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Unlocking Synergies: How Coopetition Can Generate Sustained Value in Food Aid Supply Chains

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Abstract

Purpose – Food insecurity remains a pressing global concern, with the role of charitable surplus food redistributors becoming increasingly crucial. Previous studies have highlighted the need for increased cooperation among redistributors who also compete for both surplus food and funding. Inspired by the benefits of coopetition in commercial food supply chains, this study explores coopetition in the food aid supply chain.

Design/methodology/approach – We interviewed managers of 35 purposively sampled surplus food redistributing organisations across England. Our data was analysed abductively, guided by an adapted coopetition conceptual model for the food aid context to derive theoretically and practically meaningful insights.

Findings – Redistributors, driven by the shared social concern for disadvantaged groups, commit food and logistics resources both vertically and horizontally to coopetitive relationships. Notwithstanding, power dynamics and value conflicts, along with resource scarcity, undermine joint and firm value creation opportunities and heighten value destruction.

Originality – Coopetition in the context of surplus food redistribution is underexplored. Our study uniquely engages actors in the two-stage food aid supply chain and proffers pathways for navigating simultaneity and value creation intent towards transformational societal impact.

Research limitations/implications – By focusing exclusively on the food aid supply chain, this study parsimoniously offers a context-specific theoretical framework whose applicability to other supply chain types may be limited. However, this contextual specificity presents valuable opportunities for future research. Further inquiry could

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explore the influence of external actors (such as governments and donors), the effects of relational direction across varied supply chain configurations, and the governance mechanisms that shape coopetitive dynamics more broadly.

Keywords: Surplus Food Redistribution, Coopetition, Simultaneity, Value creation, Food aid supply chain, Cooperation, Competition

Paper type: Research paper

1. Introduction

The long-held view that competition drives ecosystem community structure (Agrawal *et al.*, 2007) parallels business theories which emphasise competition's role in market dominance (Bengtsson and Kock, 2000). However, recent research reveals that ecosystems are influenced by a range of interactions, including competition, symbiosis (mutualism, commensalism, parasitism), herbivory, and predation, along with their indirect effects and the varying responses within and between species (Agrawal *et al.*, 2007; Knight *et al.*, 2025; Lang and Benbow, 2013). Similarly, management studies are recognising the complexity of interfirm relationships, including where competing firms also simultaneously cooperate for synergistic benefits (Bengtsson and Raza-Ullah, 2016; Bouncken *et al.*, 2015; Gernsheimer *et al.*, 2021). This is known as "coopetition" (Brandenburger and Nalebuff, 1996). Despite its risks, coopetition has driven innovation, optimised resource use, accelerated market entry, and yielded economic and political benefits (Bouncken *et al.*, 2015; Gernsheimer *et al.*, 2021; Kostis *et al.*, 2024; Walley and Custance, 2010; Zacharia *et al.*, 2019). In food supply chains, it has shortened lead times, strengthened bargaining power, and increased sales and product variety (Beckeman *et al.*, 2013; Walley and Custance, 2010).

Food insecurity is a growing crisis (Facchini *et al.*, 2023), affecting 29.6% of the global population, with 783 million people experiencing hunger (UNEP, 2024). Yet, one-third of all food, valued at over $2.6 trillion in socio-economic value (Sundin *et al.*, 2022), is wasted annually. The environmental cost associated with agrifood systems is estimated at 16 $GtCO_2eq$ globally, with a food wastage footprint of about 4.4 $GtCO_2eq$ per year (FAO, 2015, 2022). Ensuring edible, good-quality food reaches those in need instead of being discarded reduces waste, optimises resources and minimises environmental harm (Facchini *et al.*, 2023; Papargyropoulou *et al.*, 2022). Currently, surplus food redistributors (mainly, charities and social enterprises) play this vital role – a role that integrates principles from related streams of research on circular economy and reverse logistics (Sundgren, 2020).

Circular economy promotes resource efficiency, waste valorisation and the cascading use of materials to extend product lifecycles (Garcia-Garcia *et al.*, 2019; Kusumowardani *et al.*, 2022). As noted, surplus food, although often still fit for consumption, is frequently wasted (Garrone *et al.*, 2014a). Redistributing this food enables the retention of value, which aligns with circular economy principles (Murray *et*

al., 2017; Sundgren, 2022). Enabling such redistribution requires robust reverse logistics systems to manage the collection, storage, and delivery of surplus food under strict time and safety constraints (Liljestrand, 2017; Sundgren, 2020). Unlike other goods, surplus food perishability necessitates rapid, controlled, and often decentralised recovery mechanisms, requiring novel actor constellations and collaboration (Facchini *et al.*, 2023; Gobbi, 2011). Yet, recent studies (such as Facchini *et al.*, 2018; Sawyerr *et al.*, 2024; Sundgren, 2020; Thapa *et al.*, 2021) highlight significant supply chain challenges, heightening the need for improved collaboration. Unfortunately, competition for limited resources such as surplus food and funding is a barrier (García-Dastugue *et al.*, 2025; Sundgren, 2022; Thapa *et al.*, 2021).

Inspired by coopetition's success in business relationships, this study examines its role in the food aid supply chain. Coopetition enhances supply chain performance by leveraging the synergies of paradoxical relationships (Bouncken *et al.*, 2015; Raza-Ullah *et al.*, 2014). Given the power imbalances and resource constraints in surplus food redistribution (Midgley, 2020; Papargyropoulou *et al.*, 2022; Sawyerr *et al.*, 2024; Thapa *et al.*, 2021), understanding coopetition in redistributor relationships could provide valuable theoretical and practical insights. This study addresses two key questions:

1. How do redistributors simultaneously compete and cooperate with each other in the food aid supply chain?
2. How can redistributors generate sustained joint and firm value through coopetition in the food aid supply chain?

This research makes multiple contributions. First, it contributes to the efforts towards a coopetition theory by exploring established constructs of the phenomenon in the unique context of surplus food redistribution relationships in the food aid supply chain. It also advances supply chain management literature on food insecurity while opening new avenues for coopetition research. Practically, it deconstructs the nature, mechanisms and outcomes of extant coopetitive relationships and presents pathways for improved joint and firm value creation. Additionally, it offers policy recommendations for governments and corporations, highlighting the importance of diverse operational models in charitable food redistribution.

The rest of this article is structured as follows. We first provide, in section 2, an overview of the relevant literature and theoretical background culminating in the study's

conceptual framework. Section 3 presents the context and design of the study, followed by our data collection and analysis approach. We then detail our results and analysis in Section 4, followed by a discussion of our findings in light of extant literature in answering our research questions in Section 5. The research, practice and policy implications are presented in Section 6, and the study's limitations and directions for future research are finally presented in Section 7.

2. Literature Review and Theoretical Background

2.1 Coopetition

Competition among firms in the same market is both expected and widely studied in business research, particularly regarding competitive advantage. Firms pursue innovation, strategic alliances, resource optimisation, and market positioning to outperform rivals. Intense rivalry is often considered the most beneficial market dynamic (Bengtsson and Kock, 2000), especially from the customer's perspective, while cooperation among competitors is traditionally seen as undesirable. Conversely, cooperation, especially with vertical supply chain actors, is deemed desirable and strategically advantageous (Iyer *et al.*, 2023; Wieland and Wallenburg, 2013). From this perspective, having competing firms also simultaneously cooperate is viewed as paradoxical (Raza-Ullah *et al.*, 2014; Stadtler and Van Wassenhove, 2016).

This situation, known as "coopetition" and defined as the "simultaneous competition and cooperation among firms with value creation intent" (Gnyawali and Charleton, 2018, p. 2513), can be mutually beneficial for involved firms (Bengtsson and Kock, 1999, 2000; Crick, 2021; Leite *et al.*, 2018). For instance, Durach *et al*. (2020) analyse 33 buyer-supplier-supplier triads in Austria, Germany, and Switzerland, showing that two coopeting first-tier suppliers with shared capabilities and joint interests are more resilient to disruptions from a common second-tier supplier. Yan *et al*. (2020), studying 323 firms in the global solar photovoltaic industry, posit coopetitive heterogeneity and that coopetition can vary depending on technological, market and geographical overlaps. They argue that firms can balance knowledge acquisition and leakage risks by selectively partnering with competitors that have optimal overlap of these dimensions. Similarly, Ritala (2012) found that a coopetition strategy, when adapted to specific business environments, enhances market and innovation performance. Using six cases

from the agri-food sector, Walley and Custance (2010) identify coopetition benefits such as knowledge sharing, competency pooling and political advantage. Garrette *et al*. (2009), analysing 310 new aircraft development projects between 1945 and 2000 conclude that horizontal alliances enable competitors to pool similar resources efficiently for product expansion.

In this regard, the underlying premise of coopetition, that is, that there are dyadic and paradoxical inter-organisational relationships characterised by the simultaneous existence of competition and cooperation for mutual value creation, is thus well established (Bengtsson and Kock, 2000). Over time, various theoretical lenses have been employed to explore this phenomenon. Game theory, in particular, has been used extensively (see e.g., Brandenburger and Nalebuff, 1996; Ritala and Hurmelinna-Laukkanen, 2009; Ritala and Sainio, 2014) to accentuate the positive-sum games competitors sometimes engage in for joint value creation (Knight *et al.*, 2025; Meena *et al.*, 2023). Similarly, the resource-based view and related theories, such as the dynamic capabilities view, the relational view and the resource dependency theory, have been used to investigate value creation in coopetitive relationships through shared complementary and compatible resources, capabilities development and associated power dynamics (Crick and Crick, 2020; Estrada *et al.*, 2016; Meena *et al.*, 2023; Ritala *et al.*, 2014). Predictably, paradox theory has also provided insights on the inherent tensions in coopetitive relationships (see e.g., Bimmermann *et al.*, 2024; Luo *et al.*, 2016; Ólafsdóttir *et al.*, 2024; Raza-Ullah *et al.*, 2014).

Despite this theoretical plurality, scholars have noted the absence of a conceptually robust theoretical framework that offers descriptive, explanatory and predictive adequacy (Whetten, 1989) for understanding coopetition (Bengtsson and Kock, 2014; Bengtsson and Raza-Ullah, 2016; Gernsheimer *et al.*, 2021; Park *et al.*, 2014). Efforts to address this include Bengtsson and Raza-Ullah's (2016) dynamic multi-level framework, which conceptualises coopetition through actor and activity perspectives, and Gernsheimer *et al*.'s (2021) integrative model, encompassing antecedents, execution, interaction, outcomes and levels of coopetition.

Notably, Gnyawali and Charleton (2018) propose a realist-based framework using the "*context* + *mechanisms* = *outcome*" formulation (Stank *et al.*, 2017). They define the context as *simultaneity,* i.e., the concurrent presence of cooperation and competition (Bengtsson and Kock, 2000; Stadtler and Van Wassenhove, 2016), and the outcome as

value creation, understood as the overriding motivation towards generating new and additional benefits (Arslan, 2018; Garrette *et al.*, 2009).

Drawing on competition theory from neoclassical economics, the framework emphasises the benefits of rivalry (Bengtsson and Kock, 2000; Kirzner, 2015; Porter, 1990) and niche overlap theory, which suggests that resources developed by competitors may be mutually beneficial (Baum and Mezias, 1992; Ingram and Qingyuan Yue, 2008). From this, Gnyawali and Charleton (2018) identify two competition-related constructs: *rivalrous spirit* and *resource relevance*.

On the cooperation side, strategic alliance literature outlines benefits such as cost and risk reduction, resource complementarity, market expansion, and capability transfer (Bengtsson and Kock, 2000; Dyer *et al.*, 2018; Dyer and Singh, 1998; Gnyawali and Park, 2011; Hamel *et al.*, 1989; Lei and Slocum, 1992). Accordingly, Gnyawali and Charleton (2018) highlight *mutuality* – the reciprocal cooperative intent between partners – and *resource commitments*, that is, the extent of resource sharing, as key constructs.

These constructs interact through four key coopetition mechanisms: *mutual pursuits*, *resource leverage*, *safeguarded resources* and *relevant commitments*. Their interplay can lead to varied outcomes, including *joint value creation*, *firm value creation* or *value destruction*. Effective coopetition requires managing the *intensity* (magnitude) and *balance* (evenness) between competition and cooperation, as well as managing trade-offs and aligning joint and firm-level value creation through deliberate strategic effort.

This study adopts and contextualises Gnyawali and Charleton's (2018) framework to investigate the dynamics and benefits of coopetition within the food aid supply chain. Through theoretical contextualisation (Craighead *et al.*, 2016) and empirical analysis, the study explores how these constructs and mechanisms operate in surplus food redistribution.

2.2 Coopetition in surplus food redistribution

Although coopetition remains underexplored in the context of the food aid supply chain, we draw on existing literature to extract its core theoretical constructs, specifically, the simultaneity of competition and cooperation, and the underlying intent of value creation. To ground this analysis, we first outline the structure of the food aid supply

chain, identifying key actors and flows. We then examine how competitive and cooperative dynamics manifest at the dyadic inter-actor level. This, then, informs the development of a conceptual framework that guides the subsequent empirical investigation.

2.2.1 Actors in the food aid supply chain

For food to reach disadvantaged consumers, surplus food moves from the commercial food supply chain into redistributing organisations within the food aid supply chain (Sawyerr *et al.*, 2024). There are two types of redistributors: food aid wholesale distributors (FaWDs) and food aid retail and service organisations (FaRSOs).

FaWDs are large charities with logistics infrastructure including trucks, chilled vans, warehouses and distribution centres. They collect or receive surplus food donations in large volumes and redistribute them to other FaWDs or FaRSOs, either for free or at discounted rates (Sawyerr and Bourlakis, 2022). Examples in the UK include FareShare, Company Shop, City Harvest, The Felix Project, His Church, and Bread and Butter Thing.

FaRSOs are smaller consumer-facing redistributors that obtain donated food from FaWDs and local donors. They then provide the food to consumers through home deliveries, free or discounted retail, or cooked meals. FaRSOs include schools, medical centres, food banks, social retailers, soup kitchens, faith organisations, out-of-school clubs, community centres and cafés, and other community-led initiatives.

An emergent category in the food aid supply chain is digital redistribution platforms, which connect businesses, charities, and consumers to share surplus food (Ciulli *et al.*, 2020; Michelini *et al.*, 2018). Financial donors – typically government bodies, corporate or private actors, or, occasionally, food donors – play a crucial role by funding the operations of food aid charities.

2.2.2 Flows in the food aid supply chain

There are three types of flows: information, material (food product) and financial (Sawyerr *et al.*, 2024). Information flows are bidirectional across all actors, while financial flows are unidirectional from funders to redistributors, and in some cases, from consumers to FaRSOs, FaRSOs to FaWDs or redistributors to discounted food suppliers. Food, including retail customer donations, primarily originates from the commercial food supply chain. It enters the redistribution network either in large volumes through FaWDs or in smaller, localised amounts directly to FaRSOs. Within the

food aid supply chain, food moves between FaWDs, from FaWDs to FaRSOs, and occasionally between FaRSOs. Figure 1 depicts these inter-actor flows.

2.2.3 Competition in the food aid supply chain

Unlike commercial firms, third-sector organisations do not necessarily seek competitive advantage. Consequently, while competition exists among redistributors, studies are limited. Notwithstanding, Sundgren (2022), for instance, highlights competition for surplus food among food aid organisations and suggests strengthening horizontal ties. Similarly, Thapa *et al*. (2021) identify logistical challenges arising as redistributors compete for surplus food from the same suppliers. They also note that different revenue models create additional tensions over food access. Sawyerr *et al*. (2024) further indicate both vertical and horizontal competition for food donations among redistributors. Although not widely discussed in the literature, surplus food redistributors, like other humanitarian organisations (Altay *et al.*, 2024; Sarkis *et al.*, 2013), also compete for often limited funding (García-Dastugue *et al.*, 2025; García-Dastugue and Rousseau, 2024). Thus, despite a shared mission to combat food insecurity, *resource scarcity* drives *rivalrousness* – the impetus to survive or to sustain or augment "market" positioning (Gnyawali and Charleton, 2018) – both horizontally and vertically within the food aid supply chain.

2.2.4 Cooperation in the food aid supply chain

The surplus food redistribution ecosystem relies heavily on cooperation. Both direct stakeholders (e.g., donors and redistributors) and indirect stakeholders (e.g., governments and media) collaborate to achieve common socio-environmental goals (Kunchamboo *et al.*, 2023). Surplus food donation and redistribution can only be effectively implemented through collective efforts (Baglioni *et al.*, 2017; Thapa *et al.*, 2021). For redistributors, cooperation is often facilitated through food partnerships and local alliances, which unite various FaRSOs to pursue a common "food goal" within their city or town (Bourlakis and Sawyerr, 2022; Starr-Keddle, 2020; Thapa *et al.*, 2021; Wang *et al.*, 2018). Notwithstanding, studies continue to emphasise the need for greater collaboration among stakeholders (Nayak and Hartwell, 2023; Patel *et al.*, 2021). FaRSOs have been described as insular (Sawyerr *et al.*, 2024), while inherent relational tensions among redistributors are also documented (Thapa *et al.*, 2021).

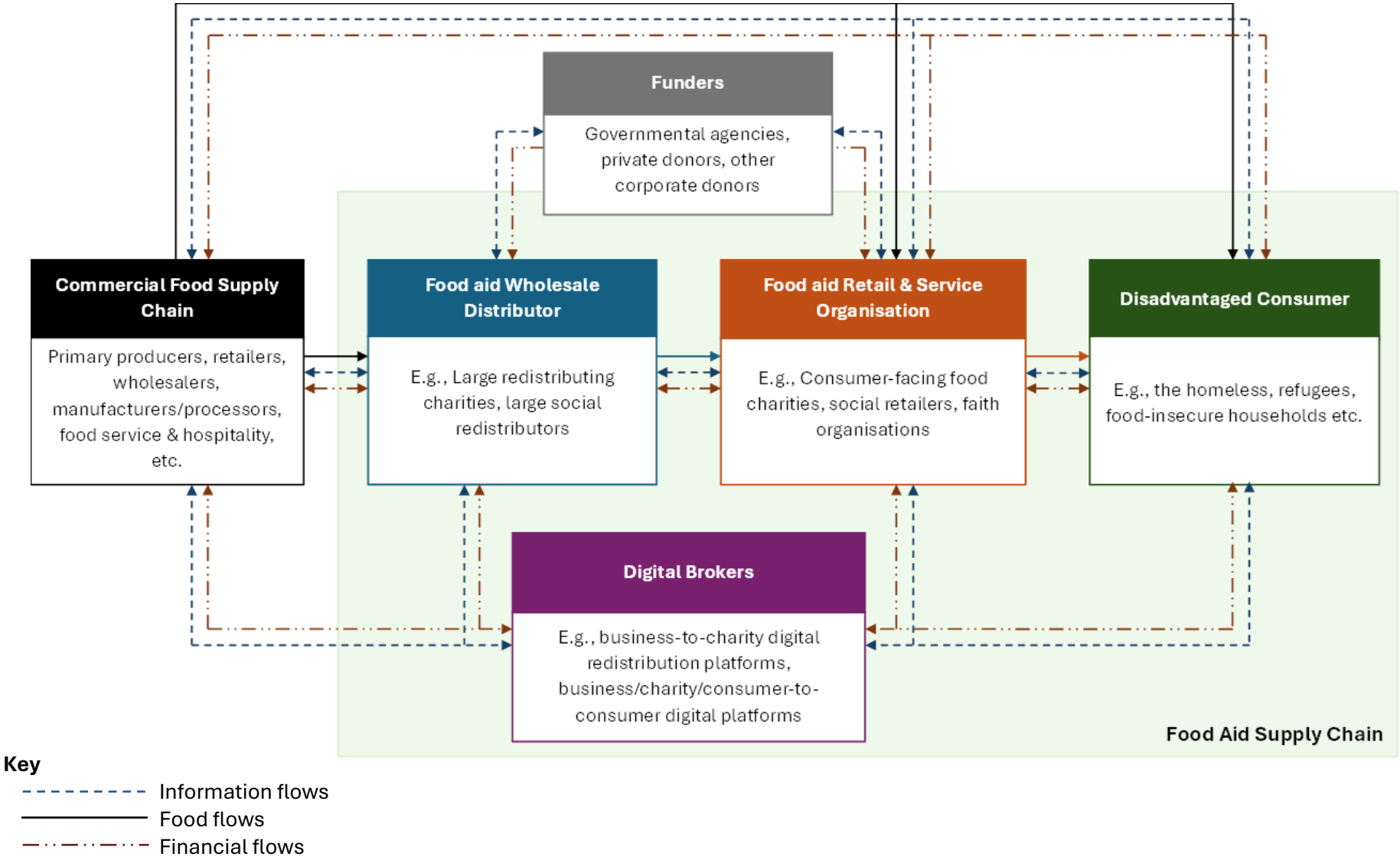


Figure 1 Overview of the food, information and financial flows in the food aid supply chain (Source: Authors' own work)

Redistributors recognise *mutuality*, in terms of the reciprocal cooperative intent and shared social goals (Gnyawali and Charleton, 2018), and indeed the requisite *resource commitments*. Yet, they also understand that they are competing – even if indirectly – for the same limited financial and surplus food resources, and the recognition that comes with success (Kunchamboo *et al.*, 2023). With the limited exploration of coopetition in the sector, even among researchers, it is unsurprising that redistributors struggle to navigate these paradoxical relationships.

2.2.5 Coopetition in the food aid supply chain

As noted, coopetition relies on two key elements: simultaneity and value creation intent (Gnyawali and Charleton, 2018). Competition and cooperation coexist in inter-redistributor relationships (Kunchamboo *et al.*, 2023). FaWDs depend on FaRSOs to redistribute surplus food or process it for consumption, while FaRSOs, in turn, rely on FaWDs for part of their supply. Yet, some FaRSOs view FaWDs as a threat to local surplus food availability (Sawyerr *et al.*, 2024), as all redistributors indeed compete for the same surplus food sources. Beyond resource competition, food banks also vie for recognition, geographical presence, and consumer proximity (Kunchamboo *et al.*, 2023). All redistributors, regardless of financial models, also compete for funding as even social enterprises in this sector rely on common funding streams (Sodhi and Tang, 2011; Sodhi and Knuckles, 2021).

From these dynamics, *mutual pursuits*, where rivalry and mutual dependence coexist (Gnyawali and Charleton, 2018), emerges from the literature as a coopetitive mechanism. *Value creation intent* is also evident, as surplus food – the sector's most critical resource – is distributed through these relationships. Shared goals, such as food waste reduction, environmental stewardship and information sharing (Kunchamboo *et al.*, 2023), drive these redistributor relationships.

Despite these coopetitive dynamics, little research explores actor-specific and hierarchical nuances. In practice, redistributors continue to struggle with manoeuvring the paradoxical relationships. This study aims to untangle these complexities and identify opportunities for maximising joint and firm value creation while limiting value destruction (Gnyawali and Charleton, 2018; Rai *et al.*, 2023).

2.3 Conceptual Framework

Building on the preceding discussion, we synthesise insights into a conceptual framework illustrated in Figure 2. Drawing on Gnyawali and Charleton's (2018) coopetition model, we examine how its core constructs apply to surplus food redistribution. Within this context, *rivalrousness* emerges as a salient expression of competition. However, *resource relevance* (Ingram and Qingyuan Yue, 2008) is notably absent from the literature, potentially due to the limited focus on competitive dynamics among surplus food redistributors. For cooperation, both *mutuality* and *resource commitments* are evident in the literature and are, thus, incorporated under simultaneity.

The interaction between specific elements of competition and cooperation gives rise to *coopetition mechanisms*. Of these, *mutual pursuits*, which capture the interplay between rivalrousness and mutuality, is supported by the literature and included in our framework. In contrast, mechanisms such as *safeguarded resources* and *relevant commitments*, which rely on resource relevance, as well as *resource leverage,* are excluded at this stage due to a lack of supporting evidence. Nonetheless, our abductive approach allows for their potential emergence during empirical analysis.

To clarify, safeguarded resources stem from the interplay between mutuality and resource relevance, whereby valuable shared resources are protected by informal safeguards. Relevant commitments involve the strategic sharing of high-value resources where the potential for significant value creation justifies risks of resource drain. Resource leverage combines resource commitments and rivalrousness, enabling access while preserving competitive advantage. See Gnyawali and Charleton (2018, pp. 2517–2520) for an exhaustive discussion of these mechanisms.

While the literature offers limited guidance on how actors navigate simultaneity, we retain this aspect in the framework for empirical exploration, without committing to intensity and balance as necessary a priori dimensions. As value creation intent is a foundational assumption, we also integrate its potential outcomes, joint value creation, firm value creation, and value destruction. Additionally, we grant the supposition that managing trade-offs and aligning joint and firm value creation affect the type of value realised (Hamel *et al.*, 1989; Rai, 2016). The resulting conceptual framework is presented in Figure 2.

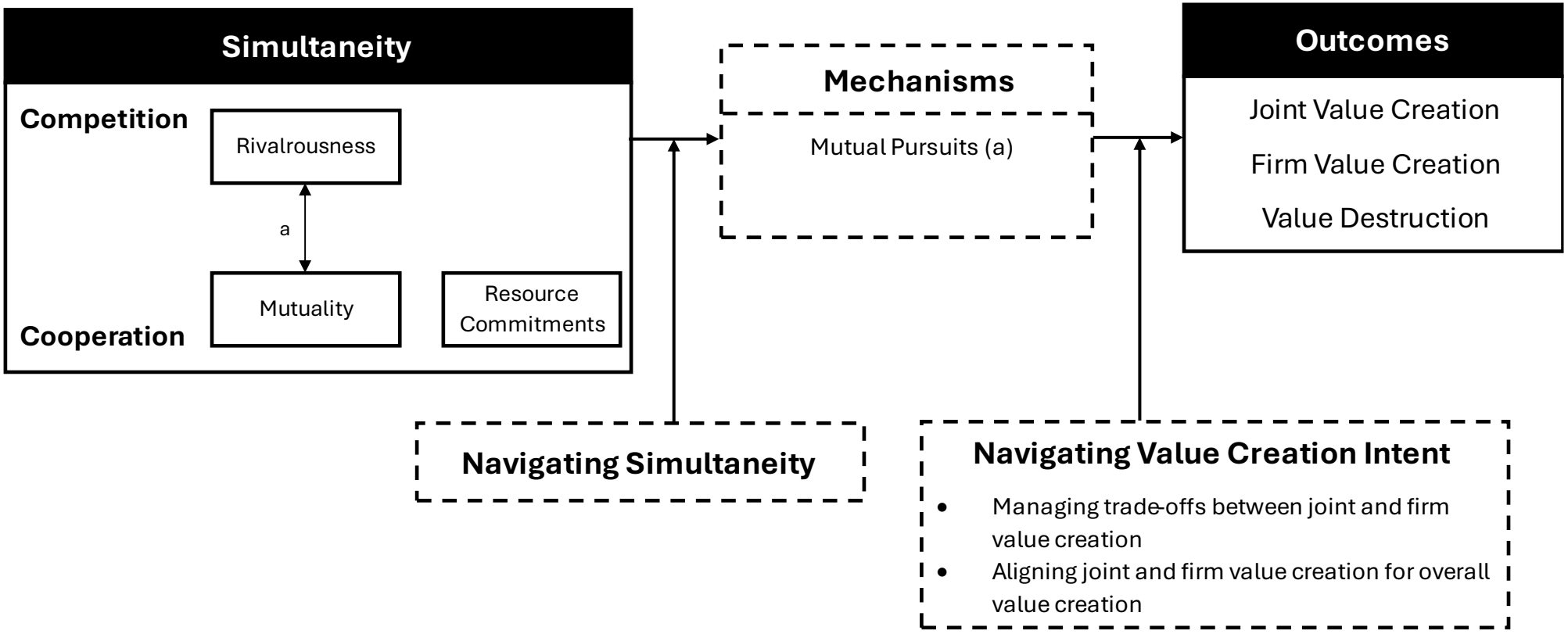


Figure 2. Conceptual Framework (Adapted from Gnyawali and Charleton, 2018)[1]

[1] While there are other constructs such as Resource relevance, Resource leverage, Safeguarded Resources and Relevant Commitments, they were not included in the conceptual framework as those were not identified in the literature.

3. Methodology

3.1 Context & Design

Surplus food redistribution has emerged as a critical means for food provisioning to support disadvantaged groups in the UK (Facchini *et al.*, 2023; Papargyropoulou *et al.*, 2022; Patel *et al.*, 2021), with the country seeing a 223.98% increase in reliance on food banks alone over the last decade (Trussell Trust, 2024). 11% of the nation's population live in households experiencing food poverty, including 17% of children in 2022/23 (Francis-Devine *et al.*, 2024), while 13.8 million (approximately 23%) of its residents live in food deserts – 2 million of these in deprived areas (Janatabadi *et al.*, 2024). Yet, significantly more surplus food (over 11.6 million tonnes) ends up in other streams of usage (such as animal feed, recycling, recovery and disposal) than is consumed by humans (less than 0.093 million tonnes) (WRAP, 2023), as is recommended and promoted by the government (Papargyropoulou *et al.*, 2022). Reasons adduced for this challenge include insufficient capacity and capabilities, the power imbalance between donors and redistributors, operational inefficiencies and limited cooperation, among others (Midgley, 2020; Sawyerr *et al.*, 2024; Spring *et al.*, 2019; Thapa *et al.*, 2021). With the documented benefits of properly managed coopetition in overcoming similar challenges, this study is positioned to explore its potential in the food aid supply chain.

The extant literature provides limited insights. Thus, in designing this study, we sought to adopt an explorative, yet structured and theoretically sound approach. We apply abductive reasoning (Kovács and Spens, 2005) to define predetermined constructs from the surplus food redistribution literature using Gnyawali and Charleton's (2018) coopetitive framework as a guide (see Figure 2). However, we remained open to emergent insights, recognising that the context is humanitarian rather than commercial.

3.2 Data Collection

Due to the explorative nature of the research, we adopted a qualitative approach to data collection, which was done through semi-structured interviews (Yin, 2018). Our focus was to collect rich data that would provide us with an in-depth understanding of the nature and mechanisms of coopetition in the redistribution sector. Semi-structured interviews facilitated this (Schiffling *et al.*, 2020). While we used an interview guide, we adopted a flexible interviewing style to allow full expression by interviewees on the

relevant themes (Hindle *et al.*, 1995). This was very useful because it allowed interviewees to share some very strong and emotive opinions that were revealing.

We used purposive sampling (Etikan *et al.*, 2016) to target the two broad types of redistributors (that is, FaRSOs and FaWDs) with a specific focus on managers and senior managers who are positioned to provide the needed insights regarding their vertical and horizontal relationships in the food aid supply chain. We employed this approach for several reasons. Primarily, it is well-suited to exploratory research, particularly when investigating a nascent theoretical concept such as coopetition within the relatively underexplored context of the food aid supply chain (Patton, 2015). This approach facilitated the selection of organisations and participants with the necessary expertise and contextual insight to generate rich, meaningful data (Palinkas *et al.*, 2015). Purposive sampling also allowed us to incorporate variation across organisational types and geographic locations. This diversity contributed to developing integrative and consistent findings while partially mitigating the approach's inherent limitations in generalisability and potential researcher bias (Creswell and Poth, 2018). Importantly, it enabled a more nuanced examination of the conceptual framework's key dimensions (Coyne, 1997). By including actors with differing roles in the supply chain and varying levels of service reach, we were able to account, for instance, for differences in how competition is perceived and experienced.

A total of 35 interviews were conducted, consisting of 21 FaRSOs and 14 FaWDs from multiple regions in England. We stopped the interview process at this stage as we reached data saturation (Guest *et al.*, 2006) with recurrent points emerging from new interviews (Aroles *et al.*, 2024). A summary table of the supply chain role and geographical diversity is presented below in Table 1. Detailed information about participant positions, experience, IDs and organisational locations, along with our key interview questions, is presented in Tables A1 and A3, respectively, of the Appendix available as a supplementary online material. All interviews were conducted in English and were either in-person, typically at the interviewee's office or virtually on Zoom, depending on the participant's preference. Interviews lasted an average of 52 minutes and were transcribed for analysis.

Table I. Summary of organisational supply chain role and location (Source: Authors' own work)

Type of Organisation	Location	Number	Total
Food aid Retail & Service Organisation	London	3	21
	Midlands	4	
	South-east	8	
	South-west	6	
Food aid Wholesale Distributor	London	5	14
	South-east	4	
	South-west	2	
	National	3	
			35

3.3 Data Analysis

We abductively analysed the collected data using NVivo R1 and an iterative engagement with the literature. Using King *et al*.'s (2019) stages of thematic analysis approach, coding was carried out at descriptive, interpretative and thematic levels. However, as we adopted an abductive approach, the overarching themes and some interpretative codes were predetermined based on our guiding conceptual framework. The a priori themes were "simultaneity" with "cooperation" and "competition" as its second-order codes. "Mutuality" and "resource commitments" were then coded under "cooperation", while "rivalrousness" was coded under "competition". "Mechanisms" was pre-coded as a theme with "mutual pursuits" as a second-order interpretative code. We also pre-coded "outcomes" with "firm value creation", "joint value creation" and "value destruction" as its second-order interpretative codes and "navigating simultaneity" and "navigating value creation intent" as the last of the predetermined codes derived from theory. We finally pre-coded "redistributors" with "FaRSOs" and "FaWDs" as subcodes. This was to allow further analysis using matrix coding to derive insights that pertained to the two types of redistributors across the other themes and codes. It was after this that we engaged the data.

Since we were exploring coopetition in the food aid context, we were conservative about adopting all of Gnyawali and Charleton's (2018) constructs presumptively. Thus, we only pre-coded for constructs identifiable in the literature and allowed for the emergence of new constructs from the data or insights that align with the other constructs in Gnyawali and Charleton's (2018) framework using a pattern-matching

approach (Trochim and Cook, 1992). For instance, “resource scarcity” emerged strongly as an important representative subcode under the a priori descriptive code “rivalrousness” while representative subcodes such as “specialisation” and “fear of sharing” were aggregated under the a posteriori descriptive code “Resource relevance”, seeing emergent insights aligned with the conceptualisation of that construct. Similarly, “withheld resources”, “shared resources”, “superior offering to donors” and “service differentiation” all emerged as descriptive codes which were then coded under “resource leverage” – an interpretative code aligned with the interplay of rivalrousness and resource commitment as a coopetitive mechanism.

Having noted differing manifestations of some of the subcodes and constructs depending on the hierarchical level of relationships, we coded all quotes relating to inter-FaRSO interactions under “FaRSO-FaRSO”, inter-FaWD under “FaWD-FaWD” and both under the descriptive code “horizontal”. Findings on the relationships between FaRSOs and FaWDs were coded under “FaRSO-FaWD”, which then came under the descriptive code “vertical” and, along with “horizontal”, were coded under the interpretative code “Relational direction”. This facilitated exploring insights on the different coded mechanisms by using a matrix coding query (a function within NVivo) of both parent and children codes under the two interpretative codes. Figure 3 presents the representative data structure from our analysis. Table A2 in the online supplementary document provides illustrative quotes for the descriptive and interpretative codes.

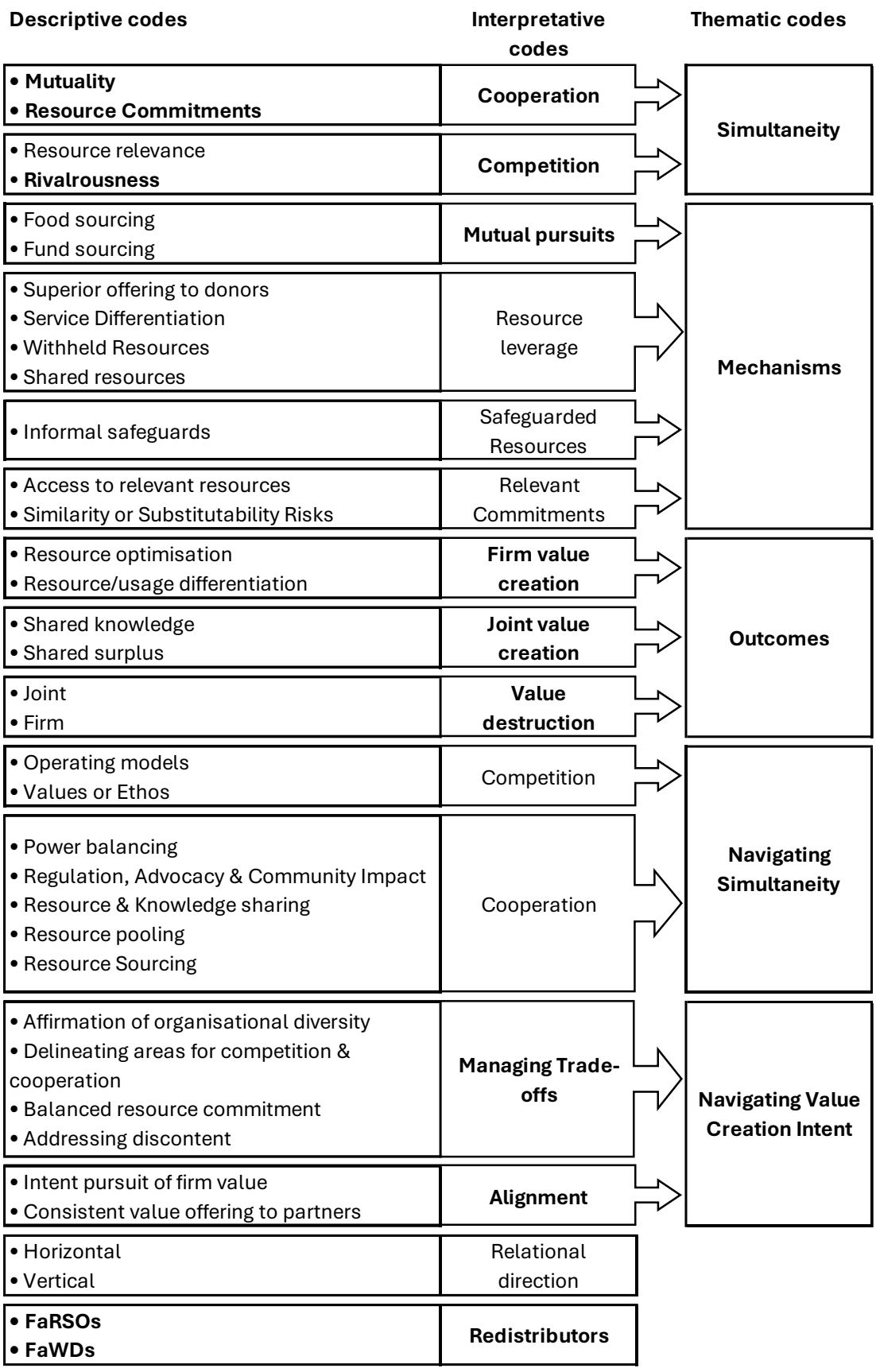


Figure 3. Representative Data coding structure[2] (Source: Authors own work)

[2] Codes in **bold** were coded a priori

4. Results & Analysis

4.1 Simultaneity in the food aid supply chain

> "We are in competition with FaWD3 for surplus; we're in competition with *anonymised group of FaWDs*, even though we actually provide them a lot of surplus. But effectively, we're all trying to do the same thing. Fortunately, there's enough food waste out there; there's room for all of us. But it's not very efficient for the food industry to work with."

This statement by the Head of Food Sourcing in FaWD1 captures the "spirit" of this study. There is the acknowledgement of competition along with cooperation and the admission of the resultant operational inefficiencies. We present, in greater depth, our findings, with supporting quotes from the data (also see Table A2 in supplementary online material), on the current state of coopetition in the food aid supply chain, exploring the nature and mechanisms of simultaneity, its navigation, and outcomes relative to value creation.

4.1.1 The extant nature of cooperation

There is reciprocal cooperative intent (i.e., mutuality) among all actors in the food aid supply chain, driven by the common goal of ensuring surplus edible and healthy food reaches disadvantaged groups, mutual communication and self-enforcing safeguards. Our findings indicate that FaRSOs refer consumers to other FaRSOs based on needs and proximity. Local food partnerships among redistributors facilitate knowledge sharing and joint problem-solving. Additionally, we found evidence for resource commitments as some FaRSOs share surplus food, either due to shortages in receiving organisations or because their operational model allows them to process donated food more effectively. We also identified this horizontal cooperation between FaWDs, where food is shared across a wider geographical area, adapting to seasonal surpluses. The Food Sourcing Manager of FaWD14 explained:

> "So, there's a sharing scheme going on, and they'll have food partners based down in…areas that we don't have access to. And so, one week they might have an overload of peppers, and we might have an overload of lettuces; well, 'hey, let's do a trade!' And it's mutually beneficial, and it means…that we're sharing food with different parts of the country… So, we're working with them on a weekly basis, sometimes daily depending on what the food offers are, and it's a really important relationship."

To facilitate such sharing, redistributors commit important resources such as their logistical infrastructure, labour, specialised knowledge and expertise, and donor relationships. The benefits here include increased volumes, varieties and quality of surplus food, which helps FaWDs and their dependent FaRSOs not only ensure supply consistency, but also access to good quality food they would otherwise not have access to, thereby reinforcing allegiance to the cooperation.

Resource sharing occurs not only between FaWDs in different locations within the same network but also among those competing in the same area, such as FaWD10 and FaWD11. In these instances, we observed informal safeguards developed through trust and reciprocal commitments as evidenced in information sharing and even occasional transfers of dependent FaRSOs between FaWDs. Although informal, these FaWDs coordinate to avoid straining relationships with shared donors due to uncoordinated collection planning.

We will not discuss the well-documented vertical cooperation between FaWDs and FaRSOs, which facilitates consumer access, as it has been extensively covered in existing literature (Baglioni *et al.*, 2017; Sawyerr *et al.*, 2024; Thapa *et al.*, 2021).

4.1.2 The extant nature of competition

As indicated in our framework, we expected rivalrousness within the food aid relationships, and this was confirmed by our findings, as it was observed horizontally, both among FaRSOs and FaWDs. In the commercial context, rivalrousness is driven by the need to maintain or improve market position (Gnyawali and Charleton, 2018); within the food aid sector, it may revolve around recognition, geographical presence and proximity to consumers (Kunchamboo *et al.*, 2023). For FaRSOs operating in similar areas, the desire to be the leading name in food redistribution heightens strife and obstructs cooperation, even within organised food partnerships. Among FaWDs, there is desperation to be the preferred redistributor for large donors and to gain regional recognition as the face of redistribution. As the Food Sourcing Manager of FaWD9 explains:

> "There are other competitors, like other groups like FaWD8, that are doing similar things, and they might do it differently with fewer costs attached to that end of it. So yes, we're competing in a market, I suppose, and we need to prove to suppliers that we can be the most efficient and the most professional kind of way to deal with their surplus."

While prior studies acknowledge competition for surplus food (Sundgren, 2022; Thapa *et al.*, 2021) and funding (Altay *et al.*, 2024), our findings reveal additional nuances. The interplay between resource scarcity and geographical proximity heightens rivalrousness. Some FaRSOs resist working with FaWDs, arguing that they create an extra layer between them and donors, introduce supply uncertainty, and sometimes charge for food that would otherwise be free. This, coupled with power imbalances, creates tensions. FaRSOs in the same area saw each other as competitors, even when operating under different models, since they typically relied on the same food and fund donors.

Our findings further reveal a dimension of rivalrousness we term "values conflict". Some interviewees held strong opinions about the values and operating models of other organisations. While some viewed a payment model as more dignified, others believed donated food should be free. There was also discontent with prepackaged food distributions, as they were seen as limiting consumer choice. Additionally, some objected to paid workers instead of volunteers, while others expected all redistributors to offer support services beyond food provision.

Although previous research (e.g., Midgley, 2020; Papargyropoulou *et al.*, 2022; Spring *et al.*, 2019) has highlighted the power dynamics between donors and redistributors, the power dynamics among redistributors is barely acknowledged. Our findings reveal a power imbalance between FaWDs and FaRSOs. Some FaRSOs feel that some FaWDs, particularly those that operate paid models, provide them with very little flexibility. They bemoaned supply uncertainty and limited choice. These differences lead to conflicting priorities, which, along with varying views on which consumers to support and the type and duration of support to provide, further intensify rivalrousness.

Our findings further present evidence for resource relevance, defined as the high relative value of a firm's resources to a competitor, primarily due to shared challenges and opportunities. Within the food aid context, niche overlap was obvious, particularly among FaWDs, and to a relatively lesser degree with FaRSOs due to differing operating models. Both tangible resources (e.g., logistical infrastructure) and intangible resources (e.g., donor relationships and local contextual knowledge) are deemed valuable both vertically and horizontally.

Similarly, specialisation, that is, where firms develop resources aligned with their niche, emerged as an especially key aspect of resource relevance vertically. For instance, despite some strong misgivings about the role of FaWDs, many FaRSOs actively compete for their support because FaWDs, whether operating freely or at discounted cost, alleviate logistical burdens by handling food collection and delivery. Similarly, digital brokerage platforms were widely valued by FaRSOs for streamlining food collection.

However, resource relevance also introduces tension. The immediate usability of shared resources heightens concerns over misappropriation. As the operations manager of FaRSO7 remarked,

> "I think that there's a little bit of competition amongst all of the groups *[referring to FaRSOs in their region]*, where there is the fear that something else is going to be taken away from them by another group".

Having identified the various dimensions of competition and cooperation, we next present findings on the coopetitive mechanisms shaping inter-firm dynamics.

4.2 Coopetition mechanisms within the food aid supply chain

4.2.1 Mutual pursuits

Mutual pursuits refers to the interplay of cooperative intent rooted in shared logics and competitive drive for firm superiority. This dynamic can foster innovation, enhance efficiency and yield joint benefits despite the risk of opportunism.

Our findings illustrate how mutual pursuits manifest in both vertical and horizontal relationships among food redistributors. The shared commitment to social impact underpins mutual communication and support under informal safeguards, despite ongoing competition for resources, divergent implementation approaches, power asymmetries, and contention for organisational prominence.

Facing similar challenges, redistributors have built trust and reciprocal commitment through collaborative practices. These include regular meetings, joint training initiatives, and information dissemination (e.g., through newsletters), which enable

mutual support in food and fund sourcing. The Manager of FaRSO18 explains an example,

> "So, we work with other community groups to experiment and collaborate for about 5 to 6 weeks, and this gives them the opportunity to, sort of, test the model and receive some training and insights – and then, if they're successful, they have the opportunity to access start-up funding".

This interplay exemplifies how mutual pursuits serve as a functional mechanism within the food aid supply chain, enabling actors to reconcile competitive tensions with collaborative goals.

4.2.2 Resource leverage

Confirming "resource relevance" within the data enabled us to explore resource leverage as a mechanism. Resource leverage arises from the interaction between resource commitments and rivalrousness, in that cooperating competitors gain access to each other's valuable resources while striving for individual advantage.

Our findings indicate that redistributors share various resources, including surplus food, information, labour, sourcing connections, and logistical infrastructure, to support joint initiatives. However, this is tempered by competitive behaviours, as organisations strive to distinguish themselves. For example, many seek to position themselves as donors' preferred redistributors by demonstrating impact, providing volunteering opportunities, showcasing cost-efficiency, and leveraging their reputation.

FaRSOs, in particular, engage in differentiation through how they deploy shared resources, often complementing these with added-value services such as community engagement, ease of access, and employment support to enhance their competitive positioning.

At the same time, the tension between cooperation and competition can lead to opportunistic hold-ups, with some actors withholding resources (such as knowledge, ideas, relationships, and even food). This hampers the collaborative aims of food partnerships and local authorities, further exacerbating already fragile relationships.

4.2.3 Safeguarded resources

When competitors cooperate, informal safeguards often serve as the most efficient and cost-effective means of protecting valuable, shared resources. The coopetition mechanism of safeguarded resources captures the interaction between mutuality and resource relevance, where shared norms help mitigate risks of misappropriation. Our findings highlight the presence of such safeguards, particularly goodwill trust and reciprocal commitment, protecting the relevant resources within coopetitive surplus food redistribution relationships.

For FaWDs, dependent FaRSOs are essential downstream partners, enabling the efficient delivery of surplus food to end beneficiaries. These relationships are, therefore, valuable resources. Notably, our findings reflect how goodwill trust and reciprocal commitment, for instance, undergird the cross-referral of FaRSOs even between competing FaWDs. As described by the Community Engagement Manager of FaWD10,

> "…whenever anyone new turns up in a certain borough, I make sure that we signpost them to that local network *[referring to FaWD11]*; but it should be the other way around as well. So, if they're aware of an organisation, they should say, 'look, you've got to come under this umbrella *[referring to FaWD10]*'".

This exemplifies how informal norms function as safeguards, sustaining cooperative practices even in contexts marked by competitive tensions.

4.2.4 Relevant commitments

Relevant commitments emerge from the interaction between resource relevance and resource commitments. When organisations commit high-value resources, the result is increased complementarity and enhanced access to quality resources, leading to better potential for joint value creation. The downside, however, is the potential for a reduced ability to differentiate individual offerings, heightening substitutability risk.

Regarding this mechanism, our findings demonstrate that redistributors willingly share relevant resources (such as surplus food and information) and commit specialised resources (including logistics infrastructure, capabilities and donor relationships) to advance collective objectives (e.g., improved volumes, quality and varieties of fresh produce). These joint efforts generate operational efficiencies and synergistic value, ensuring continued commitment.

Vertically, substitutability risk appears minimal, despite some FaRSOs expressing concern about the intermediary roles of FaWDs. In contrast, horizontal relationships reveal varied expressions of this risk. Among downstream actors (FaRSO-FaRSO), differences in ethos and operational models help mitigate the risk of similarity, even within high geographical proximity. However, with upstream actors (FaWD-FaWD), the risk appears more pronounced, though regionality and measured resource sharing offer potential buffers.

4.3 Outcomes

Our findings indicated all three types of coopetition outcomes.

4.3.1 Joint value creation

The most evident joint value created both horizontally and vertically was surplus food sharing. Despite differences in operational models and ethos, geographical competition, or disagreements over consumer financial access modes, participants agreed on its importance. Thus, while an organisation may not have received any donations from its usual sources, it can, in the interim, rely on other FaRSOs to meet users' needs. With limited control over their supply, it is worth restating the importance of improved quality, variety and quantity of surplus as a created joint value. Additionally, cooperation among competing FaWDs allows them to accept large donations they would otherwise be unable to store or distribute. This is crucial, as large surplus food donors prefer redistributors with sufficient capacity (Sawyerr and Bourlakis, 2024).

Knowledge sharing was another form of joint value, though some noted its diminishing impact. Personal relationships across organisations were seen as more effective for information exchange than via food partnerships, largely due to declining engagement in joint meetings – an issue observed across multiple locations. While food aid organisations do not necessarily compete for consumers, serving more people in need reinforces their relevance, operational model, and ethos. As a result, cross-referral among FaRSOs, that is, directing consumers to organisations that can better assist them, is a valuable outcome of horizontal coopetitive relationships. This sentiment was aptly expressed by the Manager of a FaRSO operating a social enterprise model:

> "So we know if somebody comes to us and they're what we will say 'on the cusp of food poverty' and they just need pointing in the right direction of how to look for those things in store – because the key thing for us is that they come in, they shop with dignity and choice – then our mentors on site would help them understand that. But if they genuinely were at a point where a food bank was the right option, then we would refer them. In the same way, the food banks will refer people to us. So maybe they've been to a food bank for the first time, but we know it's not a sustainable solution, and we shouldn't create that dependency, so the food bank will then refer them to us."

While FaRSOs may disagree on the approach (as noted in the Manager's statement), they acknowledge diverse needs and share relevant information to ensure consumers receive appropriate support.

4.3.2 Firm value creation

Our analysis of the collected data indicates that redistributors derive firm value by resource optimisation and resource/usage differentiation, leveraging internal capabilities. In this sense, a FaRSO that repurposes surplus food for hot meals or cooking classes can access a wider variety of food and use it more efficiently than one that only distributes unprocessed surplus food. For example, a consumer might not take individual vegetables like leeks or celery but is more likely to use them if included in a meal, recipe kit, or cooking class.

Different operational approaches enable redistributors to generate firm value. Some FaRSOs adopt a communal operations model, where consumers gather to socialise while collecting or purchasing surplus food. These organisations aim to address both food insecurity and social isolation by also offering support services for food poverty. As a result, they may secure more funding, particularly from local governments, by demonstrating broader social impact. On the other hand, some FaRSOs opt for packaged delivery, considering it a more dignified alternative to consumers waiting in long queues. This method allows them to collaborate with social workers to address specific needs differently from communal-style FaRSOs. For example, the Operations Manager of FaRSO7 provides this account:

> "We had a phone call last week from a social worker who had literally just visited a young mum with a 6-week-old baby who hadn't eaten anything for 4 days – and she went into her cupboards and there was nothing there – and the social worker was able to phone us up and get food straight in there immediately… So, we are really meeting a crisis need, and I think it's

really important for people who are struggling with food insecurity. And we are tackling the issues via the professional agencies…"

4.3.3 Value destruction

In the vertical relationships, our findings suggest that some FaRSOs experience significant firm value destruction in their relationships with FaWDs. While FaWDs typically collect surplus donations from distribution centres or donor warehouses, FaRSOs rely on local outlets. Several FaRSOs lament losing direct donor relationships, believing that FaWDs' operations reduce the surplus available to them. This supply uncertainty, combined with the marginal payments some FaWDs require, has created resentment among some FaRSOs, who feel they are losing access to resources they have worked hard to secure. Even in instances where the vertical relationships are not antagonistic, the informal safeguards that govern these relationships may cause relational inertia, leading to complacency, especially by the FaWDs, since the FaRSOs become highly dependent on them.

Horizontally, factors such as competition for local funding, pressures to adopt specific operational models, favouritism and suspicions about opportunistic holdups fuel apathy within organised redistributor groups, thereby waning their value.

4.4 Navigating simultaneity in the food aid supply chain

Gnyawali and Charleton (2018) identified *intensity* and *balance* as key dimensions for navigating simultaneity. However, we present our analysis here based on participant insights on where redistributors should compete, where they should cooperate, and why.

4.4.1 Competing within a coopetitive food aid relationship

Researchers (such as Papargyropoulou *et al.*, 2022; Sundgren, 2022; Thapa *et al.*, 2021) have highlighted the negative effects of competition in the food aid supply chain and called for its reduction. While we acknowledge these concerns, we argue that competition can still benefit redistributors. For example, the food sourcing manager of FaWD9 acknowledged that competition encourages greater professionalism and operational efficiency. Therefore, the issue may lie more in *how* and *why* redistributors compete, rather than whether they should compete at all. Our findings suggest that while redistributors have strong views on food redistribution methods, they also

recognise, even if inadvertently, the need for different approaches by their cross-referrals. We, therefore, propose that redistributors compete based on their operational models and ethos.

Redistributors vary in type, with each having a unique operating model that may fall under one or more categories. These differences include accessibility requirements (e.g., referrals, closed membership, open access), revenue models (e.g., paid membership, pay-as-you-feel, pay-in-kind, or free), funding profile (e.g., social enterprise, fully donation-funded), and intervention types (e.g., emergency food service, developmental models) (Spring *et al.*, 2019; Thapa *et al.*, 2021). Additionally, they may vary in service locations (local, regional, national), target demographics (narrow vs. broad), and food processing methods (e.g., cooked food, recipe kits, cooking classes, or no processing) (Sawyerr and Bourlakis, 2024). Each model addresses different needs. As the Chair of FaRSO9 explained:

> "FaWD7 is pushing cookery classes, but I don't think that would work for everybody because some people don't want to get into a group dynamic".

Thus, redistributors could embrace diversity rather than pursue uniformity. They can define a unique niche based on their values, expertise, capacity, and strategy for competitive advantage. If multiple redistributors in a similar location share the same operational model and ethos, they would benefit from merging into a single organisation to avoid duplication.

4.4.2 Cooperating within a coopetitive food aid relationship

The food aid supply chain faces several challenges, including operational inefficiencies, disjointedness, and resource deficits, that cooperation can help address (Sawyerr *et al.*, 2024; Thapa *et al.*, 2021). We explore opportunities towards this end.

Resource & Knowledge sharing. Surplus food redistribution relies on resource and information sharing, yet this remains an underutilised dimension which could be optimised with intentionality. For instance, while some regional FaWDs successfully collect surplus beyond their capacity and share it with other FaWDs, this could be expanded as redistributors sometimes still decline surplus due to distance and logistical constraints. Redistributors may prioritise accepting available surplus, recognising the economically incentivising alternatives that donors might overlook (Sawyerr *et al.*, 2024). Enhanced cooperation and information sharing could help

FaWDs map locations and contacts, improving coordination for collection and redistribution. The same approach can be applied locally among FaRSOs.

To encourage resource and knowledge sharing among local FaRSOs, adversarial attitudes stemming from differing operational models must be deliberately addressed, while emphasising the benefits of cooperation. As the Operations Manager of FaRSO7 noted, local redistributors should "celebrate what we all do in a more positive way and realise we are all the same and it is just about helping the community." This mindset can help formalise cross-referrals (Crick and Crick, 2021) based on consumer needs and maximise their impact. Similarly, since staff skills vary across organisations, organising more training sessions within redistributor groups could enhance professionalism and efficiency.

Resource pooling. Resource and knowledge sharing is closely linked to the consolidation of resources for synergistic value. Since many redistributors cannot afford many paid skilled workers, sharing a talent management pool (van den Broek *et al.*, 2018) could be beneficial. Similarly, as multiple FaRSOs often make supplementary purchases to provide balanced offerings to their consumers, joint purchasing could secure significant discounts from retailers and wholesalers, allowing them to maximise limited funds. Given the high logistics costs of redistribution (Sawyerr *et al.*, 2023), integrating logistics through a hub-and-spoke model would also be highly beneficial. This approach has been proven effective. The Community Engagement Manager of FaWD10 discussed its success during the COVID-19 lockdowns, explaining:

> "I mean, for us logistically it was brilliant…, all of those community organisations could come into the hub and then do the onward distribution. It meant the food was actually matched quite well to need… And so, it was very, very positive…".

Although local councils within the region coordinated this, redistributors can adopt this approach, as its effectiveness was attested across regions.

Resource Sourcing. Limited fundraising capacity and numerous fund applications impede access to needed funds. This can be addressed through joint applications, leveraging the expertise of more experienced applicants across organisations. This approach benefits both redistributors and funders by reducing administrative duplication, while organisations can also demonstrate greater combined impact.

Joint food sourcing for surplus and discounted purchases will also empower redistributors to engage more effectively with donors, helping offset the often lopsided power dynamics (Papargyropoulou *et al.*, 2022). This will allow them to negotiate the type, quantity, and quality of donated food, as well as collection/delivery lead times.

Corporate volunteers are an underutilised resource among redistributors. Many companies, including those in the food industry, offer employees volunteering days for charities of their choice. Redistributor groups could organise one-day workshops where industry experts provide training on specific tasks to enhance operations. There are also opportunities for joint labour sourcing, acquisition of logistical resources, consolidated redistribution and innovation.

Regulatory, Advocacy & Community Impact. Redistributor coalitions can have a greater impact on redistribution policies both locally and nationally. With their knowledge and influence, they are well-positioned to offer effective solutions to food poverty and insecurity, as they directly engage with those most affected. Furthermore, these redistributor groups could manage the onboarding of new charities to address the high turnover in FaRSOs, reduce duplication and integrate similar charities for better and sustained impact.

Power balancing. The final aspect of cooperation in surplus food redistribution is addressing the power dynamics between FaRSOs and FaWDs. While the integration of similar-styled FaRSOs and cooperation among them can help balance the power, FaWDs must also adjust their approach to be more cooperative. Though FaWDs have limited control over the types of donated surplus food they receive, they can better align supply with the specific needs of FaRSOs. Ongoing communication and a commitment to understanding the operational models, values, and target consumers of dependent FaRSOs can strengthen these vertical relationships.

5. Discussion

Coopetition in surplus food redistribution remains largely underexplored despite its classical representation of coopetitive dynamics. In this study, we have sought to examine coopetition empirically and explore how surplus food redistributors can better

manage their dual competitive and cooperative roles to optimise value creation while minimising value destruction.

5.1 How Redistributors Coopete Within the Food Aid Supply Chain

Addressing the first research question, this study reveals a nuanced understanding of how organisations in the food aid supply chain simultaneously cooperate and compete. These coopetitive dynamics are shaped by relational direction, that is, whether the relationships are vertical (FaWD–FaRSO) or horizontal (FaWD–FaWD and FaRSO–FaRSO).

Vertically, cooperation is strong and primarily built on shared social missions, with FaWDs and FaRSOs working together to ensure surplus food reaches marginalised consumers. Resource commitments are critical and substantial. FaWDs provide logistical and sourcing capabilities while FaRSOs provide vital community access. Informal safeguards, such as goodwill trust and reciprocal commitment, play a key role in maintaining these partnerships, though the resulting high interdependencies can lead to relational inertia and, thus, diminishing value. Despite underlying tensions, particularly around power asymmetries and limited supply flexibility, substitutability is low due to supply chain role differentiation, allowing coopetition to persist without significantly undermining joint or firm value creation.

In horizontal relationships, however, coopetitive dynamics are more complex and volatile. Among FaWDs, cooperation occurs through sharing surplus and information, and joint investments in labour and infrastructural resources for synergistic value creation. These partnerships are often underpinned by informal safeguards and mutual resource leverage. Yet, these same relationships can be marked by strong rivalrousness, driven by factors such as donor recognition, funding and geographical overlap. Similarly, FaRSOs cooperate through local food partnerships, cross-referrals, and shared training, but also compete fiercely for legitimacy, relationships, food and funding. Value conflicts, such as divergent views on payment models, consumer dignity, and volunteer use, further strain these horizontal alliances.

Using a pattern-matching approach, we compared our data to Gnyawali and Charleton's (2018) coopetition framework. All four mechanisms – mutual pursuits,

resource leverage, safeguarded resources, and relevant commitments – were present and relevant in the humanitarian context. They enable both joint and firm-level value creation, but also create tensions that may lead to value destruction. Importantly, our findings extend this framework by showing that relational direction influences coopetition mechanisms. In particular, factors such as supply chain role and regionality significantly influence how coopetition manifests within horizontal relationships. We reflect this refinement in the food aid coopetition framework presented in Figure 4.

The structure of the food aid supply chain positions FaWDs as the primary recipients of large-scale food donations, thereby dictating that FaWDs must necessarily be larger organisations with significantly higher logistical capabilities relative to FaRSOs. This establishes a consistent vertical dynamic in which better-resourced FaWDs supply smaller, community-based FaRSOs. The result is relatively stable vertical cooperation marked by complementarity and clear role differentiation.

However, horizontal coopetition is more complicated with differing dynamics at the wholesale and consumer-facing portions of the supply chain. Among FaWDs (that is, the wholesale level), service offerings to donors are largely indistinguishable, primarily involving surplus collection and redistribution. In their downstream relationships, service differentiation to FaRSOs is similarly limited, usually evident in their revenue model (i.e., whether FaRSOs receive food at a discount or for free). Consequently, regional proximity intensifies rivalrousness, particularly affecting mutual pursuits and resource leverage. Nevertheless, resource relevance remains consistently high, regardless of regionality.

On the other hand, FaRSO-FaRSO relationships exhibit significant differentiation based on factors such as revenue models, organisational structure, service accessibility, intervention type, and additional support services. While regionality still shapes rivalrousness, distinct value propositions allow for meaningful differentiation to donors, wholesale partners, and consumers. Here, resource relevance is lower than in wholesale relationships, and resource commitments are more varied, influenced by organisational ethos and operational models. These variations lead to different manifestations of the four coopetition mechanisms among consumer-facing actors.

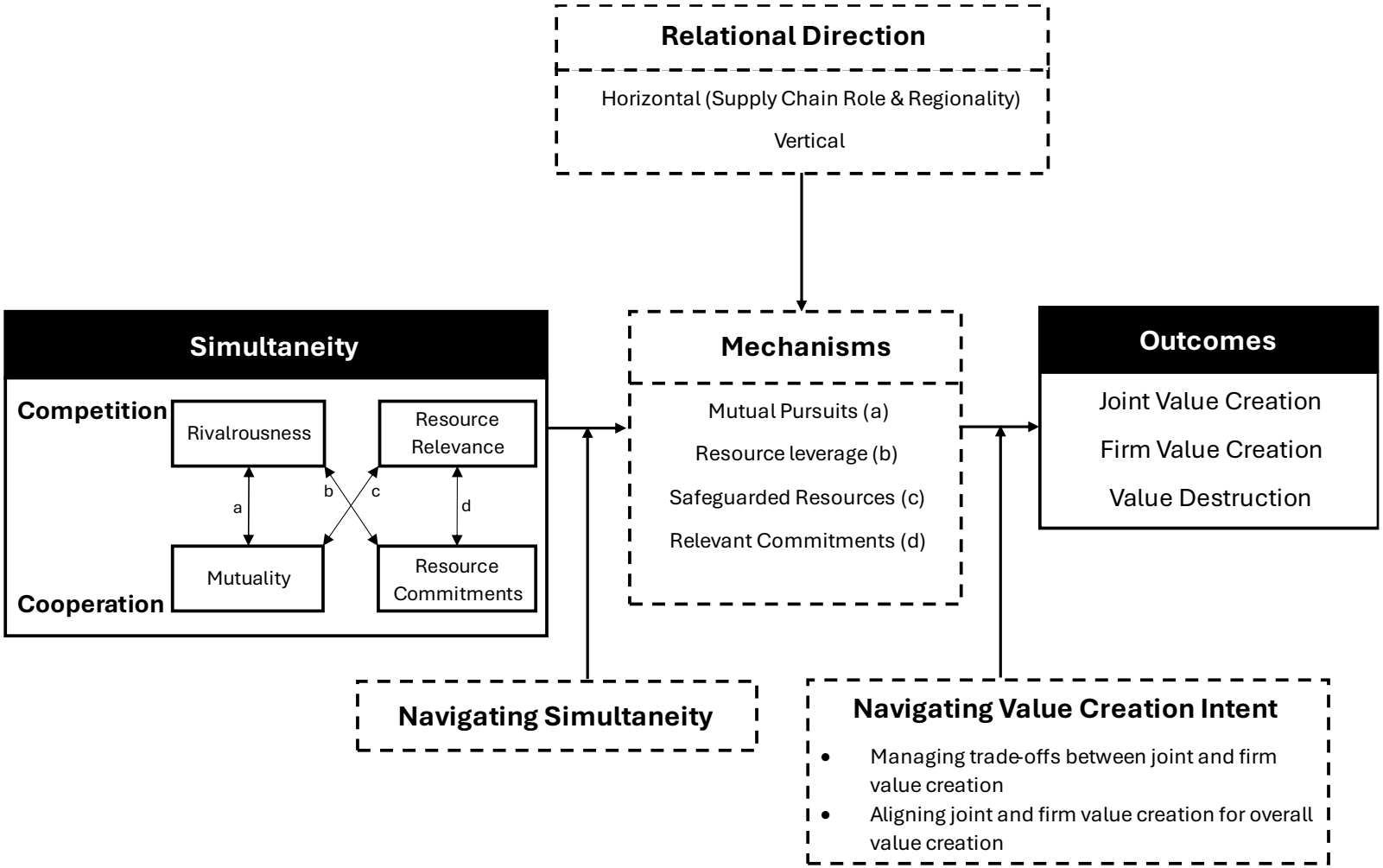


Figure 4. Theoretical Framework for Coopetition in the Food Aid Supply Chain (Adapted from Gnyawali and Charleton, 2018)

Considering these nuances, the next section discusses how coopetition can generate sustained value within the food aid supply chain to address the study's second research question.

5.2 How Redistributors Can Generate Sustained Firm & Joint Value Through Coopetition

Navigating simultaneity among redistributors can create value, but it requires intentional effort to sustain relationships. Both joint and firm value creation demand resource commitments. Given their limited resources, actors must carefully manage trade-offs and align both dimensions to avoid value destruction.

To navigate this dilemma, we recommend that, regardless of relational direction, redistributors focus joint value-creation efforts on the two most critical and relevant resources: surplus food and funding. Collaboratively developing the capabilities needed to secure sustainable funding and a sufficient supply of high-quality, diverse food will be most effective. Any identified resource or capability gaps can then be addressed collectively. A horizontal approach, particularly among wholesale redistributors, may be ideal initially, as organisations with similar resource capacities can more effectively engage both food and funding donors and operationalise necessary logistics. While less collective effort may be needed, additional resources could support regulatory, advocacy and community impact. These efforts could be coordinated regionally to engage multiple local governments and nationally for central government engagement.

For firm value creation, redistributors can learn from each other to optimise internal operations and support services. Vertically, FaWDs can develop their dependent FaRSOs by investing in their competence. This benefits FaWDs through more efficient downstream operations and better impact reporting to donors, while FaRSOs would gain a horizontal "competitive" advantage. Local redistributors can also gain valuable skills through collaborative learning, even as they compete in redistribution approaches. For example, a community café could learn fundraising skills from a local social retailer to secure funding from a donor that supports free communal redistribution.

To mitigate firm value destruction, redistributors may identify and actively pursue opportunities for firm value creation in coopetitive relationships. For joint value destruction, partners can address concerns like favouritism, distrust, and exploitation. Regular reviews and fair compensation can help ensure no organisation feels exploited for disproportionate resource commitment.

Lastly, redistributors may need to embrace diversity in operational models and values as a strength, not a weakness. This way, adversarial attitudes that stifle coopetitive relationships can be overcome.

6. Implications

6.1 Research

The increasing recognition of the importance of coopetitive relationships underscores the need for continued phenomenological and empirical inquiry to advance theory in this area. Responding to this need, our study explores coopetition within the humanitarian aid supply chain, specifically, the redistribution of surplus food to underserved communities.

By applying Gnyawali and Charleton's (2018) conceptual model, we provide empirical support for its theoretical framing in a non-commercial context. Our findings extend the model's applicability beyond business settings to humanitarian supply chains, which remain underexplored in coopetition literature. In particular, we contribute to the limited body of research on competition among surplus food redistributors, offering new evidence that resource relevance, in addition to rivalrousness, is a key dimension of competition in these coopetitive relationships.

Moreover, our study empirically identifies the presence and functioning of resource leverage, safeguarded resources, and relevant commitments, three coopetition mechanisms that are seldom addressed in non-commercial contexts. Significantly, we introduce the concept of relational direction to account for how coopetition mechanisms manifest differently in vertical (FaWD–FaRSO) and horizontal (FaWD–FaWD; FaRSO–FaRSO) relationships. Our findings demonstrate that supply chain role and regionality moderate these dynamics, particularly in horizontal relationships. Recognising the explanatory value of relational direction, we propose an adapted

theoretical framework for understanding coopetition in food aid supply chains, as illustrated in Figure 4, building upon Gnyawali and Charleton's (2018) model.

While our study relies on data from the United Kingdom, insights from studies such as Garrone *et al*. (2014b, 2014a), Wills (2017), Mourad (2016), Goodman-Smith *et al*. (2020) and Clare *et al*. (2023), suggest that surplus food redistribution systems in other developed economies such as Italy, Australia, Canada, France, United States and New Zealand, share similar supply chain structural characteristics. Thus, the proposed framework is likely generalisable across developed countries where both direct and indirect (i.e., through wholesale intermediaries) sourcing models are used by consumer-facing charitable organisations.

6.2 Practice & Policy

The growing issue of food insecurity and increased reliance on alternative, often charitable, food sources have made improving surplus food redistribution critical. The environmental benefit of reducing food waste and associated carbon emissions compounds the urgency. We have analysed data from redistribution sector practitioners to identify actionable pathways for managing redistributor coopetitive relationships. We clarify the paradoxical dynamics that have previously hindered effective collaboration, highlighting areas where redistributors could compete and others where cooperation could be more beneficial. We propose opportunities for resource sourcing and sharing, such as increased surplus food sharing, cross-referrals, joint procurement, collective fund applications, and training by corporate volunteers. Additionally, we suggest pooling resources through integrated logistics operations, both vertically and horizontally, to optimise performance. We offer suggestive guidance to managers on balancing firm value creation with joint value creation, while avoiding value destruction to ensure enduring coopetitive relationships. Finally, we highlight the hitherto unacknowledged power dynamics between large-scale redistributors and smaller, consumer-facing organisations, urging a more balanced, cooperative approach.

This study has policy implications. Coopetition among redistributors may not have been fully exploited due to limited understanding, but governments and corporations (including financial and surplus food donors) can actively encourage it. For instance,

local government funding could require joint applications from multiple competing redistributors. Corporate policies that do not favour specific operational models could require collection only by redistributor groups. Additionally, we recommend that central government policy on surplus food redistribution explicitly encourage diverse operational models and avoid promoting a one-size-fits-all approach.

7. Conclusions and Future Research

Despite incessant calls for greater cooperation in the food aid supply chain, the paradoxical nature of its coopetitive relationships has hindered progress. Our findings show that redistributors also desire more cooperation but acknowledge the associated complexities.

To address the first research question, we adapted Gnyawali and Charleton's (2018) coopetition framework to analyse the relationship dynamics among redistributors within the food aid supply chain. Our aim was not only to empirically demonstrate the simultaneous presence of cooperation and competition in both vertical and horizontal relationships but also to theoretically ground this duality. We, therefore, analysed the literature to establish the theoretical constructs identifiable within the surplus food redistribution literature and investigated those, along with those absent in the extant literature, within the collected data. Our findings affirm rivalrousness and resource relevance as dimensions of competition, and mutuality and resource commitment as dimensions of cooperation. These interact through the four coopetition mechanisms (mutual pursuits, resource leverage, safeguarded resources and relevant commitments) whose manifestations are moderated by relational direction in determining relationship outcomes. The outcomes may be joint and/or firm value creation, or value destruction, depending on how simultaneity and value creation intent are navigated.

In response to the second research question, we offer practical pathways for generating sustained joint and firm value within the food aid supply chain. Rather than avoiding competition, we propose that redistributors embrace differentiated competition based on ethos and operational models, which can drive innovation and efficiency. Simultaneously, deliberate efforts to strengthen both vertical and horizontal cooperation can reduce value-destroying factors such as apathy, distrust, and

relational inertia. Together, these can enable the effective management of coopetition, supporting the resilience and impact of surplus food redistribution systems.

The limitations of our study also present further opportunities. This study was conducted in England, where legislation on the redistribution of surplus food by commercial food actors needs further development (Beckmann *et al.*, 2021; Sawyerr *et al.*, 2024). Opportunities exist to expand current insights by exploring coopetition in countries like the USA, Canada, France, and Italy, which have more advanced legislative frameworks for redistribution (González Vaqué, 2017; Szulecka and Strøm-Andersen, 2022). Such research could shed light on the impact of legislation in fostering coopetition among redistributors. Additionally, our study focused primarily on redistributors, overlooking the influence of external actors, such as donors and governments. Future research could incorporate such perspectives for a more comprehensive understanding of the challenges and opportunities involved.

We focused on defining areas for competition and cooperation as a crucial first step in the redistribution context and did not examine their intensity or balance. However, future research could explore this. While our study revealed the significance of informal safeguards such as goodwill trust and reciprocal commitment within coopetitive redistribution relationships, future studies can explore governance and its diverse mechanisms in greater depth (Klimas *et al.*, 2023; Raza-Ullah, 2021; Xu *et al.*, 2025).

This study contributes to the growing research on how logistics and supply chain management can address food insecurity and surplus food redistribution. Specifically, we highlight the potential of coopetition in leveraging the hub-and-spoke logistics model to enhance redistributors' operations. However, there is room to explore alternative, cost-effective, and innovative logistics strategies for surplus food redistribution. For example, how might coopetitive relationships among redistributors facilitate a milk-run approach to food sourcing and distribution? If our propositions are realised, more high-quality, edible food will reach disadvantaged consumers. Given the capacity constraints downstream in the food aid supply chain (Papargyropoulou *et al.*, 2022; Sawyerr *et al.*, 2023, 2024), future research could examine how coopetition can enable innovative storage solutions.

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