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**Creating supply-chain effects from sustainable practices:
Scaling relationships in agrifood systems**

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Creating supply-chain effects from sustainable practices: Scaling relationships in agrifood systems

Abstract

Purpose: Sustainable practices of food production are often pioneered and implemented by hybrid organisations, who bridge profit and sustainability goals and shape their collaborative strategies accordingly. This research investigates how such hybrid organisations manage the scaling relationships with their supply chain to scale the effects of their practices.

Design: We frame our initial conceptualisation based on the scaling relationships hybrid organisations build with the wider supply network to achieve scaling effects. Our in-depth evidence from seven cases in the UK agrifood sector shows how these scaling relationships with large retailers (e.g., supermarkets) or with other sustainability-oriented organisations (e.g., independent farm shops) are managed.

Findings: Our findings show the different paths for managing scaling relationships, their upstream implications and scaling effects depending on the selected partner. Scaling relationships with large retailers are defined by the retailer’s business terms and are characterised by active supply arrangement with distinct beginnings and endings. Relationships with other sustainability-oriented organisations are explored within the context of a community with shared values, where episodic explorations of active supply arrangements provide a temporary formal frame.

Originality: Our contributions arise from identifying the distinct ways hybrid organisations manage scaling relationships with large retailers or other sustainability-oriented organisations. While relationships with large retailers largely mirror existing supply-chain theory, our insights regarding the scaling relationships with other sustainability-oriented organisations indicate a community approach where joint knowledge creation is prioritised over material flows.

Keywords: sustainable operations; case study; food system; scaling; supply networks; hybrid organisations

1. Introduction

Because sustainability is a core concern particularly in the agrifood system, a variety of sustainable practices of food production have emerged (Alem Fonseca et al., 2024; Corallo et al., 2024; Do et al., 2024). These sustainable practices aim to reduce the negative environmental impacts of agriculture and food production, such as greenhouse gas emissions (Gómez & Lee, 2023; Gualandris et al., 2023) and increasing social value through the creation of nutritious and healthy food and reduction in food-related illnesses (Gómez & Lee, 2023; Lindgren et al., 2018). For example, regenerative farming focuses on novel practices that enable sustainable ways of using land for agriculture (LaCanne & Lundgren, 2018). Another example is the application of circular approaches to combat food loss and waste (Atkins et al., 2024; Do et al., 2024). As a result of such efforts, hybrid organisations emerge, which integrate economic business logics with those aimed at creating societal and environmental benefits (Boehme et al., 2024; Doherty et al., 2014). These hybrid organisations pioneer new practices initially for technical and business feasibility and typically reach a specific customer segment (Do et al., 2024). With this, they establish purposeful supply chains (SCs) that align with their vision of creating economic as well as environmental or social outcomes (Meqdadi & Pagell, 2025).

Scaling sustainable practices enables reaching a wider set of consumers, creating systems impacts of sustainable food production (Luzzini et al., 2024) with the potential to increase the sustainability effects (Ritala, 2024). Scaling refers to the increase in number of people that an innovation reaches, either through diffusion or translation, with the ultimate goal of achieving systemic change (Moore et al., 2015). This can be affected through a range of approaches including increasing the geographic spread to reach more people (scaling out) or addressing the institutional or systemic roots of a problem (scaling up) (Moore et al.,

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2015). Irrespective of the approach taken, scaling sustainable practices requires these hybrid organisations to build and develop scaling relationships across their SC, often extending beyond their purposefully constructed network of suppliers.

In parallel, research highlights that a firm *“is no more sustainable than its supply chain”* (Krause et al., 2007, p. 18). In other words, SCs must become sustainable (Corallo et al., 2024; Münch et al., 2023; Oyedijo et al., 2024). Yet, sustainable practices do not always translate into sustainable SC performance (Alves et al., 2024; Corallo et al., 2024). Various factors can undermine sustainable practices spreading across the SC, including geographic, cultural and institutional distance (Alves et al., 2024), a lack of information sharing between partners (Obonyo et al., 2025), SC complexity (Oyedijo et al., 2024), and varying levels of commitment across SC actors to implementing sustainable practices (Suvanto & Lähdesmäki, 2023). In addition, hybrid organisations often have specific needs for managing their SCs due to the multiplicity of their missions (Boehme et al., 2024).

SC relationships become an important element of scaling sustainable practices (Alves et al., 2024; Obonyo et al., 2025). Some researchers have even labelled them as essential in achieving sustainable SC performance (Atkins et al., 2024; Gelderman et al., 2024). However, tensions can arise in these scaling relationships when combining sustainability goals with other business aims (Uttam et al., 2025; Xiao, Wilhelm, et al., 2019). In response to these tensions, managers often contextualise their sustainability goals, meaning they make sustainable practices “workable” in different settings (Xiao, Wilhelm, et al., 2019). This contextualisation of sustainable practices can depend on the chosen partner for the scaling relationship. Especially in the agrifood sector, SC relationships differ depending on whether the hybrid organisation wishes to engage with established SC actors, such as supermarkets or online retailers, to reach a wider set of consumers (Mueller et al., 2023). Power

asymmetries between smaller hybrid organisations and larger retailers are well documented to challenge efforts of sustainability (W. C. Benton & Maloni, 2005; Majewski et al., 2020; Marttinen & Kähkönen, 2022). Scaling relationships are affected by power dynamics, such as power asymmetries between SC actors (Alves et al., 2024). These power asymmetries include dominance in decision-making and unequal bargaining power in negotiations. Such power asymmetries can affect partner choice (Suvanto & Lähdesmäki, 2023) and hence the ability to build and develop scaling relationships by hybrid organisations. While prior works have studied the organisational (e.g., Alves et al., 2024) and technical (e.g., Roscoe et al., 2023) conditions of scaling sustainable practices, the ability of managing relationships often emerges as an important element. However, further work is needed to explore how sustainable practices can be scaled effectively, identifying approaches that help hybrid organisations build and manage SC relationships that support the wider adoption of their sustainable practices. In response, we pose the following research question (RQ): How do hybrid organisations who promote sustainable practices of food production manage the scaling relationships with their SCs to scale the effects of their practices?

To answer this RQ, we study the SC relationships hybrid organisations build and develop to scale the effects of their sustainable practices. Using in-depth evidence from seven cases in the UK agrifood sector, we identify how hybrid organisations scale their sustainable practices of food production by building purposeful scaling relationships through aligning economic goals with social and environmental impact. This differs depending on the nature of the buyer: large retailers or sustainability-oriented organisations.

This research contributes to the academic debate on achieving sustainability outcomes in SCM (Gelderman et al., 2024) by scaling the sustainable practices of hybrid organisations to achieve sustainable SCs (Alves et al., 2024; Atkins et al., 2024; Gelderman et al., 2024;

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Obonyo et al., 2025). Our findings allow us not only to elaborate our initial conceptual framework, but also to identify its boundary conditions and to propose an alternative logic of scaling that is not captured by linear, supply chain-centred conceptualisations. We show that scaling relationships with large retailers follow initial conceptualisation based on existing works. Here, our study contributes in-depth insights into the relationships, including how power asymmetry creates tensions both in the scaling relationships and the upstream SC relationships, expanding on existing studies (W. C. Benton & Maloni, 2005; Marttinen & Kähkönen, 2022; Suvanto & Lähdesmäki, 2023). We also show that scaling relationships with other sustainability-oriented organisations are qualitatively distinct as they emerge from and disintegrate into a community of sustainability-oriented organisations and manifest as episodic formalised supply arrangements within more loosely defined inter-organisational relationships. These relationships do not stabilise into traditional linear SCs but instead remain episodic and community embedded, highlighting joint knowledge creation and learning. This provides novel insights into sustainability in SC complementing prior works into integrating sustainability in established SCs (Glavee-Geo et al., 2022; Glover, 2020; Gupta et al., 2024; Xiao, Petkova, et al., 2019).

2. Literature review

2.1 Sustainable practices for food production

The agrifood sector offers an interesting context to study the scaling of sustainable practices. The sector poses specific challenges meaning it differs from other sectors (Corallo et al., 2024). Agrifood products are often perishable with short life cycles, and high product differentiation create specific requirements regarding transport and storage (Blackburn & Scudder, 2009) as well as the quality and recycling of materials (Corallo et al., 2024).

Seasonality of product harvesting and consequently production operations require flexibility in the SC (Bacon et al., 2014). The close dependence on environmental factors, such as the climate and geopolitical tensions also affect the availability of ingredients for food items (Altuntas Vural et al., 2024; Huang et al., 2024). These factors create specific drivers for sustainable practices for the agrifood sector.

Sustainable practices can be defined around the efficiency of the food system and often aim at balancing economic, social and environmental outcomes (Benton & Bailey, 2019). Food systems are defined as *“the range of activities related to producing, processing, distributing, retailing, preparing, and consuming food”* (Zurek et al., 2022, p. 514). Food systems involve a wide range of interacting actors and are influenced by governance and social policy, technology, market, environmental, and economic dynamics (Corallo et al., 2024). Conversely, outcomes encompass social, economic, and environmental implications and are often summarised as providing food *“from farm to fork”* (Kelmenson, 2022). Addressing sustainability with a food-system perspective means looking at the interconnections between food security for a growing population, environmental degradation and increasing levels of dietary ill-health. An efficient food system balances high nutritional output with minimal environmental impact, equitable access, and social justice, aligning with broader sustainability goals (Benton & Bailey, 2019). This contrasts with established food SCs, which focus on the efficiency of food production in terms of yield per unit area (Benton & Bailey, 2019). However, as a result, *“the efficiency of the food system as a whole – in terms of delivering nutritious food, sustainably and with little waste – has declined”* (Benton & Bailey, 2019, p. 1). An efficient food system hence requires significant changes from existing dominant practices within the SC. This has resulted in a body of literature on the transformation of the food system (Horton et al., 2025).

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Sustainable practices have emerged within different SC stages of farming, processing, manufacturing, and retailing (van Berkum & Ruben, 2018; Zurek et al., 2018). Consequently, sustainable practices of food production spread across a range of activities, including processing and technological innovations (Bocken et al., 2022; Niessen & Bocken, 2021) or even the establishment of new products (Rohmer et al., 2019). Sustainable practices in food production thus far have commonly targeted the reduction of food waste (Atkins et al., 2024; Do et al., 2024), alignment between diets and dietary requirements (Northcott et al., 2023), resource optimisation for the efficient use of soil, and water and other inputs (Zurek et al., 2022), ethical and transparent SCs e.g. fairtrade (Vermeulen, 2015). They create sustainable outcomes, including reduced environmental impact of agriculture (Benton & Bailey, 2019) or even the protection or regeneration of the environment to promote ecosystem health (Gordon et al., 2022), and improvement in human health and social effects, such as alleviation of poverty (Bacon et al., 2014).

2.2 Supply-chain relationships for scaling sustainable practices

Hybrid organisations are defined as “structures and practices that allow the coexistence of values and artefacts from two or more categories” (Doherty et al., 2014, p. 418). Hybrid organisations typically challenge traditional conceptions of economic organizing as inherent in existing food systems (Benton & Bailey, 2019) and embodied by many large retailers, such as supermarkets (Benson et al., 2023; Hingley, 2005). Societal and environmental challenges such as food insecurity, poverty, inequality, and climate change, seemingly require engagements that combine the societal benefits of welfare and environmental logics with the innovativeness and financial sustainability priorities associated with market logics. As a result of the multiplicity of logics, hybrid organisations may face specific challenges in their

scaling relationships (Boehme et al., 2024).

We start our analysis of scaling relationships, i.e. the purposeful relationships hybrid organisations build with other SC actors to scale sustainable practices of food production and increase their impact across the SC, with the choice of partners. Hybrid organisations can choose to partner with large retailers, such as supermarkets. This enables increased volumes of sustainably produced food items reaching consumers (Islam, 2020; Moore et al., 2015). However, this creates power asymmetries defined as the ability of one party to dominate and exercise power over the conclusion of contracts and, thereby, determine relationship processes and outcomes (Suvanto & Lähdesmäki, 2023). Established SC actors, such as large retailers have mature positions within the SC (Hingley, 2005) and can hence enact power over relatively smaller hybrid organisations, who need to adhere to the inter-organisational conventions employed by the large retailers (W. C. Benton & Maloni, 2005; Marttinen & Kähkönen, 2022). This can create tensions in these scaling relationships as hybrid organisations need to balance their multiplicity of logics with the often profit-focus of large retailers (Uttam et al., 2025; Xiao, Wilhelm, et al., 2019). Managing such tensions becomes a part of hybrid organisations succeeding and benefiting from these scaling relationships with large retailers and may result in the prioritisation of profit considerations over sustainability considerations (Xiao, Wilhelm, et al., 2019).

In contrast, hybrid organisations may also choose to circumvent collaborating with these large retailers by creating their own markets and SCs together with other sustainability-oriented organisations (Mueller et al., 2023). This can include direct consumer relationships to scale demand for their products or alternative food SCs offering alternative routes to end consumers (Maye, 2013). Here, digital technologies, such as online platforms may help to shorten food SCs and engage directly with end users (Majewski et al., 2020).

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This in turn may create the need to manage a larger number of downstream relationships to scale sustainable practices, increasing transaction costs. This in turn may create tensions for the hybrid organisation, including contrasting demands of managing relationships with a range of partners. In parallel, hybrid organisations may choose to build horizontal relationships to scale their sustainable practices. These horizontal relationships include other SC actors enabling them to explicate practices and through this a geographic spread of sustainable practices (Moore et al., 2015). This coopetition (Dai et al., 2024) approach to scaling aims at sharing knowledge about sustainable practices to on the one hand improve a focal organisation’s knowledge about sustainable practices, and on the other hand spread successful sustainable practices to other hybrid organisations or food producers.

Depending on the chosen approach to partner selection (large retailers or alternative food systems), hybrid organisations may be required to engage with new suppliers to enable larger quantities and continuity of supply streams (Ramjaun et al., 2024). The extent of these upstream relationships depend on the partner selection of retailer relationships indicated above. For example, partnering with large retailers often requires the ability to deliver large amounts of products of consistent quality (Benson et al., 2023; Hingley, 2005), which in turn requires a large set of sub-suppliers to deliver the required ingredients. The nature of the relationship with the large retailer will affect potential tensions experienced in these upstream relationships. For example, purchasing agreements with large retailers often require high volumes of delivered items but lack long-term security (Benson et al., 2023; Hingley, 2005). This may create tensions related to fast up- and downscaling of production capacity across the SC. This suggests that the partner choice of downstream scaling relationships in turn affect the upstream relationships.

2.3 Studying scaling relationships – an initial conceptual framework

This research focuses on answering the RQ: How do hybrid organisations who promote sustainable practices of food production manage the scaling relationships with their SCs to scale the effects of their practices? We distil the reviewed literature into an initial conceptual framework (Figure 1). We start our investigation with partner selection, engaging in scaling relationships with large retailers or alternative food systems actors. The reviewed literature indicates that this choice sets the hybrid organisation on fundamentally different paths of managing scaling relationships requiring them to respond to different considerations regarding power asymmetries and tensions (Kreye, 2026; Oyedijo et al., 2024; Xiao, Wilhelm, et al., 2019). Starting from this relationship selection, we explore how these scaling relationships are managed and how this partner selection affects the remaining upstream relationships. As part of analysing these scaling relationships, we investigate what tensions are experienced and how these are managed in the scaling relationships. Through this relational assessment of scaling, we further the scaling outcomes, including the potential increase in volume or number of sustainably produced food items reaching consumers (Moore et al., 2015). This can include increasing the geographic spread as well as addressing the institutional or systemic roots of unsustainable food production (Moore et al., 2015). We depict the connections between these four concepts as linear with the potential for feedback loops to indicate their iterative nature in long-term developments. The arrow from managing scaling relationships to partner selection can, for example, indicate that negative experiences during the relationship might drive the deselection of the partner in the future. Similarly, the arrow from consequences for upstream SC relationships to partner selection can indicate that, for example, the inability to find suitable upstream suppliers leading to a deselection of the scaling partner in the future.

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The arrow from scaling effects to partner selection indicates that, for example, the insufficient achievement of scaling effects leading to deselection of a partner in the future. Other examples, also for reinforcing connection can of course be found. The focus of this study is to identify the connections between the four indicated concepts (Figure 1) and how they manifest for scaling sustainable practices of food production.

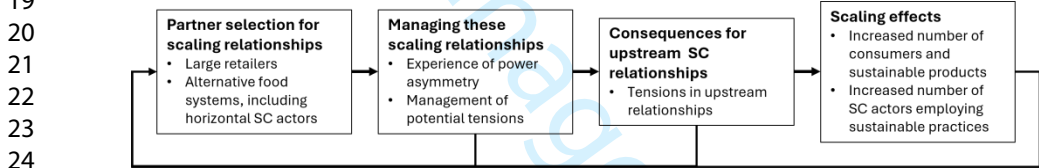


Figure 1: Initial conceptual framing

3. Method

Using theory elaboration, we employ a multiple case study approach to answer our focal research question: How do hybrid organisations who promote sustainable practices of food production manage the scaling relationships with their SCs to scale the effects of their practices? Theory elaboration is defined as *“the process of conceptualizing and executing empirical research using pre-existing conceptual ideas or a preliminary model as a basis for developing new theoretical insights by contrasting, specifying, or structuring theoretical constructs and relations to account for and explain empirical observations”* (Fisher & Aguinis, 2017, p. 441). Theory elaboration aims to challenge and extend theory by applying it to an unexplored context (Ketokivi & Choi, 2014). For this research, we elaborate the literature on sustainable SCs via new construct specification, *“in which a theoretical construct is specified or refined to more accurately reflect the realities and insights that emerge empirically”* (Fisher & Aguinis, 2017, p. 446). In particular, we offer novel insights on

the issue of scaling sustainable practices by managing scaling relationships.

A qualitative approach via case studies is a suitable method for theory elaboration (Ketokivi & Choi, 2014) as they offer rich data that enable an in-depth analysis of the studied phenomenon as well as identifying contextual influences (Voss et al., 2002; Yin, 2018). Three main reasons guided our decision. First, the literature on sustainable SC management largely focuses on how to integrate sustainability in established SCs (Glover, 2020; Gupta et al., 2024; Wu & Pagell, 2011). Alternatively, research explores the specific SCs of sustainability-driven organisations – such as hybrid businesses – based on the commonality of achieving not only economic but also environmental or social outcomes (Meqdadi & Pagell, 2025; Rosca & Taylor, 2024). This drives a need for elaborative research into novel research settings. Second, sustainable food production involves various practices (Section 2.1) with different approaches to scaling across the SC. A multi-case approach enables us to investigate this variety of practices to investigate similarities and differences in decision making across a range of hybrid organisations implementing a range of sustainable practices for food production and hence limit the potential impact of organisation-specific constraints on our findings. Third, multiple case studies assist our exploration of the impact of context on the studied phenomenon (Flyvbjerg, 2006). Studying multiple cases set within a similar context enables us to identify which factors are context specific and which are part of the focal phenomenon of scaling sustainable practices through supply relationships.

3.1. Case selection

We present in-depth insights from seven cases, sampled based on theoretical criteria (Yin, 2018) to ensure methodological rigor. Our cases are hybrid organisations combining plural institutional logics, particularly market-based commerce with environmental and social

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welfare (Battilana et al., 2017; Battilana & Lee, 2014). The cases span sustainable food production approaches motivated by reduced waste, revised production, local chains, or redirected food items (based on Section 2.1) and hence enable us to investigate a range of practices for our research focus (Voss et al., 2002). Furthermore, the cases span different scaling relationships aligned with our conceptual framing (Section 2.3). In particular, the investigated cases include interactions with both large retailers and other sustainability-oriented organisations. This allows us to study how hybrid organisations manage these scaling relationships based on the selected partners allowing for broad insights into a range of experiences across seven independent organisations.

Drawing from a three years ongoing co-productive research project, the cases are embedded within Yorkshire's regional food network in the North of England, UK. In the Yorkshire region, intensive industrial agriculture coexists and interacts with local and alternative food networks. Many food businesses navigate a hybrid landscape in which conventional commodity production and short SCs intersect (O'Neill, 2024). A multiple-case study of small and medium-sized food businesses offers a valuable lens to understand the dynamics of hybridisation of regional SCs. Organisations such as Deliciously Yorkshire play a central role in shaping these interactions by providing a regional network and branding infrastructure, supporting market access, and legitimising local provenance. Examining multiple cases allows for detailed insight into how these hybrid organisations structure supply relationships, diversify channels, and respond to market dynamics. Focusing on cases set within the same practical context allows us to control for context-dependent influences (Triguero et al., 2022). These context-dependent influences include food-related policies, consumer preferences based on socio-economic factors, and network dynamics within the

local food system. Fixing variation in these influences by setting the cases in one context allows us to provide a deeper analysis of the scaling relationships as the focus of our work.

The unit of analysis is the scaling relationships hybrid organisations build to scale the effects of their sustainable practices. Each case included a nested design going from the individual case organisation to their respective supply relationships. To enhance external validity (Gibbert & Ruigrok, 2010), we adopted a nested approach for multiple-case selection within a pre-existing place-based co-productive research program involving about 25 companies over a duration of approximately three years with a variation of unstructured engagement activities, including workshops (Table A-1). The selection process prioritized cases that had received notable recognition and acclaim within the network, as evidenced by consistent referrals and recommendations. In other words, each of the seven presented cases focuses on a hybrid organisation celebrated for the effectiveness of their sustainable practices for food production. This deliberate approach ensured the chosen cases exhibited a high degree of prominence and significance within the research context and consequently replication of our study. Each selected case company had a multi-product portfolio and implemented specialized practices in sustainable food production. Table 1 summarizes the selected cases and provide a useful cross-section of projects in terms of food production practices and scaling efforts.

Table 1: Cases overview

Cases	Sustainable practices of food production	Direct supply chain relationships	Company information	Collected data
A Pies	Combine food production practices aimed at reducing waste and redirecting food items; sourcing ingredients from regenerative production; experiments with sustainable sourcing for new products	Main suppliers: Range from large international companies to local small suppliers Main buyers: Hospitality sector, consumers (via webpage and pop-up stores)	Founded in 2013; 15 employees	Interviews: Initial interview with CEO and founder in July 2022, Follow-up interview with CEO and founder in April 2023 Primary data from unstructured engagements: Three Horizon workshops with diverse stakeholders, including policy makers, food network representatives, health and public service providers, community voluntary sector support organisations, multi-entrepreneurial individuals offering business support (2021-2022); Deliciously Yorkshire annual food award ceremonies attended by local food businesses (Nov 2021, 2022, 2023); Deliciously Yorkshire breakfast networking event with local food businesses (Feb 2023, 2024); Great Yorkshire Show with stakeholders involved in food sector (including farmers, producers, retailers, politicians and policy makers) in July 2023; SC Design Lab in November 2022; Research program summit in March 2023; Grains Food System Transformation Workshop in May 2023; visit to company local pop-up store at a local street food market Secondary data: Company websites, CEO YouTube Channel, Supplier Collective 1 website, Supplier Collective 2 website, Local and regional news articles, SC Design Lab presentation, Company social media engagement, CEO social media page, including LinkedIn and Instagram
B Fava beans	Promotes plant-based alternatives as a sustainable protein source. Products include fava bean-based snacks using beans grown in the UK. Supports regenerative farming by growing fava beans as part of rotation reduces the use of artificial fertilizers as it is a nitrogen fixing crop; also rapeseed oil and products using rapeseed oil as an ingredient (e.g., bread dip sauces).	Main suppliers: Farmers (UK) Main buyers: Independent farm shops across UK, mainstream retailers	Founded in 2008; 17 employees	Interviews: Interview including initial and follow-up guide with CEO and Marketing and Communications manager in March 2023 Primary data from unstructured engagements Three Horizon workshops with diverse stakeholders, including policy makers, food network representatives, health and public service providers, community voluntary sector support organisations, multi-entrepreneurial individuals offering business support (2021-2022); Deliciously Yorkshire annual food award ceremonies attended by local food businesses (Nov 2021, 2022, 2023); Deliciously Yorkshire breakfast networking event with local food businesses (Feb 2023, 2024); Great Yorkshire Show with stakeholders involved in food sector (including farmers, producers, retailers, politicians and policy makers) in July 2023; Workshops: Food network workshop with 16 participants, including CEO of case company B Secondary data: Company websites (company information, vision and creation) Blog entry from local food blogger, Social media posts, including LinkedIn and YouTube, founders' website
C Coffee 1	Pioneers fair-trade and sustainably sourced coffee in mainstream retail; Supplier poverty alleviation by protecting producer	Main suppliers: Small-scale farmers (global)	Founded in 2013; 14 employees	Interviews: Interview including initial and follow-up guide with CEO, Sales Manager for Food Service, Managing Director Primary data from unstructured engagements: attendance at Annual General Meetings 2020-2023 attended by shareholders, board members and stakeholders, including suppliers. These AGMs are attended by producer group representatives from the Global South, Certification organisations e.g. the

		livelihoods and providing producers with higher long-term income and welfare provision; Collaboration with small-holder farmer groups on climate change adaptation projects, including resource investments	Main buyers: Mainstream retailers (UK), grocery sector (global)		Fairtrade Foundation, Soil Association, founders and mainstream retailers, coauthor was keynote speaker at 30th Birthday party in October 2022; Deliciously Yorkshire annual food award ceremonies attended by local food businesses (Nov 2021, 2022, 2023); Deliciously Yorkshire breakfast networking event with local food businesses (Feb 2023, 2024); Great Yorkshire Show with stakeholders involved in food sector (including farmers, producers, retailers, politicians and policy makers) in July 2023; Local B Corp networking meeting 2021, 2022; Secondary data: Company sustainability strategy “2030 and beyond: Gold standard”; Company impact report 2021: “30 years improving lives together”; Retailer 3 sourcing strategy (available from their website); Retailer 3 customer newsletter focusing on Fairtrade premium; Retailer 3 future of food report; Retailer 4 product advertisement for co-produced product
D Pasta		Production using traditional Italian methods and locally sourced flour (main ingredient) with local, short transparent SC, using recycled materials for their packaging Local sourcing of all wheat (unique for UK pasta production). careful non-plastic packaging, on-site energy efficiency	Main supplier: Miller (regional) Main buyers: Independent and farm shops across UK	Founded in 2020; 3 employees, family business	Interview: Initial interview with CEO and founder in September 2022 Primary data from unstructured engagements: Three Horizon workshops with diverse stakeholders, including policy makers, food network representatives, health and public service providers, community voluntary sector support organisations, multi-entrepreneurial individuals offering business support (2021-2022); Deliciously Yorkshire annual food award ceremonies attended by local food businesses (Nov 2021, 2022, 2023); Deliciously Yorkshire breakfast networking event with local food businesses (Feb 2023, 2024); Great Yorkshire Show with stakeholders involved in food sector (including farmers, producers, retailers, politicians and policy makers) in July 2023; visit of the CEO to university in 2022/23 academic year to explain their business model to students of an Innovation module and work on a one-day challenge; regular email exchange between company CEO and co-author to exchange update on business progress; Local B Corp networking meeting 2021, 2022; Workshops by research program: Research workshop on challenges in sustainable food production especially for small and medium sized companies in December 2023 Secondary data: Company websites, Local association description of company as finalist for local food awards; National new article in The Times; Local news articles
E Coffee 2		Sustainable sourcing of coffee beans, including sustainable farming practices, and wider engagement on environmental sustainability; offers mono-material coffee pods for easier recycling	Main suppliers: Small-scale farmers (global) Main buyers: Food service, major online retailer	Founded in 2013; 14 employees	Interviews: Interview including initial and follow-up guide with Service and sales director and Founder in August 2023, Head of Sustainability and Governance Primary data from unstructured engagements: Local food exhibition fair organised by regional agricultural society in July 2023; regular email exchange between company CEO and co-author to exchange update on business progress; Deliciously Yorkshire annual food award ceremonies attended by local food businesses (Nov 2021, 2022, 2023); Deliciously Yorkshire breakfast networking event with local food businesses (Feb 2023, 2024); Great Yorkshire Show with stakeholders involved in food sector (including farmers, producers, retailers, politicians and policy makers) in July 2023; Local B Corp networking meeting 2021, 2022; Secondary data: Company websites; industry magazine; local news report; company blog – reflecting on farm visit to Uganda; website of local farmer association; company social media (including LinkedIn); association website (https://www.onepercentfortheplanet.org/)
F Cheese		Cheese production using Middle Eastern production methods (cultural preservation of Syrian	Main suppliers: Farmers (region)	Founded in 2014; 5 employees	Interview: Interview including initial and follow-up guide Business owner/CEO in October 2023 Primary data from unstructured engagements: Local food system networking event in February 2023; Deliciously Yorkshire annual food award ceremonies attended by local food businesses (Nov 2021, 2022, 2023); Deliciously Yorkshire breakfast networking event with local food businesses (Feb 2023,

	culinary traditions) and locally sourced ingredients, paying a fair price to the farmers.	Main buyers: Independent farm shops across UK, Mainstream retailers		2024); Great Yorkshire Show with stakeholders involved in food sector (including farmers, producers, retailers, politicians and policy makers) in July 2023; Workshops by research program: SC Design Lab in November 2022 Secondary data: Company websites; Company social media (Instagram, LinkedIn, facebook); Mainstream retailer 4 websites on supplier competition; local news article about case company relationship to Retailer 4
G Micro-greens	Hyperlocal food production in urban environments through aeroponics based production growing system with low impact lighting (controlled, soilless indoor technology which promotes fast growth), requires no agricultural land, uses 95% less fertiliser and water than traditional field-based agriculture, and no pesticides. This in turn reduces nutrient/chemical runoff to waterways	Main suppliers: Large international companies Main buyers: Food service, food bank (hyper local)	Founded in 2019; 2 employees	Interview: Interview including initial and follow-up guide with Farm manager in September 2023 Primary data from unstructured engagements: Three Horizon workshops with diverse stakeholders, including policy makers, food network representatives, health and public service providers, community voluntary sector support organisations, multi-entrepreneurial individuals offering business support (2021-2022); Great Yorkshire Show with stakeholders involved in food sector (including farmers, producers, retailers, politicians and policy makers) in July 2023; Secondary data: company websites

3.2. Data collection

We collected empirical data from multiple sources (Yin, 2018), including primary and secondary sources and from a selection of relevant stakeholders, including the founders and company CEOs, suppliers, industry associations, retailers, local policymakers and politicians. We received ethical approval prior to data collection. The structured data collection process unfolded in three phases between February 2022 and December 2023 and built on unstructured data collection over a period of five years (Table A-1). First, the researchers leveraged the contextualization within the pre-existing research program, including unstructured observations and other engagements with these companies across a variety of activities. These activities encompassed the case companies' active participation in workshops, events, and other unstructured settings with key stakeholders from the selected case studies. Here data was collected using audio-recording and structured notetaking by the research team. These informal interactions provided unique insights through open-ended discussions, observations during field visits, and immersion in the operational contexts of the participating businesses. This approach supported inductive sense-making (Miles et al., 2014) and helped to capture nuanced perspectives and unanticipated details that were not fully uncovered through formal data collection alone. The multiple sources of data enabled triangulation during data collection using publicly available documents and information as well as secondary data from websites and brochures. These data sources gave the researchers a valuable contextual understanding of the national and regional food system and the case company's fit within it and contributed to a comprehensive understanding of the case study enterprises.

Second, interviews with businesses were conducted using the initial and follow-up interview areas (detailed in Appendix). Initial interviews explored the case companies'

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business models, integration into the supply network, social and environmental ambitions and commitments, and scaling motivations. Follow-up interviews explored the companies' scaling relationships in-depth. The interviews enabled us to capture key facets of each case company's sustainable food business, ensuring a comprehensive and nuanced understanding of their strategies, challenges, and SC considerations. Each interview took at least one hour, was held individually in dedicated meeting rooms on company site, recorded, and transcribed.

Third, post-interview, additional data from program-based engagements with case companies were collected to complement insights and provide further detail on developments. This included data from large retailers, and local networks, such as Deliciously Yorkshire. All case companies have a significant media presence in terms of web content, including blog and social media activities, which formed a further data source for the purpose of this research. Data collection was stopped when thematic saturation was achieved, i.e., no new insights emerged. The final data for each case (see right column of Table 1) included semi-structured interviews conducted with significant team members in each case company, unstructured primary and secondary data, such as web blog posts, websites company communications and presentations.

3.3. Data analysis

The data analysis followed three steps aimed at theory elaboration (Fisher & Aguinis, 2017) using an abductive approach by combining inductive and deductive elements in our analysis process (Ketokivi & Choi, 2014). First, we inductively captured each individual case in terms of its context, company focus and strategy, sustainable practice of food production, approach to scaling this practice and engagement with supply-network partners. This

enabled the researchers to capture the details of each individual case within its nested structure. Through cross-case comparison, the codes were aligned for internal consistency and then, the first-order concepts were grouped into second-order concepts based on emerging patterns (Runfola et al., 2017). This step resulted in an initial coding structure and an initial case description for communication within the research team and as a basis for further discussions and further coding.

Second, we iterated this initial coding structure based on deductively applying conceptualizations from the literature (Section 2) to ensure internal validity of our analysis (Gibbert & Ruigrok, 2010). Discussions within the research team enabled to draw out nuances and solve disagreements in terms of abstraction, especially related to scaling relationships. Based on the emerging differences between scaling relationships with large retailers and other sustainability-oriented organisations, various approaches to further analysing the data were tested. For example, the first-order and second-order codes were matched to different relationship stages identifying their respective importance when relationships started, continued, and ended (where applicable) for each case. While this line of analysis led to the identification of relevant ideas and dynamics within the supply networks – such as an unpronounced ending to supply relationships amongst sustainability-oriented organisations – this process-based analysis was ultimately abandoned to explore such more fruitful lanes of analysis.

Third, axial coding was conducted, aimed at determining the creation and maintenance of scaling relationships based on the emerging patterns from Step 2 to identify mechanisms for scaling sustainable practices for food production within the supply arrangements. Specifically, we combined codes of the aggregate themes on SC developments and dynamics within supply relationships initially within each case differentiating the type of relationship

(with large retailers or other sustainability-oriented organisations) to identify internally consistent analyses before comparing these insights across cases. These steps resulted in a coding tree as depicted in Figure 2.



Figure 2: Coding tree

Throughout data collection and analysis, we ensured study rigor by making considerations of validity and reliability. We achieved construct validity by utilizing multiple

sources of data to establish a chain of evidence (Gibbert & Ruigrok, 2010) and complemented with having an in-depth understanding of the literature for purposes of internal validity (Gibbert & Ruigrok, 2010). Reliability was achieved through creating a case study database that summarizes all collected data (Yin, 2018). The data analysis followed a deliberate reasoning process (Harley & Cornelissen, 2022), combining emerging insights from the empirical data with insights from theory and the literature in an abductive process. We triangulated insights during data analysis by confirming insights across data sources aligned with best practice in analysing qualitative data (Miles et al., 2018).

4. Findings

4.1 Partner selection for scaling relationships

To scale the impact of sustainable practices, the case organisations carefully selected the partners to build such scaling relationships with. As summarised in Table 2, only four case companies (B, C, E and F) built scaling relationships with large retailers. The lack of broad collaboration with large retailers suggests a hesitation and cautious strategy of hybrid organisations to engage in such scaling relationships. Organisations aim to maintain control over quality, provenance and relationships to their suppliers and perceive broad collaborations with large retailers as potentially compromising these values. This hesitation was evident not only among case companies exclusively engaging with other sustainability-oriented organisations, but also among those also interacting with large retailers as demonstrated by the CEO of Case company B: *“That [partnering with Online Retailer 1] is not a decision we took lightly. With our two main brands that we have sold for years in the oil sector, we have always looked to independents [retailers]. (...) Yet, it is never going to be the same volume as a supermarket.”* Highlighting the potential for scaling through large

retailers, they also emphasise that this comes with trade-offs. Partnering with a large online retailer introduces uncertain dependence. It allows hybrid organisations to access to a broader market but at the same time, this could take them on a path of losing relational security, while they may not even achieve the volume growth necessary to maintain both streams of sales profitably. The required dependence with little to no relationship security was a significant draw-back to the scaling opportunities created by large retailers. In sum, while only two case companies built scaling relationships with large retailers, three focused on scaling relationships with other sustainability-oriented organisations only, and two followed a mix approach engaging with large retailers and other sustainability-oriented organisations.

Table 2: overview of case organisations’ scaling relationships

	Scaling relationships with large retailers	Scaling relationships with other sustainability-oriented organisations
A - Pies	No	Yes, directly to consumer via online shop and stalls
B - Fava Beans	Yes, with supermarkets	Yes, directly to consumer via online shop
C - Coffee 1	Yes, with cooperatives	Yes, Directly to consumers via online shop and independent retailers
D - Pasta	No	Yes, with farm shops and delis, at local food events and distributors, with retail routes being established through wholesale brokers
E - Coffee 2	Yes, with online retailer	Yes, directly to consumer through online shop
F - Cheese	Yes, with supermarkets	Yes, with local farm shops
G - Micro-greens	No	Yes, with local small-scale businesses

4.2 Managing scaling relationships

4.2.1 Managing scaling relationships with large retailers

The scaling relationships with large retailers were typically motivated by the high-volume potential and hence required production of large numbers at low and stable costs. The

power asymmetries (indicated in Section 4.1) led to specific approaches to managing these scaling relationships with large retailers (see also Table A-2 in the online supplement). Retailers dictated the terms of such relationships, and the case companies adapted their approaches to relationship management. The case companies adapted their capabilities enabling them to produce large volumes (e.g. Case B) and manage the administrative and operational processes such as inventory, order fulfilment, and delivery (e.g. Cases E and F). Difficulties often resulted in the ending of these relationships, which was clearly pronounced and also signified an end to communications and arrangements. The Managing Director of Case company E summarizes their observations as follows: *"Our relationship with some retail supermarkets is purely based on our weekly sales performance. There is little consideration of how we use our profit to deliver social impact for small-holder farmers. They can even delist our products without informing us. The first thing we notice is they stop ordering."*

Interestingly, we found evidence of some retailers changing their approach to sourcing agrifood products in line with sustainable practices for food production, signalling a top-down influence on SCs that creates new opportunities for hybrid organisations. The founder of Case company E explains this as follows: *"With some more enlightened retailers the relationship is focused on a broader set of criteria. For example, some retailers have increased purchasing from small-holder farmers as part of their corporate strategy."* Such retailers not only consider up-stream supplier sustainability but also change their purchasing and contract management with direct suppliers. For example, the retailers working with the case companies (e.g., Retailers 3 and 4 in Cases C and F) engage in longer-term supply arrangements and have included sustainability elements, such as local sourcing, small-holder livelihoods, and environmental protection, into their sourcing strategies. For

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example, Retailer 3 included a feature on Case company E in their newsletter to their consumers. The *“Fair Trade premium (...) empowers farmers to take responsibility for their own futures (... and) is often invested in providing better housing, education grants, farm improvements, school allotments and sustainability projects for communities in developing countries.”* This suggests an ongoing transformation of retailers’ purchasing practices.

4.2.2 Managing scaling relationships with other sustainability-oriented organisations

Relationships with other sustainability-oriented organisations, such as other hybrid organisations, **delis** and farm shops, were frequently enacted through a mix of informal and formal networks (see also Table A-3 in the online supplement). For instance, case companies A and B explored collaborations with neighbouring businesses, leveraging their proximity (e.g., sharing a location in adjoining units). On a regional level, initiatives such as the food business network Deliciously Yorkshire provided a crucial platform for creating informal networks, fostering connections among actors, encouraging innovation of further sustainable practices, and strengthening local collaboration within the food sector.

Deliciously Yorkshire is a membership-based organisation *“promoting, supporting, and developing our fantastic member businesses (... such as) artisan producers, farm shops and delis, cafes, coffee shops to breweries, restaurants, and hotels, all committed to using the best local produce”* (Deliciously Yorkshire webpage). Through member events, such as Deliciously Yorkshire Taste and Sustainability Awards, breakfast networking events, this network fosters knowledge exchange, collaboration and connections. Case companies B, D, E, F are long-term members and regulars at associated events.

4.3 Managing upstream SC relationships

4.3.1 Upstream SC relationships when scaling with large retailers

Commented [BD4]: Should we say :
Delicatessen's?

Engagement with large retailers required the case organisations to rapidly build the production capacity needed to fulfil the orders. Interviews highlight the operational challenges in scaling and reliance on trusted partners to meet demand while maintaining quality. For example, Case company B outsourced production of their snack products: *"We work with a good set of manufacturers who we have spent quite a long time finding"* (CEO). Prior relationships with other manufacturers ended because the quality of the product was not sufficient for Case company B. *"We have moved around a little bit and we have now settled they produce a good product"* (CEO). In contrast, Case company E actively engages with farmers through on-the-ground visits to coffee-growing regions such as Katanda (Democratic Republic of Congo) and Kalingwe and Ibanda, both in Uganda, fostering a direct connection with farmers, sharing appreciation for their coffee and witnessing the positive impacts of their collaborations. These relationships were affected by the scaling relationships built with large retailers. Case company C reports that by partnering with large retailers, *"295,000 small-scale farmers (including women and youth) in our SC have increased their income by 50%: as part of our roadmap towards every small-scale farmer earning beyond a living income"* (Company strategy "2030 and beyond: Golden Standard, p.4). These insights highlight the need to develop strategic supply relationships that enable case organisations to quickly scale production capacity, ensuring they can meet the high-volume demands of large retailers without compromising quality or reliability.

4.3.2 Upstream SC relationships when scaling with other sustainability-oriented organisations

The cross-case evidence suggests the SCs amongst hybrid organisations are based on the fundamental shared values in terms of the positive impact of agrifood production in the food system and beyond. This includes environmental protection (e.g., Case E), creating a

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10 climate resilient system of local food production by sourcing regenerative produce (e.g.,
11 Cases A, B, D and G), animal welfare (e.g., Case F) or social equality (e.g., Cases C and E). The
12 evidence suggests that these shared values and informal engagements extend beyond the
13 active supply relationships. Amongst sustainability-oriented organisations, relationship
14 endings are less pronounced: contracts may end, but relationships can outlast these and
15 form the basis for future supply arrangements. This is summarized by the CEO of Case
16 company A as follows: *“we are keen to invest in farming approaches that have a positive*
17 *impact on reversing the negative environmental impacts of farming. That is why we are*
18 *building a set of SC relationships with regenerative farmers to source wheat, beef etc for our*
19 *pies and pizza bases.”* Based on shared values, sustainable food production is promoted
20 irrespective of active SC agreements creating a community of sustainability-oriented
21 organisations. Frequent network activities reinforce this community (e.g., Table A-1). In
22 these relationships, upstream coordination is achieved not through formalised monitoring
23 or contractual control, but through relational proximity, repeated interaction, and shared
24 interpretive frames regarding sustainability outcomes. This enables hybrid organisations to
25 gain influence into production practices through dialogue and joint experimentation. These
26 mark substantial differences in comparison to relationships with large retailers, where
27 interactions tend to be transactional, volume-driven, and time-bound. In contrast, the
28 networks of our case companies are built on shared values, long-term collaboration, and
29 mutual support, enabling knowledge exchange and innovation even when formal contracts
30 are not in place.

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49 **4.4 Scaling effects**

50 The scaling effects varied across cases, with effects being visible in increased numbers of
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product sales, increased number of product ranges, increased number of suppliers and so on as indicated in Table 3. Achieving these scaling effects resulted in a corresponding need to increase capacity both internally (e.g. through acquiring additional production capacity, Case C) and externally (at suppliers, e.g., Case F). This was particularly pronounced for scaling relationships with large supermarket retailers as these supply arrangements required a sudden need to supply large numbers of the product. In contrast, scaling relationships with other sustainability-oriented organisations led to a more organic growth, where sales numbers increased slowly allowing sufficient time for building capacity.

Table 3: Overview of scaling effects across cases

	Scaling effects in relationships with large retailers	Scaling effects in relationships with other sustainability-oriented organisations
Summary	Fast or sudden increase in product quantity moved through the food system to consumers Rapid capability development for managing production and delivery of larger product quantities, often supported by established SC actor	Slow and steady increase in sustainable practices and product quantities. Experimenting with new practices and ingredients can lead to identification of new agrifood products
Exemplar case evidence	B - Fava Beans: The fava bean snacks are now available in two sizes and have expanded from the initial two flavours in 2021 to six flavours. Their distribution has expanded from farm shops and independent retailers throughout the Yorkshire region now to Selfridges stores and the Eurostar lounges at St Pancras station, 28 Booths supermarkets and 400 Coop stores. C - Coffee 1: They have expanded their capacity for sustainable food production through purchasing a local coffee producer (previous supplier) in June 2023 increasing coffee roasting capacity from 400 tonnes per annum by a further 4,000 tonnes per annum. Due to our business growth, we have increased our number of employees from 26 to 74 and have increased the Fairtrade price premiums we pay to producers from £520k to £728k. This has enabled Coffee 1 to invest in new recyclable packaging and invest in a comprehensive sciences-based approach roadmap to achieving net-zero by 2040. E - Coffee 2: Since its founding in 2013, the company has scaled from relationship with one Sumatran supplier, roasting and selling in small batches at farmer's markets and on demand for retail and commercial suppliers to supplying 200 outlets and own cafes with capacity to respond to national requests. This is complemented by the sales through	A – Pies: Steady increase of sold products: “Going direct to customers with our pies which started during the pandemic has enabled us to double our pie business and raise the awareness of regenerative farming with our customer base.” (Managing Director). Relatedly, the company increased the range of regenerative produce they purchase, including wheat, beef and milk. D – Pasta: The company has steadily increased the number of products it places on the market and now use more than 450 independent retailers and buy from 169 local farmers, who deliver to a local mill (low food miles, 25 miles from field to mill on average). The pasta further features on distinguished local restaurant menus. G - Micro-greens: Education for healthy and sustainable eating, exploration of meal options with various local businesses. Micro-greens was founded 4 years ago in that time it has grown its key customer base to 4 significant restaurant accounts supplying fresh micro-greens coupled with two food banks. From its inception when it commenced growing two crops in the 4 years it has expanded its production to include a

	the large online retailer: “Through [Covid-19] lockdown [in 2020] it did very, very well for us. Now it’s a reasonable part of our business but we are not reliant on it.” (Service and Sale Director). F – Cheese: Building of administrative capabilities to manage the relationship with established SC actors. Retailer 2 developed Case company F’s capabilities to meet the requirements of such a large retailer: “They said (...) we will support you in this. The auditor came and he said if there are a few gaps, then we can work on it. (...): “We had to learn a lot. We had to understand why is that happening? To work towards certain accreditation? We failed I think three or four times when they came and audited us. But they’ve been very supportive each time they tell us what our mistakes are and how to correct them. So that added a lot of experience to us and knowledge.” (CEO). Ambition to bring their products to all big retailers in the UK: “if we had the right investments, it could go to all Supermarkets in the UK, it could go really big.” (CEO interview Oct 2023).	broad range of indoor cultivated crops totalling 59 different crops.
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While scaling effects generally differ between relationships with large retailers and sustainability-oriented partners, the cases reveal concrete variations in how these effects unfold. For example, Case B expanded its snack range, while Case C increased coffee roasting capacity, enabling investments in recyclable packaging and net-zero strategies. In contrast, Case A and D experienced steadier growth, gradually expanding product ranges and sourcing from local regenerative farmers, highlighting that scaling is not only about volume but also involves capability development, product innovation, sustainability practices, and long-term relationship management.

5. Discussion

This section discusses the findings in light of our RQ: How do hybrid organisations who promote sustainable practices of food production manage the scaling relationships with their SCs to scale the effects of their practices? The case findings indicate differences in scaling relationships with large retailers and other sustainability-oriented organisations. In

Table 4, we summarise the key observations expanding on our initial conceptual framework (Figure 1). We discuss these insights in this section.

Table 4: Summary of key findings for scaling sustainable practices for food production through relationships in the supply network

Relationship partner	Partner selection	Managing scaling relationships	Managing upstream relationships with suppliers	Scaling effects
With large retailers	Large retailers initiate supply relationships through, for example, supplier competition, or calls. Relationships are also ended by the large retailer, often without prior warning creating uncertainty in long-term nature of supply relationships	Relationship is defined by the frame of formal supply arrangements (contracts), including product quantity, governance, and time frame. Established SC actor defines and enforces this frame and supports the hybrid organisation in their ability to adhere to it. Insecurity in mid-term continuation of increased product demand as buyer can end contract with little notice	Need for rapid expansion of production capacity encourages expanding supplier pool and building of new supply relationships. Insecurity in relationship continuation is extrapolated to these upstream supply relationships.	Fast or sudden increase in product quantity moved through the food system to consumers. Rapid capability development for managing production and delivery of larger product quantities, often supported by established SC actor
With other sustainability-oriented organisations (e.g. hybrid organisations, cooperatives)	Based on jointly identified opportunities from loose relationships by a sense of community with open-ended, informal relationships that enable sharing of best practices. Episodic supply arrangements provided temporary formalized supply relationships.	Shared values in sustainability outcomes beyond direct supply relationships, including wider society, animal welfare, and environment. Focus of relationships on these outcomes.	Continuation of existing upstream relationships characterised by shared values	Slow and steady increase in sustainable practices and product quantities. Experimenting with new practices and ingredients can lead to identification of new agrifood products

5.1 Pathways to scaling relationships

5.1.1 Scaling through relationships with large retailers

Our case insights suggest that scaling through relationships with large retailers requires the hybrid organisations who promote sustainable practices of food production to accept the retailer-enforced supply-management practices, including profit distribution and payment (Boyd et al., 2007) and administrative processes and audits (Narasimhan et al., 2013). This

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also included acceptance that relationship ending is enforced by the large retailer. As a result, not all case organisations engaged in scaling relationships with large retailers. This suggests that the power asymmetries can affect partner choice (Suvanto & Lähdesmäki, 2023). Despite the understanding that partnering with large retailers often contradicts the purpose of sustainable practices of food production, many of the studied hybrid organisations accepted these supply-management practices in the short term for the purpose of increasing the quantities of their products on the market and were indeed aware that this acceptance was necessary for the supply arrangements to function. These scaling relationships hence largely mirror existing theory on buyer-supplier relationships, especially in the food industry, where powerful actors, such as supermarkets enforce supply practices in the supply network (Hingley, 2005; Mueller et al., 2023). Our insights also mirror existing SC-management theory, where material flows are initiated by information flows (orders) and complemented by a counter-moving finance flow (Carter et al., 2015; Sweeney, 2011).

To manage these relationships with large retailers, hybrid organisations had to adhere to explicit procedures and processes (supply contract) in line with Lim et al. (2022). This created tensions for hybrid organisations because it required them to build the capabilities for adhering to these guidelines, including reporting and auditing. Our case evidence demonstrates that these large retailers, in addition to enforcing these explicit procedures and processes, also supported hybrid organisations in building the capabilities to engage with them and adhere to them. This suggests a willingness to support hybrid organisations and enable them to participate in and contribute to established supply networks.

To satisfy the orders by large retailers, hybrid organisations need to expand the number of suppliers they engage with and build additional capacity to produce higher volumes, build stronger administrative capabilities, quality assurance, and compliance with retailer

standards. Our case organisations showed that they could do this by outsourcing part of the food production and by engaging with more suppliers. One of the key challenges here was the insecurity of supply relationships as quickly built capacity may suddenly not be needed anymore because the large retailer ended the scaling relationship. This created significant uncertainty for these scaling relationships of hybrid organisation. While existing works have reported the loss of farmers' market power and the resulting power imbalance with their vertical business partners (Glavee-Geo et al., 2022), our study looks at how this is affected by the choice and management of scaling relationships of hybrid organisations. Specifically, we show that the tensions created by the need for hybrid organisations to accept the ad-hoc and formal supply-chain management approaches enforced by the large retailers translate upstream to suppliers, who often must invest in capacity and resources without guarantees that the orders will be sustained.

Our insights suggest further active reorientation of some large retailers towards sustainability and especially the environmental and social goals in support of economic outcomes. This contradicts observations from studies, such as Xiao, Wilhelm, et al. (2019), who ascertain that "radical change toward 'true sustainability' is unlikely while systemic power favours business aims over sustainability aims" (p.16). Instead, our insights complement observations by McLoughlin & Meehan (2021), who state that established SC actors use their powerful position to *"define and diffuse their conceptualisation of sustainability and restrict competing logics"* (p.251). Some large retailers share logics with hybrid organisations and borrow their purposes that stretch to social and environmental considerations (Bruder & Sydow, 2024). The case evidence showed that some large retailers change their purchasing procedures to adapt to the needs of small suppliers, including providing predictability in supply arrangements. For example, Retailer 1 was described as

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implementing established supply arrangements in Case C while incorporating sustainability considerations in more recent engagements, e.g. Cases B and F. This evidence suggests that scaling sustainable practices of food production through relationships with large retailers enables such established SC actors to slowly integrate these sustainable practices through adapting explicit processes and procedures as well as informal engagements between buyer and supplier.

5.2 Scaling through relationships with other sustainability-oriented organisations

The case insights suggest that scaling through relationships with other sustainability-oriented organisations constitutes a distinct form of supply chain organisation, characterised by a sense of community with relationships built on joint values and goals rooted in sustainability effects. This sense of community applied across up and downstream scaling relationships as indicated in the merged cells in Table 4. A surprising insight was the persistence of these shared values and relationships irrespective of an active supply relationship (through, for example, an active supply contract) effectively creating a community of sustainability-oriented organisations. This community was characterized by a loosely connected set of sustainability-oriented organisations for the shared purpose of achieving an efficient food system (Dora, 2020; Tribaldos & Kortetmäki, 2022). The emphasis on community instead of active supply relationships enabled hybrid organisations to scale their sustainable practices for food production through experimenting with new combinations of ingredients, practices and food-item combinations resulting in new or revised agrifood products and creating added positive impact both socially and environmentally. In other words, the community prioritised joint knowledge creation and information flows via relationship building, trust and solidarity, which is complemented by material flows as deemed appropriate by the collaborating partners. This contradicts

traditional theory of SC management (Carter et al., 2015; Sweeney, 2011), which emphasises material flows in active supply relationships. In contrast, the rich knowledge creation in the value-based community of sustainability-oriented organisations observed in our cases catalysed material shifts within their respective SCs.

In sum, our findings suggests that scaling through relationships with other sustainability-oriented organisations creates a distinct type of SC in the form of a community, which is characterised by joint values in achieving sustainable outcomes in society and environment. In this community, inter-organisational relationships are open ended and function to exchange experience and jointly experiment with new sustainable practices of food production, combine them in novel ways, and create novel food items. Such experimentation may consequently result in an active supply relationship to provide sustainable food items to customers. This community-based SC differs from established SCs (Section 5.1) and from existing theory in SC that highlight material flows within pre-existing SCs (Lim et al., 2022). Instead, our study suggests that networks between sustainability-oriented organisations are characterised by knowledge sharing (Dai et al., 2024) – the exchange of ideas and best practices – in addition to resource sharing and market access creating the basis for shared values and a joint logic (McLoughlin & Meehan, 2021) and hence a basis to collectively scale their practices. Such a community-focused SC enables temporary formalised structures as active supply arrangements are created and enacted. Hald & Spring (2023) describe this as *“an accomplishment that exists only as episodes are performed between actors”* (p.88). Our research demonstrates that these emerging conceptualisations of SCM provide a useful lens for understanding how sustainable food production practices are scaled through relationships with other sustainability-oriented organisations.

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5.2 Logics of scaling relationships in agrifood systems

Based on the above discussion of our empirical insights, we identify the fundamental differences between hybrid organisations managing scaling relationships with large retailers or with other sustainability-oriented organisations. These findings allow us not only to elaborate our initial conceptual framework, but also to identify its boundary conditions and to propose an alternative logic of scaling that is not captured by linear, supply chain-centred conceptualisations. Figure 3 depicts the different nature of these scaling relationships and the scaling effects. We show that scaling relationships with large retailers follow our initial conceptualisation (Figure 1) in terms of the separate consideration of partner selection, managing scaling relationships, and consequences for upstream SC relationships, all creating scaling effects (Figure 3 top). Here, our study contributes in-depth insights into the relationships, including how power asymmetry creates tensions both in the scaling relationships and the upstream SC relationships. This elaborates studies on power asymmetries in food systems (W. C. Benton & Maloni, 2005; Marttinen & Kähkönen, 2022; Suvanto & Lähdesmäki, 2023). We also show that scaling relationships with other sustainability-oriented organisations have a fundamentally different nature and hence do not follow our initial conceptualisation (Figure 1). Instead, our findings suggest an alternative logic of scaling, whereby scaling occurs through community-based, value-driven relationships that episodically materialise into formal supply arrangements. These scaling relationships emerge from and disintegrate into a community of sustainability-oriented organisations and manifest as episodic formalised supply arrangements within more loosely defined inter-organisational relationships (Figure 3 bottom). Dominant SC management theory cannot explain these observations of scaling relationships amongst sustainability-oriented organisations. Here our study shows a fundamentally different nature of scaling

relationships contributing novel insights to the literature on food supply chains (Alem Fonseca et al., 2024; Corallo et al., 2024; Do et al., 2024). We summarise these insights in Figure 3.

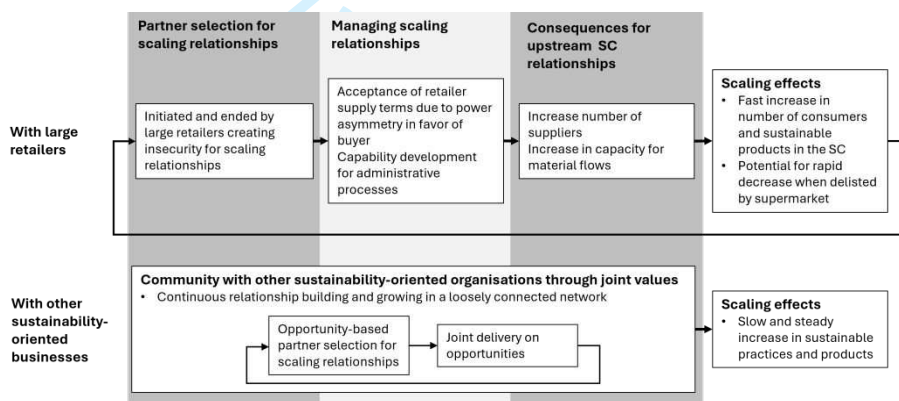


Figure 3: Scaling relationships in agriculture supply chains

6. Conclusions

This research set out to study the RQ: How do hybrid organisations who promote sustainable practices of food production manage the scaling relationships with their SCs to scale the effects of their practices? By studying seven cases of hybrid organisations practicing a range of sustainable practices of food production, we explored how scaling relationships within the SC enables them to scale these practices. Our findings suggest distinct characteristics in these scaling relationships depending on the nature of the supply partner: large retailers or other sustainability-oriented organisations. Scaling relationships with large retailers are defined by the frame of active supply arrangements, where the large retailer sets and enforces the terms of engagement and supports the hybrid organisation in meeting these requirements. This often creates tensions in managing the scaling

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relationships, which translate upstream to suppliers. These relationships are often characterised by inequitable power dynamics and transactional agreements, where smaller hybrid organisations may struggle to maintain fair terms, potentially undermining their sustainability goals and social justice objectives. In some cases, however, we found that large retailers shifted in their purchasing strategies to address some of these concerns by their sustainable suppliers, including hybrid organisations. In contrast, relationships with other sustainability-oriented organisations, such as small-scale and regenerative farmers and food manufacturers, are explored within the context of a community with shared values and purpose, where episodic explorations of active supply arrangements (i.e. an active supply contract) define a temporary formalisation of this relationship. Such relationships may foster more equitable partnerships, but the episodic nature of these collaborations can negatively impact their ability to scale sustainably. We discuss these distinct forms of scaling relationships in relation to the supply-chain literature.

6.1 Theoretical implications

This research contributes to the academic discussion of sustainability in SCs by showing the impact of building scaling relationships with other SC actors. Our study allow us to elaborate our initial conceptual framework, to identify its boundary conditions and to propose an alternative logic of scaling that is not captured by linear, supply chain-centred conceptualisations. Complementing prior works into integrating sustainability in established SCs (Glavee-Geo et al., 2022; Glover, 2020; Gupta et al., 2024; Xiao, Petkova, et al., 2019), this research demonstrates how hybrid organisations manage scaling relationships with large retailers or other sustainability-oriented organisations within their sustainability-based orientation to food-system efficiency. We detail how the management of different scaling

relationships – either with large retailers (established SC actors) or other sustainability-oriented organisations – affects upstream supplier relationships and in turn create different scaling effects. As such, this research provides detailed network insights and complements other research highlighting how hybrid organisations collaborate with established SC actors (Ramjaun et al., 2024). Our study indicates the value of prioritising knowledge-creation amongst a community of sustainability-oriented organisations over material flows and demonstrates the scaling effects for creating changes in the wider supply network (Moore et al., 2015). This research demonstrates empirically that in networks of sustainability-oriented organisations, such knowledge-oriented conceptualisations of SC management exist in parallel to supply arrangements in pre-existing supply networks mirroring traditional conceptualisations of SCs. This research suggests that traditional and alternative conceptualisations of SCs provide complementary insights to SC practice supporting the theoretical argumentation by Hald & Spring (2023).

6.2 Practical implications

This research has important practical implications – both in terms of managerial and societal concerns. First, managers of hybrid organisations benefit from creating and contributing to a community of like-minded partners with the same understanding and sense of purpose of sustainable production of (agricultural) products. This enables them to exchange knowledge, experiment with new approaches and share best practices. These insights can then support the management of active supply arrangements to create sustainable agrifood products for customers, while leading to stable scaling effects. Second, relationships with established SC actors, such as large retailers, can accelerate scaling effects with the drawback of adhering to enforced supply processes. Such relationships hence require targeted

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capability building for hybrid organisations to become suppliers.

This research also has implications for purchasing managers of large retailers. As these large retailers wish to integrate sustainable products and food items sourced from hybrid suppliers into their portfolio, purchasing managers need to be aware of the specific needs of such suppliers and support them accordingly. This includes longer-term predictability of supply relationships despite variability in demand and potentially requires collaboration and information sharing with such hybrid organisations. This also includes supporting these hybrid organisations in building the capabilities for administering these supply relationships. Purchasing managers of established SC actors are hence advised to adapt their explicit processes and procedures to the needs of these hybrid organisations to integrate food items from sustainable practices of food production to be sold through their retail channels.

6.3 Study limitations and future research

This study’s conclusions arise from the specific study design and industry context and are to be seen within the limitations of these. While qualitative research is often challenged by claims of low (statistical) generalisability, the multi-case design of this study facilitated through the strategic sampling enabled external validity of our insights (Gibbert & Ruigrok, 2010). The selected cases, set within a regional network of food businesses engaged in a vibrant exchange on sustainability-related issues present a useful data set for deriving abstract insights for scaling relationships in the food sector. The studied regional context has a high emphasis on sustainability concerns. Within this context, the presented cases provide particularly successful examples of hybrid organisations building and managing scaling relationships for their sustainable practices. The authors would position this work as based on an outstanding set of case studies in terms of the range of hybrid organisations

and the range of sustainable practices of food production.

This research raises the need for important avenues for future work. First, scaling sustainable practices within the supply network requires further attention across industry settings. While this research focused on the food system, some of the provided insights might also be applicable to other industry sectors. Other sectors, including manufacturing, chemical production, and healthcare are also dominated by established SC actors and consequently difficulties for hybrid or emerging organisations to enter the supply network. Our research offers potential generalizability to other sectors, though further investigation is required. In particular, further work should investigate the transformation of established SCs arising from the increasing integration of sustainable practices and increasing participation of hybrid organisations. Our research indicates that large retailers are changing their engagement with their SC, which indicates a dynamic transformation. Further work needs to investigate this dynamic transformation in more detail to discern causal mechanisms and consequently identify potential ways for accelerating such transformation.

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Appendix

Initial interview areas with exemplar questions

1. Background: yourself/your Institution

What does [initiative/business] do? How would you describe/define [initiative/business] in 1 or 2 sentences, what is its organisational/business model? (Services other than food supply/distribution)? How did [initiative/business] come about (vision, new market, inspiration from other initiatives/businesses)? Can you tell me a bit about the idea/motivation behind it? What is its aim/mission? What is interviewee's role in relation to [initiative/business]?

2. Design, Governance, Activities undertaken and skills required

In what sense would you say does [initiative/business] differ from a established food business? *Customers/Clients:* What are the [initiative/business]'s distribution channels? What are [initiative/business]'s customers/clients/members/visitors of [initiative/business]? Do you have any target demographics? What is your relationship with them (i.e. is it somewhat different from established food suppliers)? What aims to you have in terms of extending your customer base?

Partnerships (intangible resources): Does [initiative/business] have any collaborative ties with partners? Would you say [initiative/business] is part of a network? Does [initiative/business] collaborate and share with other initiatives/businesses? What shape does the collaboration/connection take (e.g. also: rather informal arrangements or formal alliances)? How is/are this/these partnership(s) helpful or not? What is missing/What would be needed?

Supply Chain Integration: How is [initiative/business] integrated in the food supply chain? Would you say [initiative/business] has explored any alternative/unusual avenues of food supply, contributes to establishing alternative supply chains? In what sense does [initiative/business] impact/have a role in the established supply chain-(incorporation/partnering)/?

Resources (tangible): What is needed to run [initiative/business]? What happens during a typical day/week? What resources do you access (land, building, labour, staff, raw materials, products, suppliers, outside financial support e.g., grants, low-interest loans, community funds? Does [initiative/business] have any accreditation/certification? Any you aim for? Why (not)? (Food safety)

3. Social and environmental impact

Presence: In what areas would you say does [initiative/business] have the greatest positive social and/or environmental impact? In what way? Would you say [initiative/business] contributes to social change? Do you (self-)assess/measure your economic, social and environmental value/impact? How (Metrics/Measuring success between financial profitability and social/ethical mission? Can you think of other metrics or information that would be useful for you to evidence/develop [initiative/business] to increase its positive impact, but you have not yet explored?

Future: Are there social and environmental areas that you would still like to work on with [initiative/business]? Are there activities of [initiative/business] that have a negative social/environmental impact?

4. The local food-system landscape

In what sense (e.g. local sourcing, serving local community etc.) does [initiative/business] have a focus on the local food system? What is the nature of the local food system?

Procurement/institutional customers: Is [initiative/business] suitable for supplying for public institutions (schools, hospitals, nurseries, prisons and care homes), independent retailers, the hospitality industry and other institutional customers?

5. Sustainability

What do you regard as food security? Would you say your initiative/business contributes to a transformation towards more food security? What do you regard as a regenerative food

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system? Would you say your initiative/business contributes to a transformation towards a more regenerative food system? Thinking about the future we want/need: What does a transformed, regenerative Yorkshire food system look like? What role would [initiative/business] play in such a system?

6. **Scaling and FS integration of [initiative/business] and future**

In an ideal world, where would you see [initiative/business] go next? What would [initiative/business] need more of (e.g. Skills, Alliances, Networks)? What are the factors that inhibit [initiative/business] to connect more deeply with the local food system or to scale up/deep more widely (e.g. Regulations, Staff)? In an ideal world, who would you partner up with? What kind of policy changes would help [initiative/business]?

7. **Recommendations**

Thinking about helping to build a network of local organisations which can contribute to transform the Yorkshire food System: Can you recommend us other inspirational initiatives/business in Yorkshire that we could speak to?

Follow up interview areas and exemplar questions:

1. **General sustainability**
What is the motivation for your business in terms of sustainability? What is your interpretation of scaling and approach to scaling in your own business?
2. **Supply chain structure**
Why did you create the supply chain partnerships that you have today (with suppliers, with customers)? What experience have you had with other supply-chain structures (sourcing, other partners etc)?
3. **Established food supply chain actors**
What experience do you have of working with “traditional/established” members of food supply chains (e.g., large retailers, distributors etc.)? How did you experience fairness in these engagements? How did you experience power in these engagements?
4. **Emerging food supply chain actors**
What is your experience of working with “non-traditional” members of food supply chains? How did you experience fairness in these engagements? How did you experience power in these engagements?
5. **Future**
What are the next plans for scaling your business?

Online supplement

Table A-1: Unstructured engagement with local food network for case selection

Type of engagement	Stakeholder(s)	Description and focus	Connection to case selection
Three Horizon Workshops organised by university research program; Oct 2021-Jan 2022; 3 workshops of 3h each, with meet ups of smaller groups in between	Diverse set of stakeholder involved in agriculture and Yorkshire industries with focus on food and farming, including: • Local Government and Regional Development public sector Organisations (Individuals associated with three different local authorities in Yorkshire) • Sustainable Development and Environmental Initiatives and agriculture and Food Networks (representatives of 7 different local partnerships) • Health and Public Services provider (3 organisations of different size and reach from Yorkshire) • Community and Voluntary Sector Support Organisations • 6. Multi-entrepreneurial individuals offering Industry and Business Supports	Kick off workshop of the university research program via online events to understand the local food business network, including the range of activities focused on local food production, farmig, manufacturing activities, community support, sustainable development, public health, and the food industry in Yorkshire and surrounding areas.	Cases A, B, D, and G were mentioned repeatedly for their sustainable practices, especially in terms of sourcing from local farms for their manufacturing.
Deliciously Yorkshire food annual award ceremonies Nov 2021, Nov 2022, Nov 2023	Award attendees are primarily food businesses (e.g., farmers, artisans, manufacturers)	Participating in the annual Taste Awards is opportunity to showcase products to a wide audience and gain recognition for their quality. Winning or being shortlisted for an award can significantly boost a business's reputation and credibility. Further attendees are representatives of retailers, food service providers, industry associations and trade organisations, sponsors and partners supporting the event. Members of the university research program FixOurFood attended and networked in 2021, hosted a table in 2022, and were a sponsor in 2023 prize for the 'sustainable product' category. Award attendance outcomes include: Networking with industry stakeholders; Identifying new suppliers and collaborators; Understanding emerging food trends and innovations.; Observing supply chain dynamics; Learning about quality standards and regulations; Gaining insights into consumer preferences; Accessing case study material for research.	various case study companies were nominated and won prizes, e.g. Case B in 2023, Case D for sustainability price

Deliciously Yorkshire breakfast networking Feb 2023, Feb 2024	food businesses (e.g., farmers, artisans, manufacturers)	co-author on panel discussing sustainable business models in 2023, whole team of university research program attendance in 2024 network building among emerging supply chain actors, including identification of potential partners, insights from industry experts on market trends and marketing strategies, and learn from best practices and new ideas through diverse discussions and Q&A sessions. These events also provide access to valuable resources and support, helping to stay informed and competitive in the food industry	Discussions took place with all our case study businesses. introductions to Case companies B and D by various business owners for local sourcing
Great Yorkshire Show July 2022, July 2023	stakeholders involved in agriculture and rural industries (farmers as potential suppliers), producers, retailers, also politicians and policymakers, other researchers to exchange ideas, gather information, and potentially establish collaborations.	co-author attended panel on 5th July 2022 and presented on sustainable business models in food hall 2023, exhibit on university research program on all days in 2023. organized by Yorkshire Agriculture Society to offer excellent platform for networking, marketing, and showcasing their products to a large audience, also general public to gain understanding about current trends and developments in local agricultural markets. Product showcasing, demonstration of pricing strategies, and insights in consumer preferences, valuable insights into current market dynamics. Yorkshire Agriculture Society supports various farming networks, such as the Future Farmers of Yorkshire and the Women in Farming Network, which provide opportunities for knowledge sharing, professional development, and community support	unstructured observations for Cases B (exhibition stall and presentation), E, F (exhibition stalls); Yorkshire Food Farming & Rural Network people referring to sustainable sourcing achievements of Case E
Grow Yorkshire/North Yorkshire Rural Farming network events	Stakeholders involved in agriculture and rural industries, including farmers, agricultural business owners, policymakers and representatives from various agricultural organisations and support networks, National Farmers Union (NFU), The Local Economic Partnership, Country Landowners Association (CLA), Deliciously Yorkshire Food Business Network, FERA Science and Yorkshire Food and Farming Rural Network	Events designed to foster collaboration and knowledge sharing, offer networking opportunities to connect with potential partners, advisors, and funding sources; Co-author engagement, meetings with chairs and board. This has involved a meeting every 3 months since 2021, working with key Yorkshire Food System stakeholders including business networks.	All cases
North Yorkshire Rural Farming network newsletter	stakeholders involved in agriculture and rural industries.	Relevant stakeholders in the local food network communicate about ongoing issues and best practices; Research program has space in Newsletter to inform about research and engagement activities	All cases
FixOurFood Anchor Institutions meetings	All key public institutions including: Universities, NHS, Colleges, York City Council, Ministry of Defence etc.	One meeting per year to discuss public procurement and other food-system relevant topics	All cases

Local B Corp networking meeting 2021, 2022	local small and medium sized enterprises (SMEs) operating in the food industry and other sectors.	Networking opportunity, learning from best practice, insights into real-world challenges, innovations, and best practices	Admiration for sourcing of coffee in general (cases C and E), Case D
informal conversations with Business Development Manager at Deliciously Yorkshire	DY is a regional food promotion organisation - here is a list of members	co-authors have frequent (ca bi-monthly) catch ups to gain updates about individual members, including businesses receiving a new certification, expanded production, new business collaborations	highlighting activities particularly of Cases B, D, and F; Case F repeatedly recommended as outstanding business, Case B recommended for revolutionising the use of fava beans; discussions around Case A
York Food and Drink Festival	Food businesses (e.g., farmers, artisans, manufacturers) and general public	Public event, showcase products and network with other businesses, also exposure to general public.	Cases D and G attended with direct researcher engagement, including unstructured observation of customer engagement
Visit to local street food market	various local small food businesses preparing and selling food to consumers	Retail space environment for food businesses providing access to communal dining areas, event spaces, and a supportive community of like-minded enterprises, support the growth of small food businesses but also fosters innovation and sustainability in the local food industry	Cases A, D, G
FixOurFood Yorkshire Food Summit March 2023	120 food businesses and food related organisations in Yorkshire	One-day, face-to-face summit event from the university research program to identify transformation needs of the Yorkshire Food System, summit included business workshops on scaling-up sustainable practices.	Discussions with all case companies at this event

Table A-2: Managing scaling relationships with large retailers

Cases	Relationship development and engagement
B Fava beans	Decision to work with supermarkets to reach supermarket customers: "I did not want to put any of our existing brands into the supermarkets." (CEO). Instead, the company develop specific product ranges specifically for supermarkets, such as fava-bean based hummus and vegetable oil. These products look different from the products sold through farm shops and other outlets and are also priced differently. Some product ranges end up being unsuccessful in the long term. For example, the company faced challenges with larger retailers regarding their hummus due to the short shelf life creating logistical and financial risks for these retailers and ultimately resulted in the ending of these relationships. The CEO describes this as follows: "[These specific product ranges] give us a chance to try these different things and different places, and then if we would like to, at some point in the future, we can then start looking at which [product] we can invest in". When working with the large retailers, product price is a concern "because the raw material market fluctuates far more than you can ever do with a branded product" (CEO).
C Coffee 1	Case company C has had a long-standing supply relationship with three major UK retailers (after initially having supply relationships with all major UK retailers but being delisted by two of them). These supply relationships include sustainability-related performance factors, in addition to capacity, low cost and stable sales. For example, Retailers 3 and 4 have included smallholder livelihoods as a performance indicator in their purchasing strategy as part of ensuring future viability of the food system. Retailer 3's "commitment to getting to know our growers and producers (and) continued dedication to protecting people in our SC" (Retailer 3 report on future of food). This joint commitment offers a stable basis for collaboration and is mirrored in relationships with other mainstream retailers. For example, in collaboration with Retailer 4, "[Case company C] launch their latest product; a small batch roasted range exclusively created for [Retailer 4]. (...) The premium Organic and Fairtrade specialty coffees not only champion emerging New World origins and follow the [Case company F] principles of donating 50% of the profits back to farming communities, but they are also packed in entirely home compostable bags, (...) which are suitable for your home compost or food waste bin" (Retailer 4 advertisement of Case company F product range). This suggests importance of sustainable supplier relationships in some of the established SC actors based on their individual relationships with sustainable food companies.
E Coffee 2	The relationship with Online retailer is transactional based on product sales: "It is an interesting bedfellow, [Online Retailer 1]. You need to understand how to court it. (...) It is worth investing in it because you never know if a buyer is on [Online Retailer 1 website] and they think to have a look around and then they go onto our website and they see a whole load more of the stuff that we do." This suggests that the relationship with [Online Retailer 1] is a means to an end of scaling up product sales and reaching new buyers.
F Cheese	While supply relationships typically start based on the initiative of the established SC actor, they typically end because of the rigidity of purchasing arrangements, focusing on the capacity to supply products at a low cost provided stable sales. Case company F has had experience of working with two major UK retailers. The relationship with Retailer 2, which started in 2015 with a call for local producers to become suppliers. The work with Retailer 2 "stopped because we did not make any profits. [There were] lots of requirements. And the price was too cheap, the milk price tripled. Machineries became more expensive. Our energy costs increased three times as well. (...) It's all about the efficiency and to be able to achieve this cost" (CEO). Despite the supply relationship having ended after a few years "I would still love to supply them because they care about local suppliers and to source local products. This was their own target. (...) we had really good relationship with them." (CEO). The relationship with Retailer 1 started around a new product developed using surplus and cuttings for a ready-made, frozen product. This started with a widely advertised competition by Retailer 1 "The next big thing" and "we are now in the process of this contract. (...) we will be required to produce a lot of cheese to make the order they are talking about... 40,000 boxes of 10s, which means 400,000 rolls per order ... this is the first order. So if they find the response good, we might become a regular supplier to them" (CEO).

Table A-3: Managing scaling relationships with other sustainability-oriented organisations across cases

Cases	Relationship development and engagement
A Pies	Identify suitable partners through joint willingness to innovate sustainable food products and their capacity to supply regenerative produce: “we can trial things. We can have an evolutionary process and not be scared of trying things that do not work. Which means that over time we can probably get to what we do want to do more quickly [in comparison to working with established SC actors]” (CEO). Relationships are started because of shared mission towards a sustainable food system and willingness to invest resources into partnerships.
B Fava beans	Identify suitable suppliers based on inter-personal connections with shared values. The CEO exemplified this: “It was Mike’s [Supplier 1] beans produced through regenerative means that I started with. He is just a neighbouring farmer, good friend of mine.” These inter-personal connections enable case company B to establish a set of suppliers and build their sustainable food business.
C Coffee 1	New small-holder farmers are identified based on joint values in environmental sustainability. Conversely, Case company C goes “far beyond the minimum fairtrade standards” (Sustainability strategy) and defined their own Gold Standard producer support pledge, which pays 10% above the Fairtrade premium price coupled with using 60% of their profits to invest in producer support and development. Problem areas and needs are jointly identified with suppliers through “involving grower partners on the boards of both [Case company C] and [the wider coffee production association]. (...) [This] helps us to work together to tackle the systemic challenges facing small-scale farmers. (...) [We] investigate opportunities for further value to remain at [the coffee’s] origin e.g., local decaffeination” (Company strategy document, p.4).
D Pasta	Local supplier was chosen based on their ability and willingness for mutual support: “The flour goes through strict quality checks at the mill, and each batch is inspected by ourselves on arrival” (CEO). The partnership arose from prior collaboration with a set of millers to understand which flours that can be grown in Yorkshire have the potential to create pasta. The product needs a good relationship between different local people to trial growing, milling and processing. Cross promotion and exchanging ideas and knowledge with other businesses in the region: “it is one of those things where there’s all these other businesses, that we grow together and help each other, which is brilliant. (...) they’re just small family business often, just like us” (CEO).
E Coffee 2	Suppliers are chosen based on inter-personal connections to the farmers, nurturing these over time: “part of [the work with small farmers] is about understanding the right thing to do to get the best out of the coffee that you are growing. [This includes] how to look after the trees, to plant trees rather than clear the land. (...) in order to get the quality of coffee that we want, we need to invest in these relationships” (CEO). For this purpose, the company has partnered with a local association working with coffee farmers since 2018. This mutual support extends downstream to customers, working on their needs to enable their continued business success. “if you [Customer] are established on the high street and someone on the same high street came [to us] and said we would like to use your coffee as well, we wouldn’t do it without talking to you first. (...) So, it is not build, build, build, our customers that we already have are very important to us, and keeping those relationships is what is important.” (CEO)
F Cheese	Relationships are based on joint values and mutual support, such as collaborative product pricing despite economic instability and fluctuation. Conversely, a supplier relationship might end if this mutual support is lacking. For example, case company ended the relationship with because “we struggled with them [previous supplier of milk] because they don’t have a pump [because their other customers bring their own pump when picking up the goats milk]. So, whenever my husband wanted to fill the tank with the milk he used to wait for gravity, so it’s very slow. And he told them, please just buy a pump it’s wasting all my day they said ‘it’s not worth it because you are the only one who collects from us.’ (...) So, it became really hard for us to keep going and collecting the milk” (CEO interview Oct 2023). As a result, Case company F has now identified a new milk supplier who shares the values of mutual support and responsible milk production.

G Micro-greens	Direct engagements with local businesses and collaborate to reformulate meals and communicate value of local fresh indoor grown produce as a key element for local resilience and food security. These relationships are based on transparent experimenting: “[Customer 1 said] we start with two kilos a week and then realized that they do not need two kilos, because the leaves are bigger [than prior competitor products]. (...) So, we reduced the amount [we deliver to them and consequently] reduce food waste, this is very positive” (Farm manager). While active supply arrangements end, the partners company continues to engage with these customers: “It happened last month with [Customer 2]. They are not getting anything from us because they change the food menus as they are not having any herbs on their menu anymore. (...) And I said, I'm happy to work through the food menu with you, as well, and see all the things that you want us to grow for that.”
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