeholder collaborations. *Business Strategy and the Environment*, 27(5), 605–611. <https://doi.org/10.1002/bse.2065>
- Juntunen, J. K., Halme, M., Korsunova, A., & Rajala, R. (2019). Strategies for integrating stakeholders into sustainability innovation: A configurational perspective. *Journal of Product Innovation Management*, 36(3), 331–355. <https://doi.org/10.1111/jpim.12481>
- Kale, P., Singh, H., & Perlmutter, H. (2000). Learning and protection of proprietary assets in strategic alliances: Building relational capital. *Strategic Management Journal*, 21(3), 217–237. [https://doi.org/10.1002/\(SICI\)1097-0266\(200003\)21:3<217::AID-SMJ95>3.0.CO;2-Y](https://doi.org/10.1002/(SICI)1097-0266(200003)21:3<217::AID-SMJ95>3.0.CO;2-Y)
- Khaled, R., Ali, H., & Mohamed, E. K. (2021). The sustainable development goals and corporate sustainability performance: Mapping, extent and determinants. *Journal of Cleaner Production*, 311, 127599. <https://doi.org/10.1016/j.jclepro.2021.127599>
- Kim, H.-J. (2017). The complementary effects of transaction cost economics and resource-based view: A technological alliance perspective. *International Journal of Business Excellence*, 13(3), 355–376.
- Kim, J., & Yang, W. (2026). ESG performance evolution in retail: A systematic review and meta-analysis. *Corporate Social Responsibility and Environmental Management*, 33(2), 2254–2279. <https://doi.org/10.1002/csr.70242>
- Koumou, G. B. (2020). Diversification and portfolio theory: A review. *Financial Markets and Portfolio Management*, 34(3), 267–312.
- Lahiri, N., & Narayanan, S. (2013). Vertical integration, innovation, and alliance portfolio size: Implications for firm performance. *Strategic Management Journal*, 34(9), 1042–1064. <https://doi.org/10.1002/smj.2045>

- Lane, P. J., Salk, J. E., & Lyles, M. A. (2001). Absorptive capacity, learning, and performance in international joint ventures. *Strategic Management Journal*, 22(12), 1139–1161. <https://doi.org/10.1002/smj.206>
- Lankoski, L., & Ollila, S. (2024). Unbundling ethical consumer choice: A configurational analysis with a framing experiment. *Business & Society*, 64(8), 1520–1558. <https://doi.org/10.1177/00076503241291304>
- Lavie, D., & Miller, S. R. (2008). Alliance portfolio internationalization and firm performance. *Organization Science*, 19(4), 623–646. <https://doi.org/10.1287/orsc.1070.0341>
- Lavie, D., & Singh, H. (2011). The evolution of alliance portfolios: The case of Unisys. *Industrial and Corporate Change*, 21(3), 763–809. <https://doi.org/10.1093/icc/dtr058>
- Lee, D., Kirkpatrick-Husk, K., & Madhavan, R. (2017). Diversity in alliance portfolios and performance outcomes: A meta-analysis. *Journal of Management*, 43(5), 1472–1497. <https://doi.org/10.1177/0149206314556316>
- Leppänen, P., George, G., & Alexy, O. (2023). When do novel business models lead to high performance? A configurational approach to value drivers, competitive strategy, and firm environment. *Academy of Management Journal*, 66(1), 164–194.
- Lévesque, C., & Murray, G. (2010). Trade union cross-border alliances within MNCs: Disentangling union dynamics at the local, national and international levels. *Industrial Relations Journal*, 41(4), 312–332.
- Lewellyn, K., & Muller-Kahle, M. (2024). ESG leaders or laggards? A configurational analysis of ESG performance. *Business & Society*, 63(5), 1149–1202. <https://doi.org/10.1177/00076503231182688>
- Mani, S., Ashnai, B., & Wang, J. J. (2022). Alliance portfolios and joint R&D project performance. *Industrial Marketing Management*, 107, 238–252. <https://doi.org/10.1016/j.indmarman.2022.10.005>
- Markowitz, H. (1952). Modern portfolio theory. *Journal of Finance*, 7(11), 77–91.
- Marques, P., Benassi, C., Costa, A., & Pinto, A. (2025). Under which conditions do unions succeed in pushing back dualization? A configurational study of collective agreements in Portugal. *British Journal of Industrial Relations*, 63(1), 133–155.
- Matthies, B. D., Jacobsen, J. B., Knoke, T., Paul, C., & Valsta, L. (2019). Utilising portfolio theory in environmental research—New perspectives and considerations. *Journal of Environmental Management*, 231, 926–939. <https://doi.org/10.1016/j.jenvman.2018.10.049>
- Memberships and Collaborations. (2026). <https://hmgroup.com/sustainability/leading-the-change/memberships-and-collaborations/>
- Meschi, P. X., & Norheim-Hansen, A. (2020). Partner-diversity effects on alliance termination in the early stage of green alliance formation: Empirical evidence from carbon-emission reduction projects in Latin America. *Business Strategy and the Environment*, 29(1), 250–261. <https://doi.org/10.1002/bse.2362>
- Misangyi, V. F., Greckhamer, T., Furnari, S., Fiss, P. C., Crilly, D., & Aguilera, R. (2017). Embracing causal complexity: The emergence of a neo-config-

- urational perspective. *Journal of Management*, 43(1), 255–282. <https://doi.org/10.1177/0149206316679252>
- Nielsen, E., & Lozano, R. (2015). Making, buying and collaborating for more sustainable production and consumption. *Journal of Cleaner Production*, 100, 1–3. <https://doi.org/10.1016/j.jclepro.2015.03.014>
- Nooteboom, B. (2007). *Cognitive distance in and between COP's and firms: Where do exploitation and exploration take place, and how are they connected?* Paper for DIME workshop on Communities of Practice.
- Norheim-Hansen, A. (2014). Are “Green Brides” more attractive? An empirical examination of how prospective partners’ environmental reputation affects the trust-based mechanism in alliance formation. *Journal of Business Ethics*, 132(4), 813–830. <https://doi.org/10.1007/s10551-014-2342-1>
- Oana, I.-E., Medzihorsky, J., Quaranta, M., & Schneider, C. Q. (2020). *SetMethods: Functions for set-theoretic multi-method research and advanced QCA* (Version 2.6). <https://cran.r-project.org/web/packages/SetMethods/index.html>
- Oana, I. E., & Schneider, C. Q. (2024). A robustness test protocol for applied QCA: Theory and R software application. *Sociological Methods & Research*, 53(1), 57–88.
- Oerlemans, L. A. G., Knoben, J., & Pretorius, M. W. (2013). Alliance portfolio diversity, radical and incremental innovation: The moderating role of technology management. *Technovation*, 33(6–7), 234–246. <https://doi.org/10.1016/j.technovation.2013.02.004>
- Paolone, F., Pozzoli, M., Chhabra, M., & Di Vaio, A. (2024). Cultural and gender diversity for ESG performance towards knowledge sharing: Empirical evidence from European banks. *Journal of Knowledge Management*, 28(11), 106–131. <https://doi.org/10.1108/Jkm-05-2023-0445>
- Pappas, I. O., & Woodside, A. G. (2021). Fuzzy-set Qualitative Comparative Analysis (fsQCA): Guidelines for research practice in Information Systems and marketing. *International Journal of Information Management*, 58, Article 102310. <https://doi.org/10.1016/j.ijinfomgt.2021.102310>
- Penney, C. R., Combs, J. G., Gaffney, N., & Sexton, J. C. (2020). A jack-of-all-trades or a master of none: The performance effects of balancing exploration and exploitation within vs across alliance portfolio domains. *Journal of Knowledge Management*, 24(3), 569–587. <https://doi.org/10.1108/jkm-09-2017-0395>
- Piening, E. P., Salge, T. O., & Schäfer, S. (2016). Innovating across boundaries: A portfolio perspective on innovation partnerships of multinational corporations. *Journal of World Business*, 51(3), 474–485. <https://doi.org/10.1016/j.jwb.2016.01.001>
- Ragin, C. C. (1987). *The comparative method: Moving beyond qualitative and quantitative strategies*. Univ. of California Press.
- Rajesh, R. (2020). Exploring the sustainability performances of firms using environmental, social, and governance scores. *Journal of Cleaner Production*, 247, 119600. <https://doi.org/10.1016/j.jclepro.2019.119600>

- Rana, M. B., & Allen, M. M. C. (2021). Upgrading the global garment industry: Internationalization, capabilities and sustainability. In M. B. Rana & M. M. C. Allen (Eds.), *Upgrading the global garment industry* (pp. 1–11). Edward Elgar Publishing. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85115716861&partnerID=40&md5=43014a6544585088f72d7ed0cb6474a8>
- Rekker, S. A. C., Humphrey, J. E., & O'Brien, K. R. (2019). Do sustainability rating schemes capture climate goals? *Business & Society*, 60(1), 125–160. <https://doi.org/10.1177/0007650319825764>
- Riandita, A. (2022). To collaborate and innovate for sustainability: Food retailers and their external partners. *Technological Forecasting and Social Change*, 180, Article 121681.
- Riandita, A., Broström, A., & Cagliano, R. (2025). Partnering with green start-ups: A vehicle for eco-innovation? *Industry and Innovation*, 32(1), 24–52. <https://doi.org/10.1080/13662716.2024.2390012>
- Rihoux, B., & Ragin, C. C. (2008). *Configurational comparative methods: Qualitative comparative analysis (QCA) and related techniques*. Sage.
- Rindova, V. P., Yeow, A., Martins, L. L., & Faraj, S. (2012). Partnering portfolios, value-creation logics, and growth trajectories: A comparison of Yahoo and Google (1995 to 2007). *Strategic Entrepreneurship Journal*, 6(2), 133–151. <https://doi.org/10.1002/sej.1131>
- Saha, K., Dey, P. K., & Kumar, V. (2024). A comprehensive review of circular economy research in the textile and clothing industry. *Journal of Cleaner Production*, 444, Article 141252. <https://doi.org/10.1016/j.jclepro.2024.141252>
- Saha, K., Dey, P. K., & Papagiannaki, E. (2021). Implementing circular economy in the textile and clothing industry. *Business Strategy and the Environment*, 30(4), 1497–1530. <https://doi.org/10.1002/bse.2670>
- Schifeling, T., & Soderstrom, S. (2022). Advancing reform: Embedded activism to develop climate solutions. *Academy of Management Journal*, 65(6), 1775–1803. <https://doi.org/10.5465/amj.2019.0769>
- Schilling, M. A. (2009). Understanding the alliance data. *Strategic Management Journal*, 30(3), 233–260. <https://doi.org/10.1002/smj.731>
- Schilling, M. A., & Phelps, C. C. (2007). Interfirm collaboration networks: The impact of large-scale network structure on firm innovation. *Management Science*, 53(7), 1113–1126. <https://doi.org/10.1287/mnsc.1060.0624>
- Schneider, C. Q. (2018). Two-step QCA revisited: The necessity of context conditions. *Quality & Quantity*, 53(3), 1109–1126. <https://doi.org/10.1007/s11135-018-0805-7>
- Schneider, C. Q., & Wagemann, C. (2012). *Set-theoretic methods for the social sciences: A guide to qualitative comparative analysis*. Cambridge University Press.
- Shan, W. J., Walker, G., & Kogut, B. (1994). Interfirm cooperation and startup innovation in the biotechnology industry. *Strategic Management Journal*, 15(5), 387–394. <https://doi.org/10.1002/smj.4250150505>

- Silva Queiroz, G. L., de Oliveira Paula, F., & da Silva, J. F. (2023). The role of alliance portfolio diversity on firm innovation and performance: The case of Colombia. *Technology Analysis & Strategic Management*, 35(4), 365–379.
- Srivastava, M. K., & Gnyawali, D. R. (2011). When do relational resources matter? Leveraging portfolio technological resources for breakthrough innovation. *Academy of Management Journal*, 54(4), 797–810.
- Stadtler, L. (2017). Tightrope walking: Navigating competition in multi-company cross-sector social partnerships. *Journal of Business Ethics*, 148(2), 329–345. <https://doi.org/10.1007/s10551-017-3579-2>
- Stadtler, L., & Lin, H. Y. (2019). Leveraging partnerships for environmental change: The interplay between the partnership mechanism and the targeted stakeholder group. *Journal of Business Ethics*, 154(3), 869–891. <https://doi.org/10.1007/s10551-017-3465-y>
- Tarnaud, A. C., & Zakriya, M. (2025). CSR performance and firm value: Disentangling the role of ESG rating providers. *British Journal of Management*, 36(4), 1553–1577.
- Van Tulder, R., & Da Rosa, A. (2012). The role of cross-sector partnership portfolios in the inclusive business strategies of multinational enterprises. In R. Van Tulder, A. Verbeke, & L. Voinea (Eds.), *New policy challenges for European multinationals* (pp. 153–180). Emerald Group Publishing Limited.
- Van Wijk, R., & Nadolska, A. (2020). Making more of alliance portfolios: The role of alliance portfolio coordination. *European Management Journal*, 38(3), 388–399. <https://doi.org/10.1016/j.emj.2019.12.009>
- van Zanten, J. A. (2025). Measuring companies' environmental and social impacts: An analysis of ESG ratings and SDG scores. *Organization & Environment*, 38(3), 403–439.
- Wang, X. Y., & Bao, H. J. (2017). Alliance portfolios and firm performance: The moderating role of environmental dynamics. *Industrial Management & Data Systems*, 117(8), 1550–1566. <https://doi.org/10.1108/lmds-09-2016-0351>
- Wassmer, U. (2010). Alliance portfolios: A review and research agenda. *Journal of Management*, 36(1), 141–171. <https://doi.org/10.1177/0149206308328484>
- Wassmer, U., Dussauge, P., & Planellas, M. (2010). How to manage alliances better than one at a time. *MIT Sloan Management Review*, 51(3), 77–94.
- Wassmer, U., Li, S. L., & Madhok, A. (2017). Resource ambidexterity through alliance portfolios and firm performance. *Strategic Management Journal*, 38(2), 384–394. <https://doi.org/10.1002/smj.2488>
- Wassmer, U., Pain, G., & Paquin, R. L. (2017). Taking environmental partnerships seriously. *Business Horizons*, 60(1), 135–142. <https://doi.org/10.1016/j.bushor.2016.09.009>
- Wassmer, U., Paquin, R., & Sharma, S. (2014). The engagement of firms in environmental collaborations: Existing contributions and future directions. *Business & Society*, 53(6), 754–786. <https://doi.org/10.1177/0007650312439865>

- Wuyts, S., & Dutta, S. (2014). Benefiting from alliance portfolio diversity: The role of past internal knowledge creation strategy. *Journal of Management*, 40(6), 1653–1674. <https://doi.org/10.1177/0149206312442339>
- Zhang, S. M., Yuan, C. H., & Han, C. (2020). Industry-university-research alliance portfolio size and firm performance: The contingent role of political connections. *Journal of Technology Transfer*, 45(5), 1505–1534. <https://doi.org/10.1007/s10961-020-09778-6>

Author Biographies

Tulin Dzhengiz is a senior lecturer (PhD, associate professor) in sustainability at the Department of Strategy Enterprise Sustainability at Manchester Metropolitan University Business School. She is interested in inter-organizational relationships, including strategic alliances, partnerships, innovation and entrepreneurial ecosystems and industrial clusters in the context of sustainability and circular economy. She published in various journals such as *Business & Society*, *International Journal of Management Reviews*, *R&D Management*, *Business Strategy and the Environment*, *Journal of Business Ethics* and *Fashion and Textiles*.

Jouni Juntunen (PhD, Aalto University, Finland) is a professor of Innovation Management and the head of the Industrial Management department at the University of Vaasa, School of Technology and Innovations. His main areas of research focus on sustainable innovation, energy transitions, and the social acceptance of renewable energy technologies. He has published his work in such journals as *Academy of Management Discoveries*, *Journal of International Business Studies*, *Organization Science* and *Research Policy*.

Samuli Patala (PhD) is an associate professor at the Aalto University, School of Business. His research focuses broadly on how systemic sustainability transitions develop through collective action and supportive institutions. His specific areas of interest include cross-sector collaboration for sustainability, circular economy as well as institutional change in sustainability transitions. He has published his work in diverse management journals, such as *Organization Studies*, *Journal of International Business Studies*, *Journal of Management Studies* and *Journal of Business Ethics*.

Andra Riandita is a postdoctoral researcher at the University of Stavanger, School of Business and Law. Her research focuses on how organizations innovate for sustainability through entrepreneurship, sustainable innovation, and cross-sector collaboration. She has published her work in journals such as *Technological Forecasting and Social Change*, *Industry and Innovation*, *International Small Business Journal*, and *Business Strategy and the Environment*.

Appendix A

Table A1. Qualitative Coding Principles and Illustrative Examples to our Coding:

Coding category	Explanation	Based on	Example 1	Example 2
Partnership Announcement (Deal) Text	Deal text as it is:	based on announcement, inductively coded.	"Today, together with Allbirds we are announcing the first product from our collaboration, Futurecraft.Footprint. At 2.94kg CO2e it represents a personal best for both brands as the result of a collective ambition to make a performance running shoe with no carbon footprint."	"Canada Goose in partnership with Inuit Tapitit Kanatami (ITK), the national representational organization that works to improve the health and wellbeing of Inuit in Canada, today announced a call for Inuit designers to join its social entrepreneurship project for Canada's North—Project Atigi. Project Atigi builds on the company's commitment to Canada's North and is designed to celebrate Inuit craftsmanship and create entrepreneurial opportunities."
Partners Name	Company Name-Partner Name.	based on announcement, inductively coded.	Addas with Allbirds	Canada Goose with ITK
Date/Time of the Press Release/ News/Partnership Announcement	The date of the partnership announcement. If the exact start date of partnership cannot be found, the date of the news/press release could be used instead.	based on announcement, inductively coded.	11/05/2021 Based on deal text announcement	08/08/2019 Based on deal text announcement
Partner type (FPO, NGO, uni., gov., multi)	The partner organization's name is checked on Google. We identified if they are a for-profit firm; NGOs; university/research org.; government (public authority, municipal-regional authority, ministry). If there are several partner types in a single partnership; this is coded as a multi-stakeholder partnerships.	based on announcement and checking one by one the partner organization names over the internet, inductively coded.	FPO Based on Allbirds' organization type as for-profit firms	NGO Based on ITK's organization type as non-profit and non-governmental organizations
Partnership type (inter-firm versus cross-sector)	If the partner type is for-profit, then insert "inter-firm"; any other partner type (NGO, university/research, government, multi-stakeholder); then insert "cross-sector."	based on the partner type variable, inductively coded.	Inter-firm Based on the partnership of Addas and Allbirds being both for-profit firms	Cross-sector Based on the partnership of Canada Goose and ITK being for-profit firm and NGO
Geography of the Partnership	Insert the location of partner as country, if this is not identified on the press release or documents, then search the organization and partnership over the internet to identify geographical location of the partner.	based on announcement, inductively coded.	USA Based on the deal text announcement	Canada Based on the deal text announcement

(continued)

Table A1. (continued)

Coding category	Explanation	Based on	Example 1	Example 2
Level of Change				
Firm	Partnership focuses on the company level, especially if the deal text involved keywords such as employee(s), manager(s), product(s), and company.	Structural coding principles applied here based on previously published studies (Dzhengiz et al., 2023; Stadler & Lin, 2019). Examples from other partnerships are provided.	"[Puma] partnered with Grde Economy and held a virtual workshop on the definition and concept of a circular economy and circular product design for our designers, product line managers, developers, and sourcing teams. The training addressed the challenges and opportunities in our industry to enhance the credibility of our products."	"Lee Jeans . . . has partnered with fashion retailer H&M. . . . The result is a collection that embodies the brands' drive to push for reduced impact, planet friendly designs that will champion sustainable denim around the world. At each stage of the collaboration the brands have aimed to use the most sustainable options in terms of materials and processes."
Supply chain	Partnership targets vertical supply-chain stakeholders, especially if the deal text contained keywords such as supply chain, supplier(s), distributor(s), upstream/downstream partner(s), logistic, vertical, and supply		"GUESS. . . is proud to partner with The Better Cotton Initiative (BCI), an organization that works with cotton farmers, helping them to use water efficiently and care for the environment, as well as promote higher standards of work, during cotton production."	"[Esprit] were among the first members of the Zero Discharge of Hazardous Chemicals Group (ZDHC). This group of industry-leading brands and stakeholders has come together to develop tools and protocols to empower the entire supply chain and move the industry forward."
Industry	Partnership targets horizontal industry stakeholder, especially if the deal text contained keywords such as competitor(s), market, horizontal, business customer(s), industry, and industry partner(s).		"Tapestry, Inc. . . announced its participation in the Black in Fashion Council Active Allyship Pledge. Members of the Active Allyship program commit to joining together to secure the advancement of Black individuals in the fashion and beauty industry."	"Looking to examine Inclusion and Diversity (I&D) in the fashion industry and start a meaningful industry dialogue, PVH Corp. has teamed up with the Council of Fashion Designers of America (CFDA)."
Society	Partnership targets stakeholders at the societal level, especially if the deal text contained keywords such as end customer(s), consumer(s), community, and society.		"[Burberry] have a partnership and are donating excess fabric to Progetto Quid in Italy, a women-led not-for-profit cooperative, providing women and men from disadvantaged backgrounds with employment opportunities through sustainable fashion."	"[VF Corp]'s Clothes the Loop program encourages people to drop off unwanted clothing and footwear at The North Face Retail and Outlet Stores. The items dropped in our collection bins are sent to our non-profit partner, Soles4Souls. Their mission is to create sustainable jobs and provide relief through the distribution of shoes and clothing. The items put into our bins are repurposed for micro-enterprise programs that aim to provide small entrepreneurs with business opportunities."

(continued)

Table A1. (continued)

Coding category	Explanation	Based on	Example 1	Example 2
Sustainability issues	Multiple issues could be coded for each partnership. The binary coding allowed us to assess issue diversity across the full partnership portfolio. Below is a description of the criteria for each coded issue:	based on announcement, and studies on sustainable fashion and textiles that indicate the sustainability issues of the industry (Dzhengiz et al., 2023; Rana & Allen, 2021; Saha et al., 2024; Saha et al., 2021), abductively coded. Examples from other partnerships are provided.	"Eyecandylab and Adidas are proud to announce their pilot project has launched at the adidas flagship store at Champs Élysées in Paris. The project integrates the existing digital video screens in the store into the storytelling, and raises awareness of adidas' sustainably manufactured products made from recycled ocean plastic." "[Anizila] collaborated with the Ocean Wise Plastics Lab research team as well as Metro Vancouver Fisheries and Oceans Canada, The McLean Foundation, OneOcean Expeditions and other retailers. The research will further understanding of the impacts of microfibres and identify opportunities to improve our future manufacturing to reduce the impact on our oceans."	"Through a new partnership, Burberry and The RealReal are aiming to support and promote the benefits of a circular economy for fashion by encouraging customers to extend the life of their products through resale." "Capri Holdings joined the Zero Discharge of Hazardous Chemicals Programme, a global coalition of leading international brands in the apparel and footwear sectors, to support elimination of hazardous chemicals in our supply chain by 2025."
	Circular Economy: Mention of circular design principles, reuse, recycling, end-of-life innovation, or product life extension.			
	Cleaner Production: References to reducing water and chemical use, improving manufacturing efficiency, or cleaner industrial processes.			

(continued)

Table A1. (continued)

Coding category	Explanation	Based on	Example 1	Example 2
Sustainable Materials/Products: Use or promotion of natural, recycled, biodegradable, or eco-certified materials and sustainable product design.	<i>Emissions Reduction, Carbon Offsetting, and Climate Action:</i> Specific goals or actions aimed at reducing greenhouse gas emissions, achieving carbon neutrality, or offsetting environmental impact.		"[H&M] are supporting Maersk—one of our strategic transport partners and one of the biggest transport providers in the world—in one of their latest innovations, the Maersk ECO Delivery. The biofuel-blend that has been tested to propel vessels, which comes from wasted cooking oil for instance, has shown promising results in reducing the emissions from the ocean shipping." "Since 2019, [Inditex] have also been a member of The Microfibre Consortium (TMC), a global initiative focused on developing practical microfibre solutions for the textile industry." "Kontoor Brands and Panda Biotech are working to bring traceability and scale to the textile-grade cottonized hemp grown and processed in the United States."	"[Columbia] joined forces with the Outdoor Industry Association (OIA) as an inaugural member of the Climate Action Corps. The OIA's Climate Action Corps is a new collaborative model for companies to gain alignment and accountability on climate action." "HUGO BOSS continues its cooperation with Ananas Anam and launches another BOSS shoe collection made of Pinatex®... an innovative natural material made out of pineapple leaf fiber."
	<i>Supply Chain, Transparency, and Traceability:</i> Mentions of visibility into supply chains, traceability systems, or improving transparency across sourcing and production.			"Kering has partnered with Albini Group, Supima and Ortain to create a more sustainable business model through 100% traceable organic cotton. Using forensic science and statistical analysis, the naturally-occurring chemical properties of the actual fibre is analyzed, creating a unique chemical fingerprint that links it back to the field in which it was grown."

(continued)

Table A1. (continued)

Coding category	Explanation	Based on	Example 1	Example 2
Social Justice and Equity: Focus on inclusion, equity, fair treatment, or empowerment of marginalized communities.			"Lands' End will also be donating \$25,000 to the <i>Point Foundation</i> , the nation's largest scholarship-granting organization for LGBTQ students of merit. Lands' End will sponsor a 2-year scholarship named the 'Lands' End Community College Scholarship', with the non-profit in addition to pledging a percentage of proceeds from rainbow capsule collection sales."	"Canada Goose in partnership with <i>Inuit Tapitit Kanatami</i> (ITK), the national representational organization that works to improve the health and wellbeing of Inuit in Canada."
			Health and Wellbeing: Initiatives that promote mental, physical, or community health and wellbeing. "In 2019 <i>Salvatore Ferragamo</i> launched diverse initiatives with the excellence of Italian Hospitals, such as the important three-year collaboration with the <i>Fondazione Meyer</i> of the Meyer Children's Hospital in Florence, an outstanding center for pediatric research and treatment." "<i>Uilleann</i> and the <i>United Nations Foundation</i> today announced their partnership around an innovative program to address the mental and physical health of UN development and humanitarian workers who serve on the front lines of urgent global challenges."	"[Ted Baker] also set up 'Ted's Bazaar', an online charity pop-up shop featuring exclusive limited-edition merchandise. 100% of profits went to local communities facing current and future challenges due to the pandemic <i>Blurt</i> is a charity providing support for people affected by depression."
Education: Programs aimed at education, training, capacity-building, or knowledge sharing related to sustainability.			" <i>Big Sisters</i> connects young people with strong, positive mentors in order to ignite their power and potential. <i>Aritzia</i> supports <i>Big Sisters</i> of BC Lower Mainland with financial donations to support the <i>Go Girls! Healthy Bodies, Healthy minds</i> program."	

(continued)

Table A I. (continued)

Coding category	Explanation	Based on	Example 1	Example 2
	<i>Certifications and Standards:</i> Use of or alignment with established environmental or social sustainability standards (e.g. GOTS, FSC, ISO).		"HUGO BOSS became a new member of the 'Better Cotton Initiative' (BCI), with the aim of further fulfil some of its sustainability criteria and goals." "Nike is a member of . . . We Mean Business is a coalition of organizations working to accelerate the transition to a low-carbon economy by forming a common platform to amplify the business voice, catalyze bold climate action by all and promote smart policy frameworks." "Gap Inc. has committed to work with Canopy, the CanopyStyle brands and global rayon and viscose producers to free the supply chain of ancient and endangered forest fiber from controversial sources."	"[Inditex] joined [Sustainability Apparel Coalition] in 2011 and are actively involved in developing the coalition's core focus, the Higg Index, used to measure sustainability performance at all stages of production." "OVS . . . to take part in the <i>Circular Fashion Partnership</i>, a project promoted by Global Fashion Agenda, P&G and BGMEA (the Bangladesh Garment Manufacturers and Exporters Association), in conjunction with 30 other international stakeholders in the fashion industry."
	<i>General Sustainability Transition Efforts through Coalitions:</i> Involvement in platforms or collective efforts aimed at sector-wide or systemic sustainability transformations.		"Biodiversity and Non-Humans: Efforts that seek to protect ecosystems, wildlife, or biodiversity more broadly."	"H&M Kids collection to raise funds for WWF . . . 10% of the sales price of the collection will support WWF's work in conserving species at risk."
	<i>Nature Conservation:</i> Initiatives specifically focused on conserving natural resources or protected environments.		"In collaboration with the <i>Fur Free Alliance</i> (FFA), a coalition of more than 50 animal protection organizations from over 40 countries, the <i>Prada Group</i> announcement follows positive dialogue between the luxury brand and FFA members, LAV and The Humane Society of the United States."	"pVH in partnership with GIZ's <i>lWagSP</i> launched Protecting Lake Hawassa, a multi-stakeholder collective action initiative that aims to improve water security for the residents, businesses, and the environment surrounding Lake Hawassa."

(continued)

Table A I. (continued)

Coding category	Explanation	Based on	Example 1	Example 2
Crisis Response (e.g. Covid-19, wildfires, disasters): Partnerships formed in response to acute social or environmental crises.	Poverty and Hunger: Partnerships targeting food security, poverty reduction, or hunger alleviation.		"Under Armour is donating \$1 million to Feeding America to support hunger relief efforts as a result of current school closures and quarantines."	"Yera Bradley . . . announces today its continued partnership with the non-profit organization Blessings in a Backpack to kick off a new philanthropic program . . . Blessings in a Backpack mobilizes communities, individuals, and resources to provide food for elementary school children across America who might otherwise go hungry."
			"Inditex is donating four machines to COGAMI for the mass manufacture of surgical face masks to protect against Covid-19. The masks will be sold by the organization to raise money for its community work."	"Lands' End today announced it is partnering with the Iowa County Health Department to transform the Corner Center, a fitness and recreation facility at its Dodgeville, Wisconsin headquarters, into a COVID-19 vaccination clinic."
			"[Lululemon] collaborate with . . . The Climate Group's RE100. A global partnership of influential businesses committed to 100 percent renewable electricity."	"LVMH's new strategic partnership with S&P Impulse Foundation . . . The field of work will include, among other areas, a reduction in energy consumption in the boutiques of the Group's Maisons, the production of proprietary renewable energy, and the use of alternative ways of transport to air freight."

Note. IRK = Inuit Tapiriit Kanatami.

Appendix B

Table B1. Calibration Table.

Focal firms	Organizational diversity	Portfolio size	Geographical diversity	Diversity of targeted level of change	Issue diversity	ESG performance
Adidas	0.96	0.86	0.97	0.99	0.44	0.99
Aritzia	0.12	0.58	0.34	0.49	0.44	0.34
Boohoo Group	0.14	0.04	0.11	1.00	0.44	0.27
Burberry	0.68	0.62	0.65	1.00	0.74	0.81
Canada Goose	0.11	0.08	0.25	0.41	0.84	0.07
Capri Holdings	0.01	0.04	0.82	1.00	0.08	0.49
Children's Place Inc	0.01	0.03	0.91	0.08	0.03	0.42
Columbia Sportswear	0.39	0.65	0.27	0.95	0.97	0.25
Esprit	0.18	0.42	0.94	0.38	0.44	0.58
Fast Retailing	0.05	0.42	0.86	0.91	0.21	0.92
Gap Inc	0.35	0.97	0.41	0.94	0.95	0.99
Guess	0.32	0.13	0.41	1.00	0.74	0.07
H&M	0.55	1.00	0.93	1.00	0.97	0.85
HanesBrands	0.42	0.62	0.06	0.29	0.91	0.81
Hugo Boss	0.28	0.58	0.77	0.49	0.44	0.98
Inditex	0.01	0.98	0.44	0.41	0.95	0.99
Kering	0.89	0.93	0.92	0.98	0.61	0.95
Kontoor	0.57	0.22	0.59	0.99	0.21	0.12
Lands' End	0.30	0.55	0.06	0.17	0.84	0.46
Lululemon	0.58	0.67	0.82	1.00	0.74	0.33
LVMH	0.88	0.22	0.83	1.00	0.74	0.76

(continued)

Table B I. (continued)

Focal firms	Organizational diversity	Portfolio size	Geographical diversity	Diversity of targeted level of change	Issue diversity	ESG performance
Nike	0.47	0.90	0.68	0.99	0.84	0.87
OVS SpA	0.01	0.04	0.46	1.00	0.44	0.61
Prada	0.61	0.04	0.64	0.27	0.44	0.35
Puma	0.30	0.55	0.95	0.47	0.61	0.97
PVH Corp	0.07	0.99	0.65	0.99	0.95	0.97
Ralph Lauren	0.65	0.75	0.69	1.00	0.74	0.61
Salvatore Ferragamo SpA	0.95	0.28	0.19	0.36	0.21	0.62
Skechers	0.01	0.65	0.04	0.02	0.21	0.05
Tapestry Inc	0.01	0.06	0.46	0.89	0.03	0.66
Ted Baker	0.06	0.28	0.24	0.98	0.61	0.18
Under Armour	0.12	0.06	0.21	0.89	0.84	0.14
Vera Bradley	0.01	0.53	0.14	0.05	0.21	0.16
VF Corp	0.78	0.97	0.50	1.00	0.95	0.94
Wolverine World Wide	0.18	0.03	0.41	0.35	0.21	0.14

Note. The values reported on this table are calibrated fuzzy-set membership scores for the conditions and outcome. Scores above the crossover point indicate greater membership in the respective set, whereas scores below the crossover point indicate greater non-membership. Higher values therefore reflect stronger membership in the corresponding “high” condition or outcome set. ESG = environmental, social, and governance.

Appendix C

Table C1. Truth Table.

Organizational diversity	Portfolio size	Geographical diversity	Diversity of diversity of change		Issue diversity	ESG	n	incl	Proportional Reduction in Inconsistency (PRI)	Cases
			diversity	of change						
0	1	1	1	0	1	?	1	0.998	0.996	Puma
0	1	1	1	0	0	?	1	0.998	0.994	Hugo Boss
1	1	1	1	1	0	?	1	0.958	0.898	Adidas
0	1	1	1	1	1	1	2	0.954	0.912	Nike, PVH Corp
1	0	0	0	0	0	?	1	0.952	0.806	Salvatore Ferragamo SpA
1	1	0	0	1	1	?	1	0.935	0.835	VF Corp
1	1	1	1	1	1	1	5	0.934	0.886	Burberry, H&M, Kering, Lululemon, Ralph Lauren
1	0	1	1	1	1	?	1	0.912	0.757	LVMH
0	1	0	0	0	1	1	3	0.883	0.748	Hanesbrands, Inditex, Lands' End
0	1	0	0	1	1	1	2	0.882	0.754	Columbia Sportswear, Gap Inc
1	0	1	0	0	0	?	1	0.882	0.658	Prada
1	0	1	1	1	0	?	1	0.839	0.522	Kontoor
0	0	1	1	1	0	1	2	0.835	0.566	Capri Holdings, Fast Retailing
0	0	1	1	0	0	0	2	0.795	0.507	Children's Place Inc, Esprit
0	0	0	0	1	0	0	3	0.781	0.359	Boohoo Group, OVS SpA, Tapestry Inc
0	0	0	0	0	1	?	1	0.754	0.330	Canada Goose
0	0	0	0	1	1	0	3	0.653	0.204	Guess, Ted Baker, Under Armour
0	0	0	0	0	0	?	1	0.647	0.169	Wolverine Worldwide
0	1	0	0	0	0	0	3	0.612	0.218	Aritzia, Skechers, Vera Bradley

Note. ESG=environmental, PRI=proportional reduction in inconsistency, social, and governance.

Appendix D

Table D1. Robustness Checks.

Sensitivity ranges	Exclusion			Crossover			Inclusion		
	Lower bound	Threshold	Upper bound	Lower bound	Threshold	Upper bound	Lower bound	Threshold	Upper bound
<i>Calibration anchors</i>									
Portfolio size	NA	11.5	NA	NA	21	NA	NA	50	NA
Organizational diversity	NA	0.09	NA	0.08	0.28	0.38	NA	0.4	NA
Geographical diversity	NA	0.1	NA	0.17	0.67	0.97	NA	0.96	NA
Diversity of targeted level of change	NA	0.5	NA	NA	1.25	1.38	NA	1.3	NA
Issue diversity	NA	0.5	NA	0.56	0.66	0.96	NA	0.95	NA
<i>Robustness parameters (for the positive outcome)</i>									
Raw consistence	Lower bound:	0.8	Threshold:	0.8	Upper bound:	0.83			
Frequency	Lower bound:	2	Threshold:	2	Upper bound:	2			
Fit oriented	RF _{cons} :	0.99	RF _{COV} :	0.899	RF _{sc_minTS} :	0.854	RF _{sc_maxTS} :	0.815	
Case oriented	RCR _{typ} :	0.63	RCR _{dev} :	0.556	RCC_Rank:	4			
<i>Robustness parameters (for the negative outcome)</i>									
Raw consistence	Lower bound:	0.75	Threshold:	0.8	Upper bound:	0.87			
Frequency	Lower bound:	2	Threshold:	2	Upper bound:	2			
Fit oriented	RF _{cons} :	1	RF _{COV} :	0.533	RF _{sc_minTS} :	0.346	RF _{sc_maxTS} :	0.406	
Case oriented	RCR _{typ} :	0	RCR _{dev} :	0	RCC_Rank:	4			

Note. “NA” means the algorithm could not specify the lower and/or upper bound, where the solution changes, after applying the maximum number of runs; thus a large sensitivity range can be consider.