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Collaboration for local food systems

The role of government in supporting and fostering conditions for successful local food system collaboration in Dublin, Ireland

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Abstract

It is becoming increasingly evident that conventional food systems driven by industrial agriculture for global supply chains are inherently unsustainable. Local food systems (LFS) have been identified as a promising and more sustainable alternative, in which food is produced, processed and retailed within a specific geographical boundary. Literature illustrates that LFSs are dependent on collaboration between relevant actors as a means of sharing knowledge, resources and collectively building resilient trust-based pathways outside of the conventional food system. Examples from literature also highlight how governmental support can enhance and improve LFSs. However, there is a lack of understanding of what makes collaborations successful in the context of LFS, and how the role of government influences such collaboration.

This study aimed to address this knowledge gap by conducting a case study analysis in the LFS of Dublin, Ireland. A novel theoretical framework was derived from literature to elucidate success conditions for collaboration in LFSs and how such conditions may be influenced by government. This framework argued that successful collaboration is indicated by the presence of collaborative processes, which are influenced by exogenous conditions and the role of government. This study tested this theoretical framework through a case study analysis in Dublin's LFS by first identifying relevant actors and how they collaborate. Interviews were then conducted and assessed using qualitative interpretative analysis techniques to understand the relationships between the central concepts. The results indicated that collaboration is unsuccessful in Dublin's LFS, and this is heavily influenced by governmental (in)action. Although actors are willing to collaborate, they feel unsupported in this niche sector and are thus incapable of collaborating effectively due to resource and capacity constraints. Findings show that the success conditions for collaboration are applicable in understanding LFS collaborative dynamics and how they are shaped by government. Further research is needed to test these relationships by evaluating each condition in-depth, over time or in varying LFS contexts.

Key words

Local food systems; Sustainable food systems; Collaboration; Governance; Government.

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Abbreviations

DFC Dublin Food Chain

EU European Union

LEO Local Enterprise Office

LFS Local food system

NGO Non-governmental organization

SDG Sustainable Development Goal

SFSC Short food supply chain

QIA Qualitative interpretative analysis

1. Introduction

It is becoming increasingly evident that current globalized and industrialized food systems are unsustainable. Dominant food supply chains depend on actors, commodities, processes and practices across a variety of geographical scales, many of which are on a global level. International trading of food has become so mainstreamed that around 80% of the global population live in net food import countries (Hamilton et al., 2020). Conventional food systems are characterized by specialized intensive agriculture for global supply chains, meaning that a limited number of countries and actors produce many global food staples (Puma et al., 2015). This allows for large-scale producers to control food supply and prices for large markets (Rotz & Fraser, 2015), thus making it more challenging for small-scale farmers to compete. Due to the fundamental co-dependence and inter-connectedness between regions in globalized supply chains, such systems are extremely vulnerable to disruptions and lack resilience.

Local food systems (LFS) have been identified as a promising and more sustainable alternative to conventional food systems. This is driven by the belief that the large scale of conventional food systems, across spatial, structural and economic levels, is the fundamental cause of its related negative impacts (Cleveland et al., 2015). Thus, shortening supply chains and building the food system around local produce has potential to fulfil the concept of sustainability across environmental, social and economic dimensions (Jarzebowski et al., 2020). However, literature illustrates that the success of LFSs is dependent on collaboration between relevant actors as a means of sharing knowledge, resources and collectively building resilient trust-based pathways outside of the conventional food system (Kang et al., 2022). Collaborative approaches within LFS include multi-actor processes and structures involving state and non-state actors collectively working towards common objectives (Andrée et al., 2019). However, within LFS research, the success conditions for collaboration and the role of government in stimulating collaboration is still misunderstood. By using the LFS of Dublin Ireland as a case study, this study aims to assess the success conditions and role of government in collaborative initiatives for LFSs.

1.1 Problem description: globalized food systems

Globalized food systems are inherently unsustainable due to their high dependence on intensive agriculture and long-distant transportation between co-dependent far-reaching countries. Political, economic, social and environmental disturbances can have far-reaching effects between regionally connected supply chains, which in turn effects their ability to ensure food security and sustainable food systems overall (Kent et al., 2022). Tendall et al., (2015, p. 19) define food system resilience as the “capacity over time of a food system and its units at multiple levels, to provide sufficient, appropriate and accessible food to all, in the face of various and even unforeseen disturbances". The lack of resilience of globalized food systems came heavily into focus during the Covid-19 pandemic in which international markets and supply chains were under threat (Duncan et al., 2020; Thilmany et al., 2021). Alongside such vulnerabilities to disruptions, the unsustainability of global supply chains is also evident when assessing implications across environmental, social and economic pillars of sustainability.

Recent studies show that the global food system, comprised of activities from food production to disposal, accounts for one-third of total annual greenhouse gas emissions (Crippa et al., 2021). Within these emissions, land use change for regionally specific monocrop agriculture alongside food production and distribution within lengthy transportation networks are the main contributors (Crippa et al., 2021). Global terrestrial biodiversity loss is also notably a direct consequence of the intensive food system, largely driven by land use change across all scales of agricultural production (IPBES, 2019; Rockström et al., 2020). Agricultural specialization and intensification within the globalized food system also pose negative social and economic implications for farmers. As farmers decrease crop varieties and become specialized in limited commodities to cater for global supply chains, they may be more vulnerable to ecological and economic risks (Smithers & Johnson, 2004). This trend has also led to few producers intensively producing commodities for large markets, giving potential power to a small number of actors in controlling food prices (Rotz & Fraser, 2015) which can lead to price volatility and surges (Hamilton et al., 2020). As noted by Kang et al. (2022), there remains a sizeable gap in our understanding of how the governance of food systems is shaped by power disparities, outlining the need for more inclusive policy

development to ensure food access and security in the face of continuing near and long term crises.

There is growing recognition of the need to ensure and protect food security within increasingly unstable globalized markets. The growing dependency on international trade within the food system, enhanced by continued and expected global population growth, maintains a reliance on fossil energy and thus sustains related emissions (Pradhan et al., 2014; Willett et al., 2019). In the aftermath of the pandemic and with ongoing sustainability concerns, The European Commission have recognized the "the importance of a robust and resilient food system" in the European Green Deal (European Commission, 2020, p. 4). As climate change is set to bring further instability and threaten resource availability (Rockström et al., 2009; Willett et al., 2019), a restructuring of how we produce, transport and consume food in an environmentally, socially and economically sustainable manner is of paramount importance.

1.2 Local food systems as alternative and more sustainable solutions

Local food systems (LFS) have been identified as a promising alternative in addressing many of the issues stemming from globalized and industrial food systems. According to the European Commission, LFS may be understood as a system in which food is produced, processed and retailed within a specific geographical boundary (Kneafsey et al., 2013). LFS include the intertwined relationships between actors, institutions, resources and logistics related to the production, distribution and consumption of food within a defined area (Zazo-Moratalla et al., 2019). As summarized by Granzow and Beckie (2019, p. 216), LFS initiatives are defined largely by "efforts to decrease food miles, increase local capacity and economic benefits, and improve food security." It is widely acknowledged in sustainable food systems literature that such local systems can improve various aspects related to environmental, social and economic sustainability (eg. Kretschmer & Kahl, 2021; Enthoven & van den Broeck, 2021; Duncan et al., 2020; Thilmany et al., 2021; Jarzebowski et al., 2020; Mount et al., 2013; Cleveland et al., 2015). In the Intergovernmental Panel on Climate Change Special Report on Climate Change and Land (Mbow et al., 2019), it is noted that the consumption of locally produced food combined with efficient food processing and transportation facilities can result in a reduction of food losses and greenhouse gas emissions while improving food security and food system resilience. However, despite the active promotion of LFS in Europe,

only few of them exist within a niche market which has not substantially grown in recent years (Enthoven & van den Broeck, 2021).

However, many individual LFS initiatives face numerous difficulties when trying to establish and compete in the current food system (Jarzebowski et al., 2020; Guthman, 2008; Marsden & Smith, 2005). Many authors express concern about the potential of individual LFS initiatives to achieve large-scale impact or change the mainstream food system, due to factors including their economic viability and ability to conduct efficient marketing strategies when working on a smaller scale (Mount et al., 2013; King et al., 2010). Individual entities also often have a lack of expertise in branding or IT, and face difficulties in securing physical infrastructure and finances (Mittal et al., 2017). Small LFS businesses may struggle to build their reputation due to limited visibility and financial capabilities alongside intense competition from other food sector actors (Carbone, 2017). Thilmany et al. (2021) also note that there are many organizational limitations within the food supply chain due to regulatory and policy environment constrains, which can be particularly challenging for small-scale LFS initiatives to overcome. Many of the challenges faced within niche LFSs stems from the fact that individual small-scale geographically bound actors are competing with the low-cost, intensive, large-scale food industry (Jarzebowski et al., 2020).

1.3 Collaboration for local food systems

A lack of collaboration underpins many of the challenges faced by LFS initiatives in trying to develop viable business models against the current food system (Moore et al., 2022), and has been identified as a key barrier against the success and scaling of LFS (Jarzebowski et al., 2020). Therefore LFSs depend on high levels of collaboration between relevant LFS actor types across levels and scales. Collaboration describes the processes and structures of sustained cooperation between actors within management and decision-making regimes (Clark, 2019). As a form of co-governance, collaborations involve multiple actors working together as a means of strengthening the problem-solving capacity in meeting shared goals (Andrée et al., 2019; Clark, 2019). It occurs as the middle ground between top-down hierarchical decision-making structures and the self-organization of market processes or social movements (Andrée et al., 2019).

As noted by Kang et al. (2022, p. 8), “descriptions of collaboration are a hallmark of the literature on local food systems”, in which collaborative arrangements are fundamental to both LFS functioning and upscaling. This is due to the fact that individual actors with varying skills and roles collaborating and sharing knowledge and resources can result in co-creating alternatives to the mainstream supply chain. This is prevalent in many collaborative initiatives, such as farmers markets, cooperatives, food hubs, urban farms or community gardens (Reckinger, 2018). As LFSs are niche within the conventional food system (Pitt & Jones, 2016; Sacchi et al., 2018), collaborating groups of actors have a higher ability to deal with overarching complexities within the system than individual actors working alone (Simons, 2017). This is because the roles and knowledge of actors is becoming increasingly specialized and distributed, calling for actors to work together to tackle complex problems across sectors (Ansell & Gash, 2008). However, collaboration may not always come naturally for LFS actors, due to factors including desires for autonomy or feelings of mistrust between competing actors in a market context (Planko et al., 2019).

1.3.1 Success conditions for collaboration

Due to complexity but necessity of collaboration between multiple LFS actors, it is important to pay attention to the conditions which shape and influence successful collaborations. Successful collaborations can be understood as approaches in which two or more organizations interact and develop joint actions to achieve shared public purpose goals (Ansell & Gash, 2008; Kang et al., 2022). In order for collaborations to be successful, critical conditions under which stakeholders act collaboratively must be in place. Ansell and Gash (2008) argue that successful collaborations are indicated by cyclical and iterative processes of *face-to-face dialogue, trust building, commitment to process, shared understanding* and *intermediate outcomes*. These processes are influenced by exogenous conditions of collaboration, which are *starting conditions, institutional design* and *facilitative leadership.* Kang et al. (2022) tested this model of indicators and conditions for successful collaboration against LFS literature, in which they argue that is valuable framework to elucidate the main themes in LFS collaborations. They however call for further research into the applicability of this model to specific LFS case studies and to understand role of government in LFS collaborations, namely how government actions can affect collaborative conditions.

1.3.2 The role of governments in local food system collaborations

Although governmental actors do not necessarily have to lead collaborative processes (Emerson et al., 2012; Kang et al., 2022), they play an important role within collaboration for LFS development and functioning. Public agencies hold a unique authority in decision-making procedures (Ansell & Gash, 2008), and can have a transformative influence on LFS development through policy and guidance (Kang et al., 2022). Fundamentally, they have the ability to develop enabling LFS strategies and policies (Jarzebowski et al., 2020) that can allow small-scale farmers to compete more effectively in the conventional system (van Gameren et al., 2015). When enabling policies give actors sufficient supports, they have a higher capacity and more time resources to collaborate with one another. Consequently, the lack of sustained and commitment support by government of LFS collaborations is identified as a key barrier to achieving transformative food system change (Laforge et al., 2017). With the support of governments, actors thrive in building LFSs and collectively developing trust-based networks outside of the conventional food system (Kang et al., 2022; van Gameren et al., 2015).

1.4 Knowledge gap

Although there is a growing body of research describing local systems of food production, distribution and consumption and the related benefits, van den Heiligenberg et al. (2017) note that there is still much to understand about what makes local food initiatives successful and sustainable. Kang et al. (2022) also argue that few studies have examined the social components within LFS, specifically in testing what factors make collaborative arrangements successful between LFS actors. Research efforts have been made to understand collaboration in LFS, but scholars remain largely unable to apply theory to inform and improve collaborative practices (Prentice et al., 2019). Prentice et al. (2019) thus calls for further application of collaboration theory to specific contexts to understand collaboration dynamics in practice. In addition to this knowledge gap around the success conditions for collaborations in LFS, Kang et al. (2022) call for further research and special attention into understanding the government's role in LFSs and LFS collaborations. They identify a lack of understanding of the role of governments in fostering conditions for collaboration between LFS actors, and how government actions affect such conditions. Research shows that LFS thrive under conditions that support collaborative processes (Kang et al., 2022; van Gameren et al., 2015), but further studies are needed to understand how governments can guide, design and support such

processes. Therefore an overall knowledge gap exists around the success conditions for collaboration within LFS and how the role of government influences such collaborations.

1.5 Research objectives and questions

This research aims to address these knowledge gaps and contribute to literature on LFS collaboration in the following ways. Firstly, this study aims to contribute to LFS collaboration case study research by assessing the actors and their roles and forms of collaboration occurring between them within the LFS of Dublin, Ireland. Secondly, this research will evaluate the presence or absence of success conditions for collaboration within Dublin's LFS, as identified by Ansell and Gash (2008). Finally, this research will assess the role of governmental bodies in promoting and supporting Dublin's LFS, specifically focusing on how their actions affect collaborative processes. These steps will provide insights into the extent to which indicators of collaborative processes are present in this case, and how exogenous conditions for collaboration, including governmental actions, affect such process. Such assessment will also elucidate the role of collaboration and governmental bodies within the LFS of Dublin more broadly.

Overall, this research aims to provide insights into the conditions and governmental actions that affect successful collaboration within Dublin's LFS. This objective will be achieved through answering the following main research questions and sub questions:

To what extent do actors successfully collaborate within the local food system of Dublin Ireland, and how does the role of government influence such collaboration?

1. Who are the local food system actors in Dublin and how do they collaborate?
2. To what extent are success conditions for collaboration present in Dublin's local food system?
3. How has the role of government influenced collaboration within the local food system of Dublin?

1.6 Dublin, Ireland

To meet the objective of this study and contribute to research around collaboration and governmental influence on LFSs, a case study analysis was conducted in Dublin, Ireland. As previously noted, there is growing recognition for the need for LFS development as a means of creating more sustainable food systems. Dublin, the capital city and county of Ireland, is a

good example of this trend as there is growing evidence of LFS development in recent years, as illustrated by the varying number of relevant actors and initiatives present, including numerous virtual and traditional farmers markets, an urban farm and community gardens, a local food cooperative, multiple farm shops, and varying retailers and restaurants selling local food (Dublin City Council, 2022a). Local and regional governments in Dublin have also developed and led several collaborative initiatives to develop Dublin's LFS. One notable example is the 'Dublin Food Chain', which is a collective initiated by the four municipalities of Dublin and supported by the Irish food board Bord Bia. This government-led initiative aims to bring Dublin's LFS actors together to collaborate, share-knowledge and collectively expand the sector (Dublin Food Chain, n.d.; O'Mahony, n.d.).

However, it is difficult to understand if collaboration is successful in Dublin's LFS and whether efforts by government are having any real impact. Although desk research indicates that there are initiatives in place, a lack of in-depth analysis of this LFS makes it unclear whether collaboration is successful and what are the influential factors. It is also unclear whether governmentally led collaborative initiatives are successful, and how the national agri-food context affects such initiatives. This Irish case is quintessential of a European Union (EU) context in which agriculture is a major industry driving the economy, but increased specialization for export-driven markets is threatened by instability in global supply chains. This has resulted in the aforementioned related resilience challenges within the Irish food system (Conefrey et al., 2018; Hegarty, 2022; Walsh, 2022), and thus the need to stimulate and support LFSs as a means of addressing such issues. This research aims to contribute to this stimulation of LFSs in Ireland and other similar EU contexts by elucidating how governments can enhance and support these collaborative food systems.

1.7 Research framework

To meet the objective of this study and answer the research questions, the research framework is outlined in Figure 1.

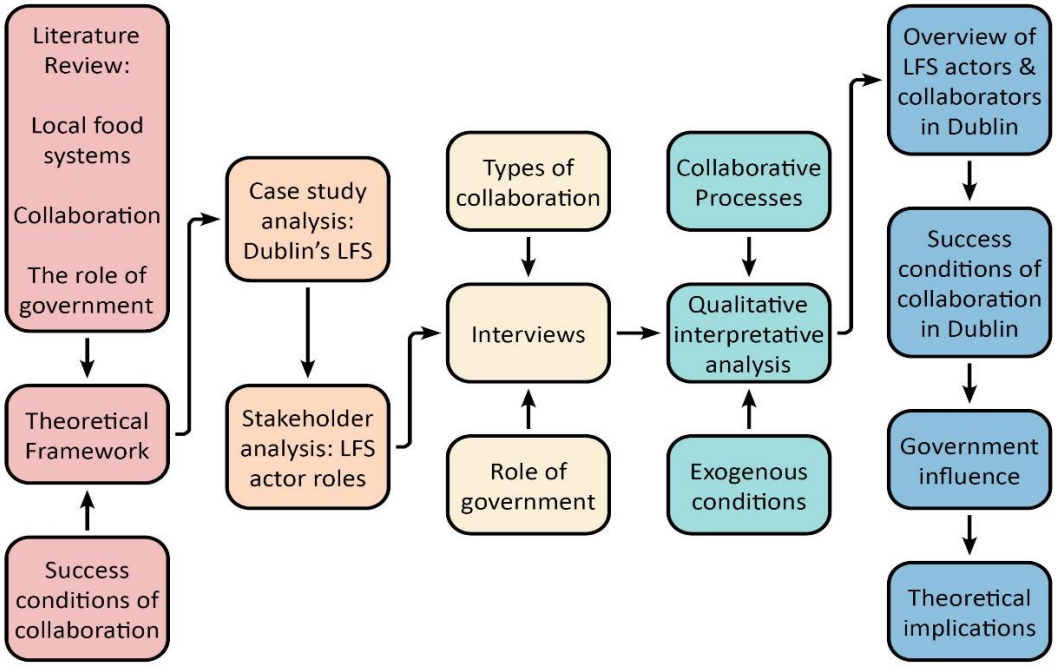

Figure 1 Research framework

2. Theory

To answer the research questions and meet the research objective, a systemic literature review was first conducted to provide a theoretical foundation. Firstly, literature on LFS was analysed, with particular focus on delineating the elements of LFSs, acknowledging related challenges and identifying LFS actor roles. Then, literature on collaboration as a key element of LFS was explored, outlining why collaboration is important, what forms it can take and how it can be difficult to foster. Finally, literature on success conditions for collaboration was explored, elucidating how the role of the government may affect collaborative conditions. Finally, a novel theoretical framework is presented to elucidate the dependent and independent variables implemented in this study.

2.1 Local food systems

As previously discussed, LFS have been identified as alternative and more sustainable solutions which address many of the challenges faced within conventional globalized food systems (Cleveland et al., 2015; Jarzebowski et al., 2020; Kneafsey et al., 2013). Due to a variety in interpretations of 'local' scales, in both academic and political spheres, there is no universal definition of LFS (Enthoven & van den Broeck, 2021). However, the following definition, derived from the work of Kneafsey et al. (2013) and Zazo-Moratalla et al. (2019), encompasses the key elements as prevalent in LFS literature:

> A local food system is one in which foods are produced, processed and retailed within a defined geographical area, and involve actors, institutions, resources, and logistics platforms, alongside intertwined relationships, to produce, distribute, and consume food within that area.

Through creating an alternative to the conventional globalized food system, LFSs broadly aim to "root food production and marketing in a particular place in a way that is economically viable, ecologically sound, and socially just" (Diekmann et al., 2020, p. 1). Kang et al. (2022) discuss how there is ongoing debate in literature about what forms a successful outcome for LFS, namely incremental change versus radical change in the conventional food system. However, it is widely acknowledged in sustainable food systems literature that when organized effectively, such local systems can improve various aspects related to environmental, social and economic sustainability (eg. Kretschmer & Kahl, 2021; Enthoven &

van den Broeck, 2021; Duncan et al., 2020; Thilmany et al., 2021; Jarzebowski et al., 2020; Mount et al., 2013; Cleveland et al., 2015).

As argued by Belletti et al. (2020), LFS can contribute to several of the targets outlined in the United Nations Sustainable Development Goals (SDGs). This is primarily SDG12 (responsible consumption and production), but also SDG 1 (no poverty), SDG2 (zero hunger) and SDG11 (sustainable cities and communities) and SDG13 (climate action). LFSs also have the potential to contribute to enhancing food security, which stems from the fact that the intermediaries between relevant actors are lower and their physical proximity is higher. Such systems are therefore dynamic and allow for quick innovative responses to external shocks (Thilmany et al., 2021). The EU's Farm2Fork strategy recognizes this and aims to "enhance resilience of regional and local food systems" through the support and creation of shorter supply chains (European Commission, 2020, p. 14).

2.1.1 Short food supply chains as key elements of local food systems

Short food supply chains (SFSCs) are the main form of distribution channel and selling arrangement used in LFS. Although these concepts are different, it is important to note and include SFSCs in this literature review of LFS as both share the central overlapping objective of reducing intermediaries and physical distance between producer and consumer (Bayir et al., 2022). However, it is essential to distinguish between the concepts of LFS and SFSCs as they are often wrongly used interchangeably in literature. As noted by Enthoven and van den Broeck (2021), SFSCs describe the selling arrangement of a reduced number of intermediaries between producer and consumer. As previously noted, LFSs encompass the system of food production within a defined area, and are therefore made up of numerous SFSC and other distribution channels plus the actors, institutions and policy mechanisms that influence the food system within that area. In their analysis of LFS in the EU, Kneafsey et al. (2013) note that 'traditional' and 'neo-traditional' SFSCs are key elements of LFSs. 'Traditional' SFSCs are rural, farm-based, family-run means of selling produce directly to consumers. Emerging 'neo-traditional' SFSC structures are however more complex and consist of collaborative networks of stakeholders using new models and social innovation to bring local produce to primarily urban residents (Kneafsey et al., 2013). Both traditional and neo-traditional SFSCs contribute to the resilience and sustainability of LFS in many ways.

Firstly, SFSCs have the potential to respond to several issues felt by food producers and consumers (Hebrard et al., 2022). SFSCs can improve farm incomes and consequently contribute to local economic development (Jarzebowski et al., 2020). Additionally, by shortening the distance between production and consumption, environmental impacts of packaging, energy and transport can be reduced (Corvo et al., 2021). Through knowledge collected while researching 100 best practice SFSC initiatives across Europe, Jarzebowski et al. (2020) formulated a concrete list of the positive impact of such initiatives across the three dimensions of sustainability, which is shown in Figure 2. This table highlights the diverse benefits which LFS have the potential to generate when organized effectively.

Areas	Criteria
Economic Sustainability	Profitability Generating local employment Reduced economic uncertainties Training and coaching initiatives Synergies with other sectors Markets/events/initiative for multiple producers locally Preservation and valorization of small farms
Environmental Sustainability	GHG emissions Energy use and carbon footprint Ecological soundness of production methods Food miles Food waste
Social Sustainability	Connection between producers and consumers Trust, sense of community Community pride and animation Recognition of producers Consumer empowerment Well-being

Figure 2 Positive elements of economic, environmental and social sustainability generated through SFSCs (Jarzebowski et al., 2020)

2.1.2 The limitation and potential of local food systems

Although LFS have the potential to stimulate many of the positive effects listed by Jarzebowski et al. (2020), it is important to address that simply decreasing the spatial scale of food systems does not directly correlate with environmental, social and economic improvements (Cleveland et al., 2015). Several scholars have argued against the assumption that shorter food miles, defined as the distance food travels between production and retail (Cleveland et al., 2015), automatically results in a lowering of related greenhouse gas emissions (Enthoven & van den Broeck, 2021; Coley et al., 2009; Saunders & Barber, 2008). One reason for this is that studies have shown that the extensive greenhouse gas emissions in food systems can be not only from transportation, but also from food production and processing (Enthoven & van

den Broeck, 2021). Many elements of the food system contribute to environmental degradation, so shorter food chains must also address fundamental issues around industrial agriculture and related emissions and energy use beyond shortening food miles (Mariola, 2008). Ultimately, using food miles indicators to assess the sustainability of food systems is an important step but does not adequately address many of the complex and deeply embedded issues within conventional food systems (Born & Purcell, 2006; Enthoven & van den Broeck, 2021). Social and economic issues within contemporary food systems, such as community-level economic development, social disconnection, nutrition deficiencies, labour inequalities also need direct attention in the development of LFS in order to meet sustainability goals (Cleveland et al., 2015).

However, it is also important to note that when executed effectively across all pillars of sustainability, LFS have the potential to develop into regenerative food systems (Zazo-Moratalla et al., 2019). Dahlberg (1993) defines a regenerative food system as "a system that regenerates the relationship between natural and social dimensions, one which is based on a food production, distribution, and consumption, and is aware of its environmental effects". Regenerative food systems foster "agro-bio-socio-economic diversity" in which humanity is integral to an integrated cycle of regeneration (Duncan et al., 2020, p. 4). The work of Zazo-Moratalla et al. (2019) and Duncan et al. (2020) elucidates the complexity of regenerative food systems, in which many dynamic and cross-cutting elements are at play. Such studies demonstrate that assessing LFS through a regenerative lens goes beyond the scope of this research, but it is important to recognize the contribution LFS can make towards building a regenerative food system.

2.1.3 Actors in local food systems

In order for LFSs to meet their transformative potential, the relevant actors must be identified and engaged (Herens et al., 2022). Kang et al. (2022) identify six main categories of actors and their roles within LFS as derived from an extensive literature review. This list was adapted and updated to remove some actor types that are deemed irrelevant for the context of this study, as Kang et al. (2022, p. 5) state that "not every actor is identified as a key member in all designs". Some actor roles were also added to the list derived by Kang et al. (2022) due to the following findings from literature. Sacchi et al. (2018) note how within LFS, the marketing of local produce is a prominent issue and prevents the functioning of such systems in several

studies. They also note how studies have shown there is a need for local public initiatives to help small-scale producers access new markets. Additionally, there is a need to include actors involved with transportation and distribution within LFS, as this is an important factor which can determine the performance and accessibility of such systems (Paciarotti & Torregiani, 2021). Therefore 'marketing' and 'transportation and distribution' actors have been added to the retail category. The final actor categorization implemented for this study is outlined in Table 1. As elucidated in the following sub chapter, collaboration between these actor roles has been deemed as an essential component of LFSs.

Table 1 Main actors in the local food system (updated from Kang et al., 2022)

Category of actor	Actor
Producer	Farmer
	Farmer federation
	Producer cooperative
	Processing facilities
Retailer	Major retailers
	Consumer cooperatives and solidarity groups
	Farmer markets (on and offline)
	Speciality stores
	Marketing
	Transportation and distribution
Consumer	Organizational
	Individual
Government	Food policy councils / advisory services
	Socio-cultural institutions
	Public authorities
Non-profit	Non-governmental associations
Private organizations	Financing bodies

2.2 Collaboration for local food systems

There is growing recognition of the importance of actor collaboration as a key asset for alternative food networks, including LFSs, to foster food system transitions (Moore et al., 2022). Restrepo et al. (2014) argue that collaboration is at the heart of socio-ecological system transitions overall, as the scale of changes needed are beyond the capacity of individuals and thus require the collective action of multiple actors. As noted by Simons (2017), fragmentation and isolation within a (food) system prohibits stakeholders from addressing and resolving overarching problems, elucidating the need for increased collaboration

between actors. As noted in the introduction, collaboration describes the processes and structures of sustained cooperation between multiple actors working together as a means of strengthening the problem-solving capacity to meet shared goals (Andrée et al., 2019; Clark, 2019). Collaborative approaches can be understood as "those in which two or more organizations collaborate by interacting and developing joint actions to achieve public purposes" (Kang et al., 2022, p. 2).

The European Commission have recognized the importance of collaboration in food system governance, and aim to prevent future EU food crises through "a collaborative approach between all public and private parties that play a role in the food supply chain" (European Commission, n.d.) LFS arguably 'thrive' under conditions of collaborative processes, in which actors work together to build resilient and efficient systems (Kang et al., 2022). Chrysanthopoulou et al. (2022) note that collaboration between LFS actors helps to overcome challenges they face in trying to survive in the conventional food system. Collaborative structures are diverse and context-specific, in which the extent of citizen, state and private actor instigation and involvement can vary considerably (Emerson et al., 2012). Therefore, it is important to first identify the forms of collaboration most prevalent in LFSs.

2.2.1 Types of local food system collaborations

LFSs depend on horizontal collaboration between actors, which can be understood as mutually beneficial relationships between two entities serving a similar purpose or service (Mittal et al., 2017). The European Commission have explicitly argued for increased horizontal collaboration and coordination at political and administrative levels of food supply chains to improve resilience against external factors, such as the pandemic and Ukrainian war (European Commission, n.d.). Nakandala et al. (2020) note how horizontal collaboration in LFSs often takes the form of independent actors sharing of resources and inventories as a means of moving beyond competition to support other actors with a shared vision. Horizontal collaborative activities can also be driven by motives of small-scale actors to increase their competitive advantage in the wider food market (Mittal et al., 2017). Varying motives for and forms of collaboration influence the extent to which actors share resources or interact with one another. This is depicted in Mittal et al.'s (2017) distinction between three levels of horizontal collaboration that may occur between LFS actors: *operational, strategic* and *co-evolution.*

Firstly, *operational* relationships are a relatively low-risk and require minimal commitment and resource or knowledge sharing between actors. Operational ventures are usually to optimize business activities, such as through collective pricing or sharing of logistical costs, meaning that actors can maintain autonomy and easily leave the collaborative arrangement. *Strategic* collaborations require actors to share key resources and/or knowledge as a means of jointly planning operations, objectives and strategies. Such arrangements, such as creating shared IT platforms for retailing produce, would require actors to share sensitive information to potentially competing actors as a means of mutual benefit. This usually poses low to intermediate risk for actors due to the usually low investment required. Finally, *co-evolution* collaborations are driven by deep shared vision for food system reform and require complex knowledge, resource and information exchange between participants. This usually takes the form of co-creating a new entity and thus requires a high level of trust and cooperation between the actors, who become an interdependent group. Such collaborations often require high investment and therefore have a high risk for participants. Overall, Mittal et al.'s (2017) conceptual framework outlining the levels of LFS horizontal collaboration is a useful tool to assess the motives behind, resources required and risk involved for participating actors.

2.2.1 Benefits of collaboration for local food system actors

LFS literature elucidates the benefits that can be generated through various types of LFS actor collaborations. Jarzebowski et al. (2020, p. 7) note the many potential benefits for actors engaging in collaborative activities within LFS more broadly; "higher margins/lower overheads, improved product range, resource sharing, local food chain infrastructure, increased negotiating power, and mutual support through collaboration". However, it is important to elucidate the benefits of collaboration for specific actor roles, as highlighted in the following examples from literature.

LFS producers and retailers benefit from collaborating through what Jarzebowski et al., (2020) describe as 'process innovations' in relation to logistics and distribution, which include aggregating larger volumes of supply and logistic backhauling during transportation (Clancy & Ruhf, 2010). Such collaborative innovations can generate economic benefits such as sharing the costs of various areas within the chain, such as transport, marketing and labour (Carbone, 2017), in which actors achieve economies of scale (Lankauskienė et al., 2022).

Retailers benefit from working with collaborative producer groups, as they have more variety of produce to sell, providing more stability and reliability throughout the year (Carbone, 2017). This scale achieved through collaboration also provides an opportunity for producers to build a positive reputation at a larger scale in the market, which is difficult to achieve by individual actors (Carbone, 2017). Farmers and food producers also benefit from collaboration when they pool their products together and thus have more product variety plus a better ability to meet consumer demands (Carbone, 2017), which overcomes the common barrier of limited product variety that often prevents consumers buying directly from farmers (González-Azcárate et al., 2021).

Overall, Kang et al. (2022) note that little research has focused on why consumers collaborate in LFS, but highlight that interest in social solidarity and environmental impact have been identified as driving factors. Consumers have shown to benefit from the 'personal touch' and connections built when being a part of LFSs (Carbone, 2017), while supporting rural development and local economies (González-Azcárate et al., 2021). Collaboration between farmers and consumers also brings opportunities to share valuable insights, for example as farmers provide information on their produce while consumers provide their feedback (Chrysanthopoulou et al., 2022). Although literature elucidates the benefits of collaboration for LFS actors, several barriers limit actor willingness to collaborate.

2.2.3 Barriers to local food system collaboration

Fostering synergizing collaborations between LFS actors can be challenging. As noted by Simons (2017), collaborative action between opposing or competing actors within the food system does not occur naturally and only happens under favourable conditions in which actors place collective long-term objectives over short-term goals. This highlights that, depending on the objectives of actors, collaboration in a LFS market context may be more complicated. This is reiterated in many case studies on LFS, outlined in the following examples from literature.

Bloom and Hinrichs (2011) assessment of LFS in Pennsylvania concludes that collaborative relationships between actors in transitional food distribution networks can be difficult to develop and maintain, namely due to actors feeling a lack of control over the system combined with a lack of confidence in other actors. A perception of competition and distrust between local business communities was identifies as a barrier to creating LFS,

although it was acknowledged that coordinating efforts and distribution networks would make achieving stakeholders' goals more feasible (Mount et al., 2013).

Marques et al. (2020) note that studies have shown that this fear of coopetition (a strategy which entails competitors working collaboratively for mutual benefit) is a central barrier that prevents collaboration between actors in supply chains. They argue that this stems from suspicions being prevalent when collaboration is suggested within a competitive market. When examining collective system building for sustainable development more generally, Planko et al. (2019) note this fundamental dilemma for business actors as being asked to collaborate closely with their competitors, which goes against the mainstream understanding of competition within business dynamics. Sharing information and resources with competitors while collectively trying to build products or services that will stand out in market is challenging for business actors, as they would be depending on rival actors to ensure their own success (Planko et al., 2019). Competing actors within the LFS face this dilemma when collaborating with their competitors, as it challenges ingrained structures of autonomy and separation between actors in business systems.

Farmers and producers may be reluctant to collaborate with consumers directly due to the time required, plus the need for appropriate facilities and competencies to do so, which may require investment that is often underestimated (Carbone, 2017). Additionally, there is a higher level of risk under collaborative ventures due to the potentially extensive diversity of stakeholders and associated values and perspectives at play (Kang et al., 2022). This has been recognized as a barrier to LFS development, specifically as banks or institutions may be reluctant to invest in collaborative initiatives with such risk (Jarzebowski et al., 2020). Overall, the variety of barriers discussed underscore the necessity of identifying the conditions needed to foster successful collaboration between LFS actors.

2.3 Conditions for collaboration in local food systems

As noted in the introduction, successful collaborations can be understood as approaches in which two or more organizations interact and develop joint actions to achieve shared public purpose goals (Ansell & Gash, 2008; Kang et al., 2022). Ansell & Gash (2008) argue that successful collaborations are indicated by the presence of specific interrelated conditions, which Kang et al. (2022) argue relate to the main themes in LFS collaboration literature. This theory states that successful collaborations are indicated by cyclical and iterative processes

of *face-to-face dialogue, trust building, commitment to process, shared understanding* and *intermediate outcomes*. These processes are influenced by exogenous conditions of collaboration, which are *starting conditions, institutional design* and *facilitative leadership.* Importantly, the role of government has a direct influence on some of the exogenous conditions which thus shape the processes and success of collaboration. The components of each condition, how they relate, and which are specifically influenced by government will be examined in more detail in the following chapters. However, it is first important to highlight why governments play an important role in LFSs, and therefore how they influence LFS collaboration.

2.3.1 The role of government in local food system collaboration

Ansell and Gash (2008) argue that within collaborative initiatives, governmental agencies play a distinctive leadership role. As noted in the introduction, however, an overall knowledge gap has been identified around the role of government as leaders in stimulating collaborative processes in LFSs (Kang et al., 2022). However, some LFS studies show how the role of government influences collaborative activities, as elucidated in the following examples from literature.

Van Gameren et al. (2015) found that in Belgium, LFS actors supported by governments and non-profits thrive in linking producers with consumers and have often developed resilient trust-based pathways outside of conventional food systems with this support. Jarzebowski et al., (2020) identify 'enabling regulatory frameworks and government policies' and 'cross-learning between stakeholders' as success factors for the development of SFSCs. In their study on interactions between grassroot initiatives and governments in LFS in the USA and Canada, Laforge et al. (2017, p. 677) note how occasions for LFS actors to collaborate effectively with governmental bodies are deemed as "important opportunities to affect change" within the system. This is achieved when governments providing 'genuine opportunities' for LFS stakeholders to give their input on policies, regulations and practices related to the system, and thus build the system together (Laforge et al., 2017). Through collaboration with LFS, governments support community based local economies (Laforge et al., 2017; Cleveland et al., 2015) which addresses issues of economic vulnerabilities of food producers susceptible to price fluctuations in globalized food chains (von Braun & Tadesse, 2012).

However, government participation in or support of LFS collaboration is not a guarantee. The extent to which governments participate in collaboration and implement consequential changes may be limited due to their overall agenda in the agro-food system, often dictated by interests of larger more influential market elites and corporations (Laforge et al., 2017). In the case of Ireland, Sage and Kenny (2017) highlight how Irish agri-food policy is export-driven at large, fuelled by targets of intensive agriculture and production to cater for global markets. This overarching national agenda may make it challenging for lower level local and regional governments to facilitate LFS collaboration. Additionally, local authorities may not have the correct skillset to provide support to collaborative LFS ventures (Jarzebowski et al., 2020). Laforge et al. (2017) also highlight how governmental collaboration with LFS must be committed and sustained, as some cases show how disingenuous forms of collaborative efforts from governments lead to modest reforms rather than the transformative changes needed to support LFSs within the conventional system. Opportunities for meaningful collaboration have been seen to be undermined by governments acting for the interest of dominant industries and actors. In their study on a LFS non-governmental organization (NGO) in Toronto Canada, Campbell and MacRae (2013) noted how although the NGO participated in policy design discussions, this was undercut by a lack of progress on supports for LFS actors, in which they conclude that governmental actors needed to improve on effective collaboration.

Overall, examples from literature show that governments can influence collaborative initiatives in LFSs. Firstly, governments can create favourable policies which support LFSs, and can collaborate with relevant actors to integrate their perspectives to develop the system. Such actions which reflect state and non-state actors building LFSs together have shown to contribute to sustained and resilient LFSs. Conversely, governmental (in)actions such as unsupportive policies, lack of collaborative capacity or ingenuine collaboration efforts with relevant actors, can prevent the development of LFS and related collaborations. The means in which the role of government affect specific collaborative conditions will be explored in the following overview of processes and conditions for successful collaboration.

2.3.2 Indicators of successful collaboration

As argued by Ansell and Gash (2008), successful collaborations are indicated by the presence of five processes as *face-to-face dialogue, trust building, commitment to process, shared*

understanding and *intermediate outcomes*. In their assessment of LFS literature, Kang et al. (2022) find that these five indicators also represent conditions of success in LFS initiatives. It is understood that the collaborative process is cyclical and iterative, in which there is a virtuous cycle between each condition in a non-linear fashion. Feedbacks from various stages of collaboration can positively or negatively shape further collaborative potential (Ansell & Gash, 2008). Each indicator will now be elaborated in more detail in relation to LFS literature.

The benefits of ***face-to-face dialogue*** in the development of LFS initiatives is prevalent in literature, according to the in-depth review conducted by Kang et al (2022). Collaboration and communication between relevant actors across roles and scales have been identified as a main strategic tool for LFS development (Paciarotti & Torregiani, 2021). In comparison to a conventional food system, LFS are built around communication as a central and necessary factor that should be facilitated openly and regularly between relevant actors (Chrysanthopoulou et al., 2022). Some authors arguing that the ability of stakeholders to engage in conversation is essential for success (Hedberg & Zimmerer, 2020; Mason & Knowd, 2010). This is also elucidated by Ansell and Gash (2008, p. 558), who place this condition first as "all collaborative governance builds on face-to-face dialogue between stakeholders". It is also argued that face-to-face dialogue is valuable when pursuing complementary goals among LFS stakeholders, such as promoting food literacy as "the knowledge, skills, and practices that enable citizens to participate more effectively in the construction of a sustainable and equitable food system" (Powell & Wittman, 2018, p. 195). Ultimately, face-to-face dialogue is the foundation in which all other processes are built and is essential for successful collaboration (Ansell & Gash, 2008).

Trust building is also frequently noted as a critical factor for collaboration. In their study the level of social innovation within SFSCs across Europe, Corvo et al. (2021, p.185) discovered a key finding that "shared initiatives that structurally involve collaboration and trust among the actors are not a habit yet". In Planko et al.'s (2019) study on coopetition, a strategy which entails competitors working collaboratively for mutual benefit, note that trust is a key enabler. The presence of trust enhances collaborative processes by stimulating cooperative behaviour and knowledge exchange while reducing tensions and improves positive group functionality (Planko et al., 2019). Trust is arguably a component of social capital as its presence between supply chain stakeholders can facilitate exchanges and

therefore reduce transaction costs (Carbone, 2017). Building trust between collaborating stakeholders is often challenging as it can be negatively affected through deliberation and iterative processes (Beckie et al., 2013). Stakeholders must feel connected to and embedded within relational set-ups with other relevant actors in order to build trust (Carbone, 2017). Prutzer et al. (2021) argue that trust can be promoted in collaborative settings when three factors are present: access (actors' accessibility to the collaborative process), standing (opportunities for everyone to share perspectives) and influence (respectful consideration of other perspectives).

Commitment to the process of LFS development can be fostered through face-to-face dialogue and trust building, but requires continuous participation from stakeholders and engaged facilitation from a leading organization (Barlett, 2017; Knickel et al., 2018). Prutzer et al. (2021, p. 5) define commitment within collaborative processes as "participants' efforts in terms of motivation, personnel (used time), and financial resources". Having effective social and political infrastructure to stimulate commitment is notably identified as crucial (Smith et al., 2016). Another means of establishing commitment is to encourage financial dedication in the form of investments or membership fees within the shared network. Such actions have been useful in deciphering between opportunistic actors with little motivation and higher motivated actors seeking to contribute (Planko et al., 2019).

A ***shared understanding*** between stakeholders is something which takes time under collaborative processes, and should not be underestimated as a straightforward condition to achieve in multi-actor dynamics (Beckie et al., 2013; Knickel et al., 2018). Planko et al. (2019) define 'common vision and goals' as a key enabler for collaboration as they provide a foundation for actors to understand their mutual objectives and needs, which contributes to strategy development that creates shared value. For shared understanding to be created, reflective communication and reflexivity between and within actors is necessary. These practices allow for actors to explicitly identify their needs and wants, while being open to respecting and accepting those of others (Prutzer et al., 2021). Ultimately, a shared understanding is central to collaboration as it allows actors to understand what they can collectively achieve while working together (Ansell & Gash, 2008).

Lastly, ***intermediate outcomes*** in the form of small, early wins help to leverage progress towards common goals (Cleveland et al., 2014). Intermediate outcomes also reflect

the progress of a LFS transition, in which they may indicate the potential success or failure of an initiative (Knickel et al., 2018; Witheridge & Morris, 2016). Kang et al. (2022) note that intermediate outcomes are the results of collaborative activities and depend on the goals of actors involved, which may include improvements to accountability and actors working together to achieve ongoing learning processes.

Overall, these five indicators of successful collaboration are elucidated in LFS literature and depict the processes which must be in place between actors in order to achieve collaborative success. However, collaborative theory elucidates how exogenous conditions have a direct effect on such processes, which are the conditions of *starting conditions, institutional design* and *facilitative leadership*. The ways in which these exogenous factors can be influenced by the role of government will now be illustrated.

2.3.1 Exogenous conditions of collaboration

The first exogenous condition is the ***starting conditions***, which include factors that encourage or discourage cooperation between stakeholders at the outset of the specific collaborative process at hand (Ansell & Gash, 2008). In LFS literature, three primary factors have been identified at this stage as *resource/capacity constraints, incentives to participate* and *mistrust/trust among actors* (Kang et al., 2022). Studies show that potential actors are often prevented from participating in collaborative LFSs due to their lack of capacities, such as the "skills, experience, and the competencies required"(Stockwell et al., 2013, p. 135) and/or resources such as secured finance to invest in the initiative (Jarzebowski et al., 2020; Saul et al., 2014). As participation in collaborative practices is largely voluntary, it is important to understand the incentives to participate that stakeholders have and the factors that shape those incentives (Ansell & Gash, 2008). For stakeholders to collaborate, their goals should be more likely to achieve through collaborative activities, as incentives to participate are low when goals can be reached independently, unilaterally or through alternative venues with faster processes (Ansell & Gash, 2008). As previously discussed, the incentives to collaborate within and between LFS stakeholders are vast and depend on the objectives of each. However, Ansell and Gash (2008) note that in general stakeholders' incentives to participate are dependent on whether the collaborative processes, and the related time and energy required, will yield meaningful results.

Additionally, *mistrust/trust among actors* is marked as a starting condition as many studies have shown that antagonistic behaviours stemming from (un)cooperative histories prevent the establishment of thriving LFS (Kang et al., 2022). Case study research on a food hub by (Cleveland et al., 2014) highlighted that the trust formulated between founders and farmers at the outset of the project contributed to the successful scaling up of the food hub. Conversely, Bui et al. (2019) noted that the mistrust of small-scale food producers and processors to larger retailers was a primary barrier to them working together effectively, and that this stemmed from previous negative experiences which broke producers' trust. Therefore, it is important that a sense of trust between stakeholders is determined from the outset of collaboration, as this directly effects the (in)effectiveness of the cycles of collaborative processes to follow.

The ***institutional design*** condition is described by Ansell and Gash (2008, p. 555) are the "basic protocols and ground rules for collaboration". It includes government policy and mandates as well as specific governance structures and rules for decision-making (Kang et al., 2022). In designing an effective collaborative process, such dimensions must be clear with transparency around the rules for deliberation, consensus, inclusion and representation (Kang et al., 2022). Van Gameren et al. (2015) note that institutional design for LFS requires adequate attention as these systems take various forms and must be designed to facilitate effective transitions on specific local and regional levels at hand. Ansell and Gash (2008) argue that access to collaborative processes in itself may be the most fundamental design issue as often it is unclear as to who should be included in this governance model and how do they get involved. Therefore having a comprehensive representation of relevant stakeholders, from various sectors, levels and roles within the system, is vital for legitimate and transparent institutional design (Kang et al., 2022). In their exploration of institutional design for LFS, Kang et al (2022) distinguish three key factors.

Firstly*, structure of supply chains* underlines how supply chain configurations chains determine how they are governed, mainly as stakeholders hold different positions of centrality and power depending on the formation of the chain. This affects collaborate processes as it identifies which supply chain actors may be included in the collaborative process, in which dominant supply chain actors may have more influence (Kang et al., 2022). Secondly, *governmental policies or actions to support local foodshed* is a key institutional

design factor influenced by the role of government. State bodies can support LFS actors and encourage collaborative activities by developing policies to promote and enhance the system (Mulligan et al., 2018). Favourable policies which support LFSs and actors contribute to the development of this system, and may encourage more actors to get involved and collaborate if incentives are there. If policies are unfavourable, actors may struggle to survive within the conventional system and therefore may be limited in their capacity or motivation to collaborate (Mulligan et al., 2018). Lastly, governments also play a role in ensuring *sources of transparency and legitimacy* in collaborative processes, which include being transparent in processes and legit in principals of collaboration. As governments can play a role in instigating collaborative processes, they play an important role in being transparent and legit, as argued by Laforge et al. (2017). Overall, the institutional design of collaborative LFS warrants attention because it can take many forms that influence local level actor behaviour and thus the potential for successful collaborative transitions (van Gameren et al., 2015).

The role of government in stimulating collaboration can also be assessed through the third condition of ***facilitative leadership,*** which is noted as an essential element for bringing stakeholders together and steering them through collaborative processes. Facilitative leadership is crucial for facilitating dialogue and co-creation by setting and maintaining ground rules for collaboration between actors, which build trust and allows mutual gains to be explored (Ansell & Gash, 2008). Ansell and Gash (2008) note that in situations where incentives to participate are weak, combined with resource and power asymmetries and/or prior opposition or mistrust, leadership becomes increasingly important. Beckie et al. (2013) acknowledges this point in their research into collaboration in municipal food system planning, in which they argue that power imbalances stemming from larger municipal bodies dominating discussions with their smaller counterparts could be addressed and managed with effective facilitative leadership roles. Kang et al. (2022) note that although leadership is underrepresented in LFS research, studies show that collaborative processes should and can be effectively promoted by both government and private actors They argue further research is needed to understand how leadership specifically shapes the trajectory of LFS development. This study aims to contribute to this knowledge gap by assessing the role of both state and non-state actors as facilitative leaders of collaboration in the LFS of Dublin. It will also examine the ways in which governmental bodies have acted as facilitative leaders in

this case through uncovering if and how governments have promoted collaborative processes within this case.

Overall, the three identified exogenous conditions of collaboration underline the variety of factors which may affect the success of collaborative processes between LFS actors. As discussed, the role of government can influence these conditions through the creation of a favourable institutional design for LFSs and through acting as facilitative leaders to stimulate collaborative processes. It can therefore be argued that in order for LFS collaborations to be successful, the government play a key role in creating favourable conditions.

2.4 Theoretical framework

As elucidated in literature, LFSs depends on collaboration between actors. Successful collaboration in LFSs is dependent on the five indicators of collaborative processes, which are therefore the dependant variable for this study. Such processes are influenced by certain exogenous conditions for collaboration, many of which are influenced by the government. Therefore the independent variables can be depicted as the presence of favourable exogenous collaborative conditions influenced by the role of government. Based on this foundation, the theoretical framework for this study is illustrated in Figure 3.

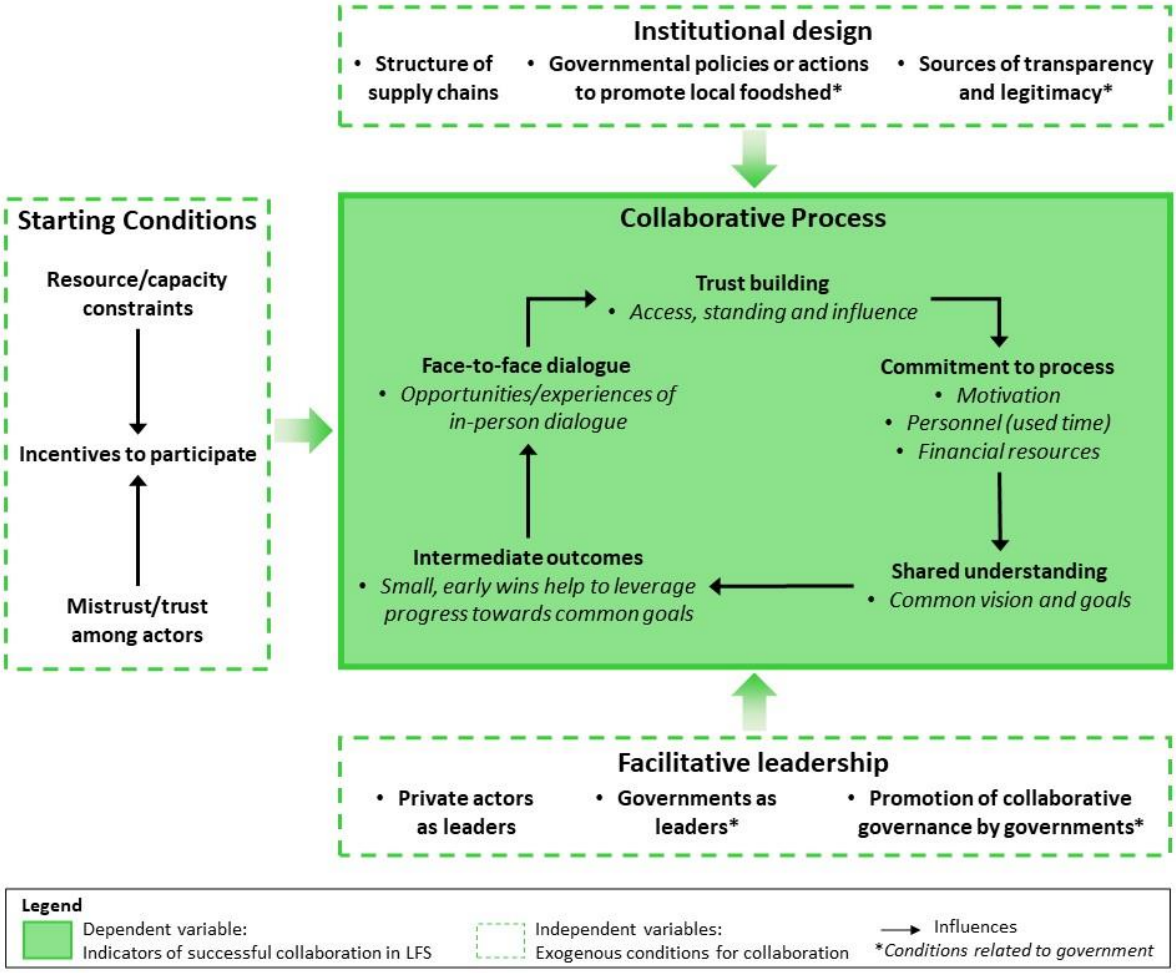

Figure 3 Theoretical framework

3. Methodology

The objective of this research was achieved through empirical research on the LFS in Dublin, Ireland. Firstly, secondary research in the form of a systemic literature review was conducted to provide a theoretical overview on actor roles, forms of collaboration and collaborative conditions within LFS more broadly. Following this theoretical foundation, a stakeholder analysis was conducted in the Dublin region to formulate an overview of the relevant actors and how they are collaborating within this LFS case. Primary research was conducted through interviews with representatives from varying LFS actor categories in Dublin to gather insight into collaborative initiatives occurring, which allowed for identification of the presence or absence of collaborative success conditions. These interviews also allowed for experiences and opinions to be gathered on how governments support LFS and enhance collaborative processes between LFS actors. The interview data collected was assessed using qualitative interpretative analysis coding techniques, allowing for conclusions to be drawn on how the presence of collaborative conditions combined with governmental influence play a role in LFSs.

3.1 Research methods

3.1.1 Case study analysis

A case study analysis was conducted to answer the main research question of '*to what extent do actors successfully collaborate within the local food system of Dublin Ireland, and how does the role of government influence such collaboration?'* A case study analysis is a research strategy aiming to gain full insight into one or multiple processes confined to a particular space and time (Verschuren & Doorewaard, 2010). The examination of certain concepts or processes within a specific context is conducted with the aim to draw general conclusions about such variables more broadly. This method is suitable for exploratory research purposes as a means of understanding a subject that little is known about (Verschuren & Doorewaard, 2010). Given the identified knowledge gap around the means in which the role of government influences collaborative conditions in LFSs, an exploratory approach examining this topic in the case of Dublin is appropriate.

As argued by Prentice et al. (2019), the application of collaborative theory to a specific context is an appropriate means of informing and enhancing collaboration practices. This is achieved through identifying which conditions are enablers or barriers to collaboration within

specific cases, allowing for recommendations to be drawn around the key leverage points to enhance collaborative arrangements. Therefore, a case study analysis was an appropriate method in light of the objectives and main question of this research. The justification for Dublin, Ireland as a case study is elucidated in the research material subchapter.

3.1.2 Stakeholder analysis

To answer sub-question one (*who are the local food system actors in Dublin and how do they collaborate?*), a stakeholder analysis methodology was conducted. This was an appropriate approach to identify the relevant LFS actors in this case, plus what are their roles and how are they collaborating. According to (Schmeer, 1999), p. 3), stakeholder analysis is "a process of systematically gathering and analysing qualitative information to determine whose interests should be taken into account when developing and/or implementing a policy or program." As argued by Bryson (2004), stakeholder analyses are a useful tool to assess societal, environmental and economic issues in which no one actor is responsible but a variety of actors are needed to mobilize to change the system. In this case, a stakeholder analysis elucidated which actors play a role in Dublin's LFS.

The stakeholder analysis was primarily conducted through desk research in the form of web searches for relevant online platforms, reports or information on the actors in Dublin's LFS. Snowball sampling was also applied during interviews to build on the stakeholder analysis, in which interviewees were asked to suggest other relevant actors for the study. This informative procedure allowed for a deeper understanding of the system at play based on the unique social knowledge of participants (Noy, 2008). Overall, stakeholders were selected to represent the six LFS actor types outlined by Kang et al. (2022), which are *producer, retailer, consumer, government, non-profit* and *private organizations.* This analysis provided an overview of relevant actors and potential interviewees to be included in this study.

3.1.3 Interviews

Interviews were the main form of data collection to answer sub-question two (*to what extent are success conditions for collaboration present in Dublin's local food system?*) and three (*how has the role of government affected collaboration within the local food system of Dublin*?). Following findings from the stakeholder analysis, interviews were conducted with 13 stakeholders representing five of the LFS actor categories identified by Kang et al. (2022) as *producer, retailer, consumer, government* and *non-profit.* The sixth actor category of *private*

organization was not included due to actor unavailability. Interviewees were selected based on their identified role within Dublin's LFS, in which a diversity of actor and role types were represented and included. An overview of interviewees and their roles is outlined below in Table 2.

Interviews followed a semi-structured format, with a broad overview guiding questions outlined in Appendix 1: Interview Questionnaire. This questionnaire was altered based on the relevancy of questions for each actor type, but all interviews broadly followed the following steps. Firstly, actors were asked about their role within Dublin's LFS, in which they outlined how they contribute to this system based on their work. Then, actors were asked about their experiences of collaboration within the LFS, in which they outlined how and why they have collaborated with other actors and how did the processes and outcomes of these collaborations look like. Interviewees were then asked about their interactions with governmental bodies, specifically in relation their experiences of government supported collaboration within the LFS. Interviews helped to indirectly identify the presence or absence of collaborative success conditions within this LFS by elucidating their perspectives on how they participated in collaborative processes and what challenges they faced in doing so. Interviewees were lastly asked to provide insight into their experiences of government support within the LFS more broadly, and how government could stimulate collaboration to enhance Dublin's LFS.

Table 2: Interviewees and their roles

	LFS ACTOR CATEGORY	**ROLE**
Int1	Government	Advisory service
Int2	Producer	Farmer federation founder, board member + farmer
Int3	Producer	Farmer
Int4	Non-profit	Enterprise centre
Int5	Producer + retailer	Farmer, farmers market host
Int6	Government	Food advisory committee
Int7	Government	Public authority
Int8	Producer + retailer	Farmer, farmers market host
Int9	Producer	Producer cooperative and solidarity group

Int10	Farmer	Farmer federation representative, farmer
Int11	Government	Advisory service
Int12	Retailer	Speciality store
Int13	Consumer	Individual

3.2 Research material: Dublin, Ireland

The choice of this case study within the objective of this research will now be delineated and validated through first examining the relevance of LFSs within the national context of Ireland, and then why Dublin is a relevant case study within this context, with a focus on collaborative efforts within the LFS to date.

Upon examining the national context, Ireland's agri-food system is increasingly specialized and export driven. 80% of land is used for silage, hay and pasture production for the dominant industry of beef and dairy farming (Sage & Kenny, 2017). Only 1% of Irish farmland used for vegetable production, which is the lowest percentage of all EU member states according to Eurostat figures (Finnerty, 2016). Ireland is the largest net exporter of beef in the EU and the fifth largest in the world, highlighting how increasingly specialized this industry has become. This large ruminant population has equated to Ireland having the highest greenhouse gas emissions per euro of agricultural output within all EU member states (Burke-Kennedy, 2017). Agriculture contributes to one third of Ireland's national greenhouse gas emissions, which three-times higher than the EU average of 10% (Sage & Kenny, 2017). This highlights how environmentally degrading this sector is. Although research shows that in 2021 efficiencies have been gained on Irish farms which have led to less greenhouse gas emissions per animal, the continued increase of herd sizes due to the profitability of dairy farming counteracts this progress and stabilizes the negative effects of this specialized industry (Buckley et al., 2022). The 'productivist' model of Irish agriculture has led to environmental degradation in the form of extensive greenhouse gas emissions (with a heavy methane content) and related pollution of waterways and biodiversity losses from intensive practices. Economic consequences are evident in declining farm incomes, which are heavily supported by public expenditure, and influenced by falling and volatile commodity prices (Sage & Kenny, 2017). Due to the large focus on exportation to international markets, Ireland agri-food sector is extremely vulnerable to external shocks, as evident in international

incidences such as Brexit which threatened supply chains with the main trading partner of the United Kingdom (Conefrey et al., 2018).

Building LFS has been identified as a means of addressing the negative effects of the Irish productivist system. As argued by Sage and Kenny (2017, p. 23) when examining the Irish agri-food system, "a food secure future for all can only be achieved when food recovers its centrality as a key dimension of social reproduction that is itself embedded within the ecological possibilities of Earth". As argued by the non-governmental organization (NGO) Talamh Beo in their 'Local Food Policy Framework' (2021), there is a need in Ireland for creating pathways for LFSs as a means of improving food security and sovereignty, through supporting food producers beyond the demands of international markets and preparing for future unpredictable disturbances to global food chains. This is recognized in the Irish government's 'Food Vision 2030' ten-year strategy for the Irish agri-food sector, which includes action points on "supporting opportunities for direct sales" and "support small and artisan food producers to develop, market and sell their products into the local and wider domestic markets" (DAFM, 2021). This was identified as one of many necessary targets for Ireland to become an international leader in sustainable food systems (DAFM, 2021).

Despite the landscape of productivist food systems in Ireland, there is evidence of LFS development at the niche level. Research conducted by Ireland's Food Board, Bord Bia, revealed that two thirds of Irish consumers believe it is important to buy local food, and showed an increase in the number of consumers buying local between 2016 – 2017 (Bord Bia, 2017). The increased importance of provenance to Irish consumers created demand which has led to more locally sourced products being available in Irish supermarkets. Large retailers, such as Aldi and Musgraves, are also contributing to LFS development in Ireland by supporting and collaborating with small-scale regional and local producers (McCarthy et al., 2019). Therefore, Ireland provides an interesting context when assessing the role of collaboration and governments in stimulating LFSs, due to the recognized need and increasing support for this alternative food system.

The research boundary chosen to examine the Irish context for this study is County Dublin, depicted in dark green in Figure 4, which is significantly the most populous and county in Ireland. The population of Dublin in 2022 was 1.45 million, which accounts for 28% of the total population of the Republic of Ireland (Central Statistics Office, 2022). This high

population density thus gives an interesting empirical context to assess the development of LFS in Ireland as there are relevant stakeholders present, which have expanded in quantity in the past 5-10 years. There is a strong local food culture in Dublin and evidence of stakeholders working together within this system, through initiatives such as producer-led farmers markets, farm shops and local food events (Dublin City Council, 2022a). Quite notably, North County Dublin is the centre of horticulture in Ireland, which produces 30% of field produced vegetables and 40% of all agricultural production for the country. This produce mainly goes into Irish markets, with most of it consumed in the wider Dublin area (Carroll & Fahy, 2015).

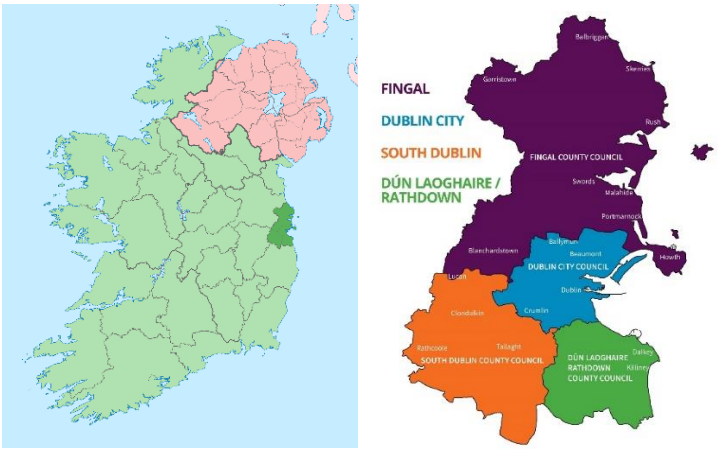

Figure 4 Map of Ireland study boundaries of County Dublin depicted in dark green. The four main municipal bodies of Dublin are outlined on the right.

The local and regional governments of Dublin have developed several initiatives to promote the development of the LFS. For example, government funded Local Enterprise Offices (LEO) provide supports and funding opportunities for small food and drinks businesses across Dublin and Ireland. Dublin's LEOs established the 'Dublin Food Chain' (DFC) in 2010 as a collaborative initiative to help Dublin's food producers build and scale-up the LFS. Dublin Food Chain provides producer supports, such as business, logistics and finance advice, while also hosting networking events and providing information to consumers (Dublin Food Chain, n.d.). Dublin's LEOs also run several support programmes for new and existing food producers, such as the 'digital school of food' and 'food starter programme' aiming to enhance Dublin's local food sector (Local Enterprise Office, n.d.). The municipal body Fingal Tourism, with the support of several other government bodies, developed 'Dublin's Coasts and Fields' to support and promote North Dublin's producers through networking and marketing campaigns aimed at celebrating local produce (Dublin's Coasts & Fields, n.d.).

Dublin City Council are currently developing the 'Edible Dublin' food strategy to enhance the sustainability of the city's food system. This strategy is building from findings found during the 'Eat the Streets' festival organized by the Council to celebrate the city's food heritage (Dalby, 2022; Dublin City Council, 2022b). The Irish food board Bord Bia also support LFS development and upscaling through several services, such as hosting webinars on private and state support services for local producers and small food businesses (Bord Bia, n.d.). Such government support for LFS in Dublin highlight the relevance of this case study for this research, as this study will evaluate if and how such government support and action is influencing collaboration between LFS actors.

3.3 Data Analysis

During the interview process, all interviews were transcribed and checked for accuracy. This collected data was then analysed using qualitative interpretive analysis (QIA). This technique involves coding data collected to identify patterns in how research subjects interpret their reality (Mason, 2018). This was conducted through the QIA software NVivo, which allows for iterative and systematic coding and categorization of patterns within data. The data collected was interpretated using techniques outlined in Mason (2018) which emphasize the researcher's agency and creativity. A thematic analysis assists in understanding patterns between the data through constructing an index of themes and subthemes (Bryman, 2016). Although themes and subthemes within the data became evident throughout the iterative process of coding (Bryman, 2016), the theoretical framework (Figure 3) provided an overview of concepts for thematic analysis.

To answer sub question 1 (*who are the local food system actors in Dublin and how do they collaborate?),* data gathered during the stakeholder analysis was combined with QIA of interview transcripts. Findings from desk research and transcripts were coded using the LFS actor roles identified by Kang et al. (2022) (Table 1) to provide an overview of the LFS actors and their roles within Dublin's LFS. Then, interview transcripts were coded using the three horizontal collaboration categories outlined by Mittal et al. (2017) to give an overview of the forms of collaboration occurring between Dublin's LFS actors as either *operational, strategic* or *co-evolution*. The identification of these collaboration types provides insight into the motives, investment and risk involved with identified collaborative ventures in Dublin's LFS.

To answer sub question 2 (*to what extent are success conditions for collaboration present in Dublin's local food system*), QIA techniques were utilized to code the conditions for collaboration as elucidated in the theoretical framework (Figure 3). Firstly, the dependant variable was coded using QIA, which are the indicators for successful collaboration as processes of *face-to-face dialogue, trust building, commitment to process, shared understanding* and *intermediate outcomes*. Then, data was examined and coded to understand the independent variables as exogenous conditions of *starting conditions, institutional design* and *facilitative leadership*. The deciphering of these codes was based on the descriptions outlined in the theoretical chapter, with an overview provided in Table 4. After the comprehensive assessment of each condition, a Likert scale grading system was used to categorize the extent to which each condition was prevalent (Table 3). This scale was applied in four measures, which are *present, somewhat present, somewhat absent* and *absent,* with an overview conditions' scoring provided at the end of the results chapter.

Table 3 Likert scale used to grade presence or absence of each condition

Present	Somewhat present	Somewhat absent	Absent

To answer the final sub question 3 (*how has the role of government influenced collaboration within the local food system of Dublin?*), interview transcripts were coded based on governmental exogenous conditions of collaboration. As indicated in Table 4, sub-codes of *institutional design* and *facilitative leadership* exogenous conditions were used to answer the final sub question. This is due to the direct connection between these conditions and the role of government in LFS collaborations as elucidated in literature. By isolating these four subcodes, it was a useful way to categorize interviewee perspectives and provided an overview of the role government's play in Dublin's LFS. A Likert scale was again used to assess the presence or absence of each condition (Table 3), with an overview of scoring provided at the end of the results chapter. This approach allowed for clear conclusions to be drawn around how governments influence successful collaborations in LFSs.

Table 4 Description of QIA codes used to answer sub questions 2 and 3

	QIA CODE	SUBCODE
Process conditions	Face-to-face dialogue	*Opportunities/experiences of in-person dialogue*
	Trust building	*Access: actors' accessibility to the collaborative process*
		Standing: opportunities for everyone to share perspectives
		Influence: respectful consideration of other perspectives
	Commitment to process	*Motivation*
		Personnel (used time)
		Financial resources
	Shared understanding	*Common vision and goals*
	Intermediate outcomes	*Small, early wins help to leverage progress towards common goals*
Exogenous conditions	Starting conditions	*Incentives to participate*
		Resource/capacity constraints
		Trust among actors
	Institutional design	*Structure of supply chains*
		*Governmental policies or actions to promote local foodshed**
		*Sources of transparency and legitimacy**
	Facilitative leadership	*Private actors as leaders*
		*Governments as leaders**
		*Promotion of collaborative processes by governments to date**

***Government related sub-codes to answer sub question 3**

3.4 Ethical issues

As noted by Verschuren and Doorewaard (2010), it is important to maintain ethical norms when conducting empirical research. As this study collected personal information and perspectives from stakeholders, it was vitally important to consider procedural ethics throughout this study (Tracy, 2010). To ensure ethical research standards were met, all stakeholders were accurately informed of the purpose of this research before they could give informed consent to become involved. The informed consent form template read and signed by interviewees is attached in Appendix 2: Informed consent form. To protect stakeholder privacy and confidentiality, all data was stored securely and deleted upon completion of the study, and all stakeholder names or organizations were made anonymous in the final report. Stakeholders were made aware that their contribution is voluntary, and that they could stop participating at any time (Tracy, 2010).

4. Results

To answer the main research question (*o what extent do actors successfully collaborate within the local food system of Dublin Ireland, and how does the role of government influence such collaboration?*), it is important to first outline findings in relation to the current state of Dublin's LFS by identifying the actors and their roles and how they are currently collaborating within this system. Then, success conditions for collaboration are examined within this case to understand the extent to which collaborative processes are occurring and how certain exogenous conditions influence why actors are or are not participating in collaboration in this case. The role of government within the LFS of Dublin is then explored, with particular emphasis on how their role influences collaborative processes. Finally, an overview of the findings is presented (Table 6) to indicate the extent to which success conditions of collaboration are prevalent in Dublin's LFS.

4.1: Dublin's local food system actors and collaborations

The first sub question of '*who are the local food system actors in Dublin and how do they collaborate'*, is answered through first identifying Dublin's LFS actors based on roles delineated by Kang et al. (2022). Then, the forms of collaboration prevalent in Dublin's LFS are categorized based on Mittal et al.'s (2017) theory on types of horizontal collaboration in LFSs.

4.1.1 Actors and their roles in Dublin's local food system

The results of the stakeholder analysis, outlining the identified LFS actor categories, roles and actors in Dublin are outlined below in Table 5. As evident in this overview, some categories and roles had a high frequency of actors. Firstly, there are many retailers present, particularly as farmers markets and speciality stores. This prevalence of retailers may reflect the aforementioned consumer demand for local produce in Ireland, although several retailer interviewees highlighted challenges in maintaining a consumer base (int5, int8, int9, int12).

There are also many public authorities connected to the LFS of Dublin, and this is due to the presence of four main municipal bodies, as outlined previously in Figure 4, as Dublin City, Fingal, South Dublin and Dun Laoghaire-Rathdown. Each municipality has a County Council, which are local authorities responsible for a range of local services. Councils can influence LFSs in many ways, such as through governing local amenities and providing

planning permission for developing infrastructure. One of the notable influences from Councils in the Dublin context is the arrangement of 'Eat the Streets' food festival and subsequent development of the 'Edible Dublin' local food strategy by Dublin City Council (int7). Each municipality has a Local Enterprise Office (LEO), which are government-funded support services for businesses in Ireland. They provide several services for food businesses, and the establishment of the Dublin Food Chain was a collaborative effort between the four LEOs in Dublin (int6, int7, int11).

There is some evidence of growing support and recognition of the importance of Dublin's LFS, both by state and non-state actors. Plans are currently underway to redevelop the Victorian Wholesale Fruit and Vegetable and to regenerate the Iveagh and Moore Street Markets as a means of increasing access to local food for Dublin's communities (Dublin City Council, 2022a). Governments have also invested in the development of a shared kitchen facility for small food businesses in city (int4). The overview of identified actors in Table 5 highlights the range of stakeholders working on the LFS of Dublin, with examples of collaborations between them as identified in interviews outlined in the following subchapter.

As argued by Kang et al. (2022), LFSs depend on the prevalence of six identified actor roles as *producer, retailer, consumer, government, non-profit* and *private.* The assessment of the Dublin case indicates that there are all actor roles present to varying degrees. As evident, some roles have minimal identified actors, such as *processing facilities, producer cooperatives* and *non-profits.* This lack of actors may reflect that this LFS is still in the development stage and that more widespread influence on the conventional food system requires more actors to get involved, which was identified as a key barrier by interviewees (int2, int9, int12).

Table 5 Overview of actors in Dublin's local food system

ACTOR CATEGORY AND ROLE	ACTOR
PRODUCER	
Farmer	McNally Family Farm
	Llewellyn's Orchard
	Donabate Dexter Farm
	Clarke's Fresh Fruit
	Clonanny Farm
	Skerries Organic Farm
	Fieldstown Farm
	Fresh from the Pier
	Airfield Estate farm
	Dublin Community Growers
Farmer federation	Irish farmers association
	Talamh Beo
	Fingal farmers
Producer cooperative	Country markets
	Open Food Network
Processing facilities	Food Central
	SPADE shared kitchen
RETAILER	
Major retailer	SuperValu
	Musgraves
	Aldi
Consumer cooperatives & solidarity groups	Dublin Food Co-op
	Solid Network
	Dublin City Community Co-op
Farmer markets (on/offline)	Airfield Estate market
	Neighbourfood
	Honest2Goodness Glasnevin
	Green Earth Organics
	Kilternan country market
	The Green Door market
	McNally Family Farm shop
	Raheny market
	Clarke's Fresh Fruit farm shop
	Clonanny Farm shop
	Country Crest farm shop
	Skerries Organic Farm shop
Speciality stores	The Fumbally
	Nolan's of Clontarf
	Fresh: The Good Food Market
	Sprout
	My milkman
	Sheridan's Cheesemongers

	Donnybrook Fair
	Scéal Bakery
Marketing	Slow Food Dublin
	Love Lusk
	Ramble Dublin
	Support Dublin
	The Locals
Transportation and logistics	Model logic limited (consultancy)
	DPD Ireland
	DHL Ireland
	Rochefreight Ireland Limited
	O'Reilly Transport Ireland Ltd
	Geodis Ireland
CONSUMER	
Organizational	Consumers association of Ireland
Individual	
GOVERNMENT	
Food policy councils / advisory services	Bord Bia
	Teagasc
Socio-cultural institutions	Dublin Food Chain
	Dublin's Coasts and Fields
	Shoplocal.Irish
Public authorities	Dublin City Council
	Fingal County Council
	South Dublin County Council
	Dún Laoghaire-Rathdown County Council
	Enterprise Ireland
	Dublin City Local Enterprise Office
	Fingal Local Enterprise Office
	South Dublin Local Enterprise Office
	Dún Laoghaire-Rathdown Local Enterprise Office
NON-PROFIT	
Non-governmental associations	SPADE Enterprise Centre
	AirField Estate
PRIVATE	
Financing bodies	Community Finance Ireland
	ReThink Ireland
	Donore Credit Union
	Microfinance Ireland

4.1.2 Types of collaborations between actors

During interviews actors identified a variety of ways in which they collaborate with other actors within the LFS. It is important note here, however, that some actors had different conceptualizations of LFS and thus what was collaboration within Dublin's LFS. Some stated how they mainly collaborated with other actors within the county of Dublin (int5), while others noted collaborative activities with other Irish LFS actors (int3, int8). However, the notable collaborative examples collected in interviews can be categorized into the three types of horizontal collaborations as identified by Mittal et al. (2017) as follows.

(i) *Operational*

As noted in the theoretical chapter, operational collaborations consist of low investment, knowledge sharing and commitment from participants involved to optimize business activities (Mittal et al., 2017). One farmers federation member noted how they had a link with an urban farm in Dublin as they shared similar values around sustainable agriculture and work together on some ideas (int2). A market host noted how an experienced farmer from another part of the country helped them with their market and provided relevant contacts and helped them with network building, which they noted was very helpful (int5). In setting up a food festival in Dublin, a governmental representative noted how they collaborated with many producers, retailers, restaurant owners and chefs in the city to build the event programme together and give space to local actors to share their knowledge and ideas (int7). One market host explained how they ran several food markets in collaboration with other local producers, in which they provided the space and infrastructure, and a variety of producers sold their produce. This ended up with a wide range of produce, with sometimes up to 40 stalls (int5). This operational collaboration then turned into a more strategic venture.

(ii) Strategic

Strategic collaborations require actors to share key resources and/or knowledge as a means of jointly planning operations, objectives and strategies (Mittal et al., 2017). This was evident in the progress of the aforementioned farmers market, as they began working with a national farmers market website to set up an online ordering platform for their local area in Dublin. This was beneficial because not all producers had the necessary IT skills, so they benefitted from helping one another with the online model. They also benefitted from this collaborative marketing and reached a wider customer base in the online space and from retailing their

food together, in which they had 35 items for sale at one point. Although this was successful for a time, it eventually ceased due to lack of consumer support (int5).

A producer noted how they collaborate with a farmer outside of the Dublin region as they produce the same crop. They therefore share ideas, experiences and equipment, which has been beneficial for both actors selling this specialized crop (int3). A non-profit enterprise centre noted how they collaborate with the governmental LEO to host networking events, programmes and one-on-one trainings as they can both mutually benefit; the enterprise centre provides services to clients and the LEO has access to businesses for their programmes (int4). One urban farm represented how they collaborate with a local university in which they exchange knowledge and build research programmes together, in which university interns help them understand their agricultural data (int8).

(iii) Co-evolution

Finally, co-evolution collaborations require complex knowledge, resource and information exchange between participants, driven by motives of collective food system reform (Mittal et al., 2017). The most prevalent form of co-evolution collaboration was identified by a co-founding member of an online producer co-operative. This collaborative initiative involved high knowledge and resource sharing between members, who are driven by motives of being agents of change to teach people why local food system support is necessary. This co-operative is non-profit and highly reliant on the voluntary time of the board, and has therefore taken a lot of time and money to establish. This collaboration involved many actor types including producers and retailers, but also other non-profit organizations as a means of support in developing plans to boost the niche SFSC and LFS industry in Ireland (int9).

In sum, the actors that are present show evidence of collaborative activities, again to varying degrees. Although cases of *operational, strategic* and *co-evolution* were noted, some interviewees had few concrete examples of how they have collaborated within this LFS. However, when assessing the forms of collaboration occurring, it is evident that *operational* and *strategic* collaborations are more prevalent than *co-evolution* collaborations, reflecting that actors may not be willing to participate in high-risk collaborations and have better capacity for building mutual-benefit, lower-risk collaborations. The variety of reasons which encourage or prevent actors from working together are explored in more detail in the following subchapters around the success conditions for collaboration in this case.

4.2 Success conditions for collaboration in Dublin's local food system

Building on the findings around actor roles and forms of collaboration occurring in Dublin's LFS, the second sub question of '*to what extent are success conditions for collaboration present in Dublin's local food system'* is now explored. This is to provide a deeper understanding of the factors which affect actor participation in collaboration in Dublin's LFS. As previously outlined, the dependent variable of this study is successful collaboration, which is indicated by the presence of four process conditions of *face-to-face dialogue, trust building, commitment to process, shared understanding* and *intermediate outcomes.* Therefore the extent to which these processes are in place in Dublin's LFS are first explored. Then, the independent variable of exogenous collaborative conditions as *starting conditions, institutional design* and *facilitative leadership* are examined, to provide an understanding of how such conditions affect collaborative processes. The conditions relating to the role of government are delineated in the following subchapter to answer sub question 3. An overview of the presence or absence of each condition based on findings is provided at the end of the results chapter in Table 6.

4.2.1 Indicators of successful collaborative processes

(i*) Face-to-face dialogue*

As previously noted, literature argues that face-to-face dialogue is the central process in which all successful collaborations start from (Ansell & Gash, 2008). One notable example of face-to-face dialogue in Dublin's LFS was the organization of workshops for LFS actors from around Ireland to come together and share ideas on their environmental and ethical decision making (int12). A governmental body heard about this and wanted to attend (int12), which highlights an interest from government in participating in dialogue. An enterprise centre also hosts networking events, often in collaboration with the DFC, and has created a physical space dedicated to stimulating discussions and informal collaboration and networking between actors (int4). The new shared kitchen which is being built at this enterprise centre due to governmental funding will be formatted in a way to foster dialogue and enhance collaboration (int4). A farmer federation facilitates working groups to discuss how to collaboratively support LFSs:

> "*Our aim is to try and engage farmers and citizens to create a space to discuss the relevant policy and to exchange knowledge and practice between one another and to transform the food system as best as we can*" (int2).

This federation aims to have face-to-face dialogue with relevant governmental representatives to highlight their collaborative ideas in future (int2). Another future aspiration built on dialogue is to develop more food hubs to stimulate collaboration between LFS actors, that communities would come together to organize and bring local producers together (int9). However, one interviewee noted that they don't think local authorities have ever brought Dublin's LFS actors into one room to discuss their challenges and needs, although the actors themselves see the benefits of such discussions (int8).

Overall, it is evident that some actors understand the importance of dialogue and are trying to foster it when possible. It is difficult to understand the extent to which dialogue is occurring on a regular basis, or if it is more of an aspirational goal. One actor stated that governmental bodies have not facilitated clear opportunities for collective face-to-face dialogue, highlighting that this process deserves more attention. Therefore, the *face-to-face dialogue* condition is categorized as **somewhat absent**.

(ii) Trust building

The data collected shows that there is evidence of trust between producers and retailers willing to collaborate and share knowledge and resources, but there is also a general sense of mistrust to government bodies due to the wider systemic issues within the food system. However, several examples outline an effort to build trust among actors, as indicated by subcodes of access (accessibility to the collaborative process), standing (opportunities for actors to share perspectives) and influence (respectful consideration of other perspectives).

The farmer federation facilitating working groups of LFS topics aims to give access and a standing to all relevant actors into collaborative processes of knowledge and idea sharing (int2). The collaborative space and new government funded shared kitchen at a local enterprise centre aim to give more opportunities for actors to share perspectives (int4). A producer cooperative also strives to create opportunities for actors to share perspectives and build trust, but it can be challenging to get wide participation:

> *"So we are working with people who are really proactive in terms of collaboration, but we haven't got the volumes of people involved that we would need to have. And that's the struggle"* (int9)

The evidence of actors being happy to share experiences and knowledge (int2, int5, int6, int7, int11) highlights a sense of respectful consideration of other perspectives. As one retailer noted: "*there's room for everyone and we should all be supporting each other"* (int12).

Overall, it is clear that some LFS actors trust one another in their willingness to share knowledge and help one another in this niche system. However, there is little evidence of efforts to build trust with actors within this system more broadly, and that trust seems to stem from inherent motivation rather than collaborative processes to build trust. Also, many of the discussions around trust building eluded to future aims to improve this process rather than concrete examples of how trust is being built at present. Therefore, the *trust building* conditions is categorized as **somewhat absent.**

(iii*) Commitment to process*

Interviewees highlighted commitment to the collaborative process by saying that LFS actors are "*working toward the same goals"* in trying to create a market culture around local food (int12), and they "*believe in what they are doing"* (int9). They are motivated to collaborate with people as they value the human connection and see that there is a community of others with the same feeling of wanting "*more than just turning profit*" (int12). Farmers are also driven and motivated to collaborate to work towards their common vision of reforming the food system and help people make better food choices (int2, int8). Producers are motivated to work together on their shared values (int9) and to collectively showcase local produce:

> *"We talk about Irish suppliers; how can we get them at the top of the food chain?"* (int8)

However, one farmer notably said that it depends on the individual as "*farmers value their autonomy"* (int2), which may reduce motivation to collaborate.

Actors also showed commitment through their personnel and time given to collaborative initiatives in this LFS. Many producers and chefs put in a lot of time in helping local authorities to prepare and co-create the 'Eat the Streets' food festival (int7). A farmer also noted that although the direct marketing of produce takes up precious time for farmers,

but they want to collaborate with customers and other relevant actors due to intrinsic motivation (int2). Similarly, one market host noted how the organization of farmers markets is very time consuming by trying to bring actors together to collaborate, but they are happy to do it and to offer a diverse range of produce to consumers and would "*absolutely do it again"*, even if they don't make much money from it (int5). One retailer noted that LFS actors often want to put in the time to collaborative initiatives:

> *"People are very responsive when someone reaches out with an initiative or a project that is very specific and very relevant to everyone, there is a huge amount of willingness to partake"* (int12)

A representative from a voluntary co-operative highlighted the commitment of personnel time shown by co-workers within their organization as they all try to build a collaborative LFS. However, they state that although many more actors may be helpful and willing to collaborate with their organization, it can be challenging for people to find the time to do so:

> "*We feel that we have a lot of potential collaborators out there who really would like to but are busy and don't find the capacity in their days to properly engage as they would like"* (int9)

However, one interviewee noted that there is more evidence of very active food networks driven by volunteerism outside of Dublin (int7). This may reflect the resource constraints expressed by interviewees, mainly in the form of limited time and money to participate in collaborative activities.

When assessing financial commitment, some actors indicated that although they might not be directly making money through collaborative processes, they are motivated to build a sense of community (int8, Int12). The collaborative research project on environmental and ethical decisions for Irish businesses which was led by a LFS actor in Dublin gathered a contribution of €250 from each participant (int12). The organization of collaborative farmers markets was identified as very expensive and not turning a profit that reflects the work put in, in which the host dedicated much financial resources to facilitating this collaboration (int5).

Overall, it is clear that although many actors want to commit to collaborative processes, the realities of running LFS initiatives often limits their capacity to do so. However, actors show that they are willing to commit to collaborations through their motivations and desire to collectively reform the food system. Although there are limitations to extensive commitment to collaborative processes, many indicated a strong desire to work collaboratively and commit to opportunities to work together when they arise. Therefore, the *commitment to process* condition is categorized as **somewhat present.**

(iv) Shared understanding

The data collected outlined several instances of LFS actors having common visions and goals that motivate them to collaborate, such as a passion for trying reform the food system (int2, int8), showcase local produce and help people make better food choices (int2, int8, int9), and to build communities around local food (int12). A market host noted how they advertise other markets as they are all working for the same goals and want to grow this niche sector together (int12). People involved in the reality and practical running of local markets have a very clear idea of the challenges faced and thus have a shared vision of what needs to be changed (int2). Many have identified a common vision for bringing actors together in collaboratively supporting the LFS, as elucidated by the following interviewee:

> *"We really believe that just given the complexity of the challenges that we're facing, that need everybody in the room, and we really can't fall into that trap of us-against-them type of thing"* (int9)

However, it was noted by a farmer federation representative that many farmers don't understand the importance of LFS (int10), and that many farmers don't even eat their own produce and instead buy the same products at supermarkets (int2). A retailer noted that there is a lack of recognition of the challenges faced by local producers, and that "*people just still don't get it"* (int12). Others agreed in that it is difficult to see there is an overall understanding of the need to support LFSs (int13), and there "*isn't a culture of that in Ireland"* (int2). Due to the overlying agri-food export agenda, it can be an "*uphill battle"* to try and explain to policy makers why LFS is important (int7). Current financial challenges due to the cost-of-living crisis was also identified as a barrier to building a common vision for LFS support (int7).

Overall, actors show that within this niche network there is evidence of a shared understanding of the importance of collaboration for LFS development. However, it is challenging for actors who may be also involved in the conventional food system, such as farmer and policy makers, to build this understanding. As actors directly involved in the LFS often have a shared understanding, but struggle to build this with actors on the periphery or outside of this system, this *shared understanding* condition can be categorized as **somewhat present.**

(v) Intermediate outcomes

There were some instances of intermediate outcomes achieved through collaboration in Dublin's LFS. One is the previously mentioned collaborative research project led by a Dublin LFS actor that resulted in workshops that were "*brilliant*", with aims to expand on this research and facilitate more workshops around it in future (int12). Several producers and farmers market hosts also indicated that although many challenges come with organizing farmers markets, they were happy to participate and had good outcomes regarding meeting people and selling produce (int5, int8). The activation of farmer federation working groups can also be identified as a collaborative outcome which also aims to expand and continue in future (int2). Actors have also contributed through collaborative efforts on a consultation on reforming legislation that is a barrier to LFS development (int9).

Although these examples elucidate some intermediate outcomes of collaborative LFS initiatives, they are evidently limited. Additionally, some actors indicated that collaborative initiatives result in little or no outcomes, such as farmers markets stopping due to high costs and little demand (int5) or governmentally led initiatives failing to be sustained or to deliver any real impact (int3, int5, int12). Therefore, the *intermediate outcomes* condition can be classified as **somewhat absent.**

Following the examination of the dependent variable of indicators of successful collaboration in the Dublin case, the exogenous conditions which affect actor participation in collaboration will now be explored. These conditions will be linked to previous findings to highlight how each condition affects collaborative processes in this case.

4.2.2 Collaborative starting conditions

It is evident that starting conditions are a vitally important and influential element of collaboration in this case as this was the most frequently used code and sub-codes. It was also

clear that unfavourable starting conditions directly affected collaborative processes, as elucidated in the following breakdown of findings.

(i) Incentives to participate

As outlined in the theory chapter, Ansell and Gash (2008) note that in general stakeholders' incentives to participate are dependent on whether the collaborative processes, and the related time and energy required, will yield meaningful results. As collaboration is a new concept in Dublin's LFS, one interviewee identified that younger people are very open to collaboration in running their businesses and want to cocreate (int4). Retailers want to cut down the "*us versus them tension"* in the food system and start working together (int9). The sense of community that's around one interviewee is quite strong and pushes through the times of not making much money (int12). This incentive for likeminded actors to collaborate beyond financial motives was also indicated by another producer:

> "*They're prepared to say, well, I'm not going to be a millionaire. I don't want to have whatever; I want to do good. I think that's the type of person that's driving short food chains"* (int8)

Collaborating at farmers markets can be driven by both the aspiration to make quality local artisan food available to local people, or the incentive to make money (int3). One market host said that running a market takes so much time and money with little financial return, but they are still happy to do it and bring people together (int5). They also noted that although it was challenging to get producers involved in the beginning, they were happy to collaborate once they saw the value of bringing producers together to offer a wide range of choice to customers (int5).

There has been mainly individual people or entities working on LFS collaboration, with a huge amount of work involved, but often these initiatives remain stagnant due to lack of resources or support. Therefore these experiences disincentivize new actors to participate in LFS collaboration (int1). Collaborative initiatives between producers are also time consuming and difficult to make money from, which can disincentivize farmers from participating in such practices (int5). A farmer noted how there are not enough farmers working on LFSs to have the scale required for collaboration to make sense, and that the first thing needed is an increase on the supply of produce for local markets (int2). This may be due to the government

agenda for export, as some farmers don't understand the importance of LFS and are not incentivized to participate as they are facing daily struggles to keep their farms going (int10).

In sum, producers have indicated they are incentivized to participate in collaboration due to their vision of bringing people together around local food to collectively address challenges within the food system. However, many actors identified that a lack of supports, resources and other actors working in this niche field disincentives them from collaborating, and therefore *incentives to participate* are classified as **absent.**

(ii) Resource/capacity constraints

Interviewees indicated resource restraints for collaboration, as the challenges of being a small-scale producer or retailer leads to financial and time restrictions in any activity beyond the day-to-day running of their business. One producer noted how they don't attend some LEO led networking or collaborative events as they are often scheduled when they are working, and that the fees required to attend was not in their boss's budget (int5). Although farmers are trying to be sustainable "*as best as they can"*, they don't have time to do anything extra, especially in busy times of year (int3, int8, int10). Producers say that no matter what the will is to collaborative, "*it's all down to work and time"* (int2) and "*it's always follow the money"* (int5). For a farmer federation working on building LFS policy recommendations and collaboration between farmers, resource constraints are also a barrier:

> *"We have very limited capacity, time and resources, we are dependant a lot on a small group of farmers that are very driven"* (int2).

The time to participate in collaboration is also a constraint for LFS business actors, as it "*can be hard to get people to […] leave their desk and come"* (int4). A consumer also indicated time restraints as being a barrier to collaborating with LFS actors (int13). A co-operative representative said that they are extremely limited on time and resources as they are fully voluntary, and similarly to community supported agriculture initiates, "*people are very busy trying to keep their heads above water and in their day jobs*" (int9). This lack of time combined with facing daily challenges within their work makes actors constrained from collaborative processes:

> "*it's very hard to get them to lift their head from the immediate struggle in front of them, to ask more of them, you know, to ask them to come along and collaborate to*

come along and do training. […] So it's probably more of a capacity struggle than it is a mindset at this stage for us anyway" (int9).

There was a sense from actors that there is another capacity barrier in their lack of experience and understanding of both LFSs and subsequently government facilitated collaboration within LFSs. As farmers have not been encouraged to think of working within the LFS, they lack the training and knowledge of working within a SFSC network (int1, int10) and sometimes don't see the relevance of collaborating (int3, int8). One farmer said that he doesn't think governmental organizations themselves have the capacity to focus on sustainability (int2).

Overall, it is very clear that resource and capacity constraints are a huge barrier to collaboration in Dublin's LFS. Actors across varying roles expressed how a lack of time, money and collaborative capacity are preventing them from committing to and participating in collaborative activities. It is clear that this condition therefore deserves high attention to encourage more actors to start collaborative practices, and is classified as **absent.**

(iii) Trust among actors

When asked if Dublin's LFS actors are willing to work together, many respondents emphasized their experiences of teamwork and trust within this network. Producers are happy to share their experiences and knowledge with one another in this "*really open community*" (int11). A farmers market host noted how they have a *"very open-door policy"* and "*are very welcoming and inclusive of anybody"* when working with other producers (int5). One actor noted that they think farmers are definitely interested in collaborating for LFSs (int1). Interviewees said that there is not a competitive feeling between LFS actors (int2), and they respond very well when given a collaborative space or opportunity (int7).

"If you look at the actors themselves, they definitely see the benefit of coming together in one location to share resources and share experiences" (int8).

However, the regulation of the food system and related bureaucracy has broken the trust of farmers, as they can "*lose heart"* and some feel when they don't meet regulations it is a "*personal attack"* (int10). One producer noted how the Department of Agriculture *"just make you go around in circles"* with bureaucracy (int5). This mentality of farmers feeling like they are trying to survive in a broken system has led to farmers fighting with one another, with decisions for cheap imports over supporting one another leaving them feel

"*disheartened*" (int10). This bureaucracy connected with government support has also led business owners to become "*quite cynical about the agencies*" (int4). Overall, several actors elucidated a sense of mistrust of governmental bodies due to the feelings that although they are working hard to address the challenges of the current food system, the government have not adequately supported them (int1, int2, int3, int5, int8, int9, int10, int12). This will be elaborated on in more detail to answer sub question 3.

In sum, the willingness of actors to work together indicates a level of trust as they are open to sharing ideas, experiences and collaborating and therefore place trust in one another. Actors show they would be willing to enter collaborative processes due to motivations to work together to collectively address food system challenges. However, it is clear that there is a fundamental distrust occurring between private and governmental bodies, as indicated by a high number of interviewees who feel unsupported and unsatisfied with governmental bodies due to the national agenda for export-driven food systems. Therefore, *trust among actors* are categorized as **somewhat absent**.

4.2.3 Institutional design

It is important to note that almost all interviewees indicated an inherent institutional design barrier to LFSs overall. As will be elaborated on in answer to sub question 3, the national agenda of export-driven agri-food systems in Ireland has a direct effect on the ability of both governments and private actors to support the LFS in Dublin, and notably affects the willingness of actors to participate in collaboration within this system. This is elucidated in the *sources of transparency and legitimacy* condition of the next subchapter, but the supply chain condition is now examined.

Structure of supply chains

Recent government collaborative initiatives reflect a recognition of the need to restructure local supply chains. The DFC has facilitating training for those wishing to sell directly at farmers markets, and local authorities in Fingal have built a network around supporting the SFSC of producers working with local restaurants (int6). A farmer federation representative noted that SFSCs and the LFS is developing in Dublin (int10).

However, many of the SFSCs in Dublin are farmers markets that rely on those actors collaborating and often running the markets without government support (int5, int8, int12). The focus on dairy and beef agriculture in Ireland does not correlate well with configurations

of SFSCs, as they are very hard to sell directly due to challenges such as cold storage facilities (int1). This was reflected by a market host who couldn't find a producer that was selling dairy on the scale for their market due to the commercial production levels prevalent (int5). Conversely, another stakeholder noted how the region imports "*potatoes, carrots and apples, when our season is perfect for growing them"* (int8), which reflects a systemic supply chain structural problem. A SFSC challenge is also the lack of available kitchens in the region (int7), which is being addressed by government funding of new shared kitchen spaces for small-scale LFS businesses (int4).

Importantly, the dominant supply chain of supermarket sales was noted several times as directly affecting the feasibility of LFS and related collaborative processes within Dublin (int5, int8, int10, int12, int13). Actors argued that supermarkets need to have tighter policy control in order to allow SFSCs to grow (int12). The overall sentiment was summarized well by the following interviewee:

> *"The issues I think are there's room for a hundred more small independent shops versus one supermarket. […] The supermarket, it's like this oversighted, short-term solution that in the long run just wipes out so much that is unseen. […] The small independent people can never ever ever ever compete with the supermarkets and will never be able to do so"* (int12).

Overall, there is a sense that the conditions for SFSCs are not feasible due to the national agenda that supports export driven supply chains. Actors identified the growing power and influence of supermarkets as a key barrier to SFSC development and call for tighter policy to allow SFSCs to compete more fairly. Therefore, *structure of supply chains* are categorized as **absent**.

4.2.4 Facilitative leadership

As outlined in the theoretical chapter, facilitative leaders play an important role as a mean of facilitating dialogue and co-creation between actors in collaborative processes, and thus influence the trust building processes and allow actors to understand mutual benefits (Ansell & Gash, 2008). The role of governments as facilitative leaders will be explored in more detail in the following subchapter, but it is important to also identify how private actors have fulfilled a leadership role in this case.

Private actors as leaders

There were many examples given of non-governmental actors acting as facilitative leaders for collaboration in Dublin's LFS. These include retailers across the country collaborating on research and facilitating related workshops (int12), farmers bringing actors together to create farmers markets without support from local authorities (int10, int5), and an enterprise centre "*really trying to foster collaboration"* by hosting networking events and connecting actors together (int4). The development of a national food co-op aims to incorporate and build a network on the local food economy between a broad range of stakeholders, especially trying to "*find connections that add value"* in a "*pretty fragmented space"* (int9). A farmer federation also reflects facilitative leadership qualities by "*opening up a new space for discussion"* of LFSs and food sovereignty in general:

> "*I can already see the effects of having a new organization it just opens up a little more room for what's possible in terms of policy"* (int2).

Overall, several interviewees showed that private actors are motivated to lead collaborative processes and to create spaces for facilitated dialogue around collective action to address challenges they face. Therefore, *private actors as leaders* is categorized as **present**. An overview of the findings related to the success conditions for collaboration in Dublin's LFS are outlined in Table 6.

4.3 The role of government in local food system collaboration

Building on the findings of sub questions one and two, the final sub question of '*how has the role of government influenced collaboration within the local food system of Dublin*' is now examined. As outlined in the methodological chapter, the collaborative conditions connected with government action contribute to answering this question, which related to the exogenous conditions of *institutional design* and *facilitative leadership.* The extent to which each condition is present or absent is examined, with an overview of findings provided in Table 6.

4.3.1 Government policies or actions to promote local foodshed

Several actors noted how several governmental policies have helped in promoting local food, such as the success of the 'Leader Programme' to start farm shops (int10), and the social inclusion fund in establishing a food co-operative (int12). Policies for government payments to hospitality workers during covid was also noted as an important factor in supporting local

food businesses in Dublin: "*I'm actually quite grateful to the government for that it, […] it really saved us and a lot of people"* (int12).

Governmental actions to promote the local foodscape were also noted, such as the 'Eat the Streets' food festival organized by local authorities (int7), which showcased local food actors and highlighted collaborative food projects (int6). Government funding was also used to build shared kitchens in an enterprise centre in response to the "*huge shortage of kitchens in Dublin"* (int4). Collaborative research occurred between LFS actors around Ireland on environmental and ethical issues for food businesses, and although this was led by non-governmental actors, governmental bodies showed great interest and wanted to learn more about it at a related workshop (which did not go ahead due to Covid) (int12). Several interviewees noted how local authorities have upcoming plans to create a large-scale and central farmers market within Dublin City at a well-known location (int6, int7, int8). However, one interviewee noted that they are sceptical about this foodscape promotion: "*I think it's a tourist attraction rather than a collective collaboration for suppliers and actors in the system*" (int8).

Overall there was a sense from producer and retailer representatives that they are not being governmentally supported in facing the systemic food system issues and related challenges as small-scale LFS actors (int2, int3, int5, int8, int9, int12). This has led to mistrust of government initiatives and actors. As one interviewee said, producers "*are not turning a quick buck, […] so they're feeling hard done by and they're feeling the struggle"* (int9). Another retailer noted how the government increased taxes for hospitality at the "*first opportunity they could"* after the pandemic, although this was the *"industry that was the most hit by Covid over the two years"* (int12). It was mentioned that governmental bodies have "*a lot of people in positions for a long time making a lot of money"*, which has led to tension and mistrust from farmers (int2).

Most notably, the overlying national agenda focusing on specialized and export-driven agri-food systems was repeatedly noted as a central top-down barrier for LFS development, and that this agenda is reflected in the actions and abilities of local and regional governments. Although local authorities want to support collaboration and Dublin's LFS, the national agenda limits their ability and feasibility in doing so (int 6, int7) Government enterprise supports focus on upscaling businesses to be export ready (int 9, int11), which overlooks

collaborative initiatives on the local and regional level. One interviewee mentioned how governmental business supports are measuring success by how many businesses are scaled to the point of export, and not by how many collaborative initiates are put in place, so this is a limitation (int6). This factor of the government's "*cheap food policy"* (int10) is central to the institutional design influencing collaboration in this context:

> "*You're not going to be able to see the realization of short food supply chains because they're too busy focused on Ireland Inc. exporting out our dairy and our beef"* (int7)

In sum, there is some evidence of government action to support the local foodshed of Dublin, through actions such as building more shared kitchen facilities and the provision of some helpful funding opportunities for several initiatives. However, as prevalent in many of the conditions, the national agenda of export driven agri-business is identified as effecting the extent to which governments support LFS development. It is clear that the lack of supportive LFS policies has impacted the ability of actors to build trust with governmental bodies. Many LFS actors noted that they do not feel supported in trying to build this alternative food system, and that the government could do much better in helping them and appreciating their efforts. Therefore, the *governmental policies or actions to promote local foodshed* is classified as **absent**.

4.3.2 Institutional design: sources of transparency and legitimacy

When exploring the government's role in ensuring collaborative mechanisms are transparent and legit, the following interviewee perspectives are relevant. One notable source of transparency and legitimacy in collaborative activities from local authorities was the collection of surveys for input on the 'Edible Dublin' food strategy, which will also be built on by input from producers and other actors in future (int7). This is not a statutory requirement, so this strategy would then be implemented by local authorities if they want to (int6). As councillors requested this strategy to be developed, plus the open collection of input from stakeholders (int6), it reflects the development of a transparent and legitimate LFS policy. The DFC also recognize that the supports available are "*often not visible, or operating in silos"*, and therefore want to bring actors together to collaborate and make them more cohesive and legitimate (int6).

However, several interviewees also outlined issues within the transparency and legitimacy of LFS governance on the national level. One government representative noted that there are collaborative measures that could be put in place in the new Common Agricultural Policy (CAP) agenda around pillar two on rural development policy, but as far as they are aware this hasn't been undertaken in Ireland (int1). The old CAP also gave flexibility on implementing various supportive elements in member states, and "*Ireland didn't use that in a way that was conducive to short food supply chain",* which was an "*opportunity missed"* (int 1). One farmer noted that there is "*deep seated functional problems"* in governmental agricultural bodies, which prevents imagination and innovation in policy development for LFS that focus on collaboration (int2). As noted by a government representative, there is a lack of data around what are the needs of local food system actors which therefore limits the ability to develop effective policy (int7).

Overall, there is some evidence of local authorities trying to improve the transparency of local food policy design, but the overlying national policy and actions is identified as a barrier to legit local level actions. Therefore, the *sources of transparency and legitimacy* condition is classified as **somewhat absent.**

4.3.3 Government as facilitative leaders

The primary example of the government leading collaboration is the establishment of the Dublin Food Chain (DFC) by the four LEOs of Dublin. The Dublin Food Chain "*is about showcasing all that is good and great in Dublin, and networking to encourage and foster those stakeholders in the community to network with each other"* (int6). The DFC wants to make LFS actor supports more visible (int6), and local authorities also want to draw attention to the LFS and help people understand how to support it (int7). The DFC is currently helping one producer "*bring [their] farmers market to life"* by giving guidance and creating proposals for ideas (int8). Local authorities are leading the development of the 'Edible Dublin' strategy, which stemmed from a request for a food strategy by councillors and as a means to bring the topics of food and climate change together (int7). However, there is research needed on the topic of sustainable food policy which goes beyond government resources available (int7), which may limit the effectiveness of this strategy. The 'Food Academy' programme is run by the DFC and the national supermarket SuperValu, and tries to increase LFS producers' access to collaboration with supermarkets to upscale their operations and retail more widely (int6,

int11). In their government-led networking events, the DFC "*deliberately try to create events that cater for many"* (int6). Local authorities have also provided financial resources to create a collaborative space of a shared kitchen (int4).

When it comes to governmentally led collaborative events or initiatives, however, producers and retailers are sometimes disincentivized from participating as they do not see the relevance for them (int3, int8). One retailer noted that although they are interested in collaboration, these initiatives often have "*a lot a vagueness around them"*, and often "*nothing really comes of them*" (int12). A co-operative member said that LEO supports do not deal with social enterprise entities like theirs, and that "*co-ops are explicitly excluded from some of their programmes if not all"* (int9). LFS retailers said that they feel disconnected from the facilitators of collaboration or networking events as they often don't know the realities of business and thus don't understand their needs (int4, int12):

> *"Most business owners feel that a lot of the people in those agencies never run a business, so they're not really in tune. They haven't got the empathy, they haven't had the sleepless nights, and so on"* (int4).

The fact that some LEO led networking events cost money indicated a lack of trust from a producer, as they stated that LEOs are "*making money out of it regardless*" (int5). It was noted by another interviewee that producers pay €10-15 for the DFC events and there is no membership fee for actors to join the DFC (int6).

As facilitative leaders, one key aspect is to facilitate dialogue and the sharing of perspectives and knowledge between actors, which has been carried out in several ways by governmental bodies. The collection of survey inputs for the 'Edible Dublin' strategy development gave a change for actors to share perspectives, and was mainly responded to by citizens (int7). Local authorities will give opportunities for other LFS actors to give input on this strategy (int7). A governmental agricultural advisory body organizes discussion groups for social learning between farmers, and although they would not focus explicitly on LFS development, they would discuss related aspects such as how farmers have developed SFSCs, how have they marketed and distributed their product etc. (int1). These collaborative discussions happen throughout the year and have proven to be useful for farmers' knowledge sharing around developing LFSs (int1). The DFC organize roughly 8-10 networking events

throughout the year, which are "*all about knowledge sharing and putting things together"* (int6). The DFC also organizes 'speed-dating' events for producers and retailers to come together to collaborate, and will be starting three cluster groups focused on peer learning for LFS actors next year (int6). Representatives from LEOs regularly try to speak with LFS actors directly to help them find contacts and collaborations that may help them (int11). The 'Eat the Streets' festival was a clear example of government stimulated face-to-face dialogue which gave the opportunity for actors to come together and build this event and showcase the LFS together (int6, int13), which resulted in "*organic collaboration"* between actors (int7).

However, some key issues were also identified around the facilitation of dialogue from governmental bodies. One interviewee highlighted that although actors themselves see the benefits of coming together to discuss issues, governments have not been creating the space or incentivizing face-to-face dialogue:

> "*Have the local authorities ever brought the farmers markets or the food producers into one room and said, okay, what are your challenges? What are your resources? What can we do to help you? I don't think that's ever happened."* (int8)

One farmer representative feels that governments are not encouraging or supporting them to sell locally, and although farmers are being listened to, it is not to the extent that they want (int10). A farmer said that the government is "*so focused on export that it couldn't imagine local markets and doesn't care about them*" (int2). Two interviewees said that local farmers collaborated to start a local market from their own will, but this was not supported by local authorities (int5, int10). This may stem from the fact that local authorities don't always see their role in food, and mainly see their role in business and planning, so this is a new space for them and is hard to build on (int7).

Overall, it is evident that there are mixed perspectives on the role of government's as facilitative leaders in Dublin's LFS. Although examples are prevalent of how governments are trying to support collaboration within this system, it is evident that these efforts are not being recognized and/or utilized by actors within this LFS. Therefore it could be argued that support of this system is more symbolic than practical, and that the national agenda of agri-food exports limits the ability of local-level governments to fully provide leadership supports for this system. This is similar when assessing how government's facilitate dialogue for

collaboration between LFS actors. Small steps are being taken to increase dialogue between LFS actors, but the fact that an actor stated that the government have never brought the relevant actors together to share perspectives and needs cannot be ignored. Therefore, it is clear that government's could vastly improve their role as facilitate leaders, and that this is a barrier to actors collaborating within this system as it is not being encouraged from the top-down. The *government as leaders* condition is therefore classified as **somewhat absent**.

4.3.4 Promotion of collaborative processes by government to date

The promotion of collaboration was evident in the development of the 'Edible Dublin' food strategy, in which citizens were welcome to fill in a survey to give input on their needs for the LFS, which accumulated in the "*really small*" number of 362 respondents (int7). The next steps of developing the strategy are plans for other actors such as producers to give their input (int7). The LEOs also try to promote collaboration by going to meet relevant actors, listening to their concerns and trying to connect them with other actors who may be able to give knowledge or support (int11). The LEOs and DFC collaborate and are "*very active"* with an enterprise centre in the area (int4). The DFC promoted collaboration by organizing various in-person or online networking events, such as events around selling food directly at farmers markets (int6) Events also aim to stimulate activity between actors, such as the food in tourism event which hotels, chefs, producers etc learned about one another's systems and discovered opportunities to work together (int6).

An identified incentive for government to stimulate Dublin's LFS is "*the potential to create employment number one"* (int11). Governments also want to build a stronger system for LFS supports and to bring all relevant actors together to make this system more connected and thus efficient and useful to citizens and new LFS actors (int6, int7). The local agencies of Dublin are very open to collaborative models (int6), and from hosting collaborative LFS events like the 'Eat the Streets' festival, they want to "*learn about collaboration and to just be brave with it and be creative"* (int7).

Such indications of government's promoting collaboration within this LFS are however limited in their translation into successful collaborative processes. This is evident in the aforementioned chapters which show that although governmental sources state they are promoting collaboration, private actors do not seem to agree. Many of the private actors interviewed showed evidence of successful collaborative processes in place, but they mostly

stem from intrinsic motivation to collectively build the LFS rather than government's fostering the conditions to do so. Many actors stated that they have very little experience of government genuinely promoting or supporting collaboration within this LFS (int3, int2, int5, int8, int10, int12).

Overall, there is some evidence of governmental bodies trying to promote collaborative processes within this LFS, namely though actions by the DFC and LEOs. However, it is difficult to decipher whether these actions are driven by a goal of building collaborative processes for the benefit of actors involved, or if this is driven by goals to promote employment in the food industry by giving actors the tools to upscale their businesses. As private actors gave little experience of government promoting collaboration, it can be argued that their approach is ineffective. Therefore, the *promotion of collaborative processes by governments* condition is classified as **absent.**

4.4 Overview of results and key findings

The in-depth overview of results provided contribute to answering the main research question of '*to what extent do actors successfully collaborate within the local food system of Dublin Ireland, and how does the role of government influence such collaboration?'.* Following the elaboration of the extent to which conditions for successful collaboration are present in Dublin's LFS and how such conditions are influenced by government, an overview of the findings is outlined below in Table 6. The presence of each condition based on the results collected are indicated by the Likert scale classification of *present, somewhat present, somewhat absent* and *absent*. The theoretical implications of these findings are discussed in the following chapter, but the results and how they contribute to answering the main research question will now be elaborated.

Firstly, overall results deduce that actors in Dublin's LFS are not successfully collaborating. This stems from the theoretical foundation that successful collaborations are indicated by the presence of five processes, as *face-to-face dialogue, trust building, commitment to process, shared understanding* and *intermediate outcomes.* As indicated in Table 6, none of these processes are fully present in Dublin's LFS, with three out of five indicated as somewhat absent. Both the *commitment to process* and *shared understanding* indicators scored as somewhat present. This is broadly due to actors outlining that although working within LFSs poses many challenges, they are driven by a deep understanding of the

benefits that LFSs can bring across pillars of sustainability and are committed to collectively bringing local food to their communities and support their local economies. Actors show that they are committed to collaborating due to shared understanding, but are limited in their capacity to participate in collaborative activities. Additionally, although there are some examples, there is overall lack of evidence of *face-to-face dialogue* and *trust building* being carried out in this LFS. Although actors acknowledged the importance of dialogue and that they are trying to foster it in some cases, it is clear that there is limited evidence in practice and this process deserves more attention. This understanding but lack of practical evidence is also evident with actors building trust, showing that both of these processes could be improved with the correct conditions in place. Such conditions should harness the prevalent motivations for actors foster dialogue and trust and build collaborations, but currently conditions are unfavourably shaping these processes.

As evident in the data collected, these relatively unsuccessful processes are heavily influenced by the many factors depicted in exogenous conditions of collaboration. However, findings show that the absence of favourable *starting conditions* quite influential. Although many actors indicated that they recognize the importance of collaboration for LFS development and are intrinsically motivated to work together to sustain this system, their lack of resources, capacity and incentives to participate limits their ability to do so. The fundamental challenges of working in the niche LFS sector was repeatedly identified as preventing actors' ability to collaborate, as they are already limited in their time and financial resources in trying to keep their small-scale businesses surviving against the conventional food system. Although the *starting conditions* were not explicitly linked to the role of government in the theoretical framework, it can be argued that if there was more governmental support for LFS actors they could have sufficient resources and thus higher capacity to collaborate.

This argumentation links with the final aspect of the results which how the role of government influences collaboration in Dublin's LFS. The most notable finding was that all of the four conditions related to the role of government were classified as absent or somewhat absent. The absence of *policies or actions to promote local foodshed* was elucidated by many actors stating that they feel inadequately supported by government and that policies are not encouraging or incentivizing LFS development. As previously argued, this has influenced the

starting conditions in which actors do not have the capacity or resources to collaborate as they are trying to keep their initiatives going in a challenging agri-food political regime. The lack of supportive LFS policies has also generated a lack of trust between private actors and governmental bodies, which is reinforced by the absence of *promotion of collaborative processes by government to date.* Actors highlighted that although the government are creating some opportunities for collaborative processes through networking events or trainings, these initiatives are not being recognized or utilized by private actors as they do not see the relevance or benefit for them. This highlights that the cases of *government as leaders* in collaborative processes are somewhat absent as they often do not translate into practical, beneficial or tangible results for private actors. Conversely, cases of *private actors as leaders* were notably the only condition to score as fully present, with evidence of actors recognizing the benefits of collaboration and fostering it to solve collective challenges. Many of the collaborative initiatives noted stemmed from private actor leadership, but were difficult to sustain due to the aforementioned challenges of small-scale initiatives trying to survive without sufficient top-down support. Overall, it is evident that the role of government influences the unsuccess of collaboration in Dublin's LFS.

Table 6 Results overview: extent of collaborative conditions in Dublin's LFS

	CONDITION	DESCRIPTION	MAIN FINDINGS	RESULT
PROCESS CONDITIONS	Face-to-face dialogue	*Opportunities /experiences of in-person dialogue*	-Discussions recognized as an important factor by some actors, evidence of some actors trying to foster dialogue - Lack of evidence of opportunities for regular dialogue, facilitated by either private and/or state actors	**SOMEWHAT ABSENT**
	Trust building	*Access, standing & influence*	- Some actors show trust in their motivation to work together and share knowledge - Lack of evidence of trust building processes with actors within this system more broadly	**SOMEWHAT ABSENT**
	Commitment to process	*Motivation*	- Motivated by common goals of addressing food system challenges - Desire to collectively showcase local produce - However farmers often value autonomy	**SOMEWHAT PRESENT**
		Personnel (used time)	- Actors often show time commitment when an initiative is relevant, and through instigating their own projects - Potential collaborators are often limited by time constraints	
		Financial resources	- Some actors are open to financial investment in collaboration due to their shared motivation - Lack of concrete evidence of valuable financial investment in collaboration, due to limited resources	
	Shared understanding	*Common vision & goals*	- Actors within LFS have strong shared understanding - Actors on periphery or outside of system lack understanding of collaboration	**SOMEWHAT PRESENT**
	Intermediate outcomes	*Small, early wins help to leverage progress towards common goals*	- Some examples of outcomes achieved through collaborative actions - However evidence is limited - Many said to be expanded in future, but this may be aspirational	**SOMEWHAT ABSENT**
EXOGENOUS CONDITIONS	Starting conditions	*Incentives to participate*	- Incentive: Motive to bring people together - Disincentive: Lack of resources and limited number of actors in the LFS	**ABSENT**
		Resource/ capacity constraints	-Financial, time and resource constraints prevalent across actor types -Capacity constraints in lack of understanding around collaboration	**ABSENT**
		Trust among actors	- Trust prevalent in actor willingness to work together - Mistrust extremely prevalent from private actors to government due to national agenda of export-driven food	**SOMEWHAT ABSENT**
	Institutional design	*Structure of supply chains*	- SFSCs are difficult to obtain - National agenda of export-driven supply chains is a barrier - Supermarkets affect the feasibility of SFSCs	**ABSENT**
		*Governmental policies or actions to promote local foodshed**	- Some examples of how government funding and support helped LFS actors - Overall, strong sense of a lack of supportive action from the government in helping LFS actors develop this system, with many saying much more is needed	**ABSENT**
		*Sources of transparency and legitimacy**	- Some local level efforts to improve transparency and legitimacy of LFS policy and collaborative processes - National policy and actions are identified as having transparency and legitimacy issues inconducive to LFS,	**SOMEWHAT ABSENT**

	Facilitative leadership	*Private actors as leaders*	- Many private actors show motivation to lead collaborations with evidence of them bringing actors together to face collective challenges	**PRESENT**
		*Governments as leaders**	- Symbolic actions to support the LFS and facilitate dialogue between actors - Overall this is not translated into practical or concrete leadership	**SOMEWHAT ABSENT**
		*Promotion of collaborative processes by governments to date**	- Government actors indicate that they promote collaborative processes - However, private actors share little evidence of this	**ABSENT**

5. Discussion

The findings of each research question provide strong insight into the dynamics of collaboration and governmental leadership in Dublin's LFS. This chapter will now discuss the theoretical implications derived these findings, by drawing insight and conclusions about the relationships applied within theoretical framework. The limitations to the applied methodology for this study and recommendations for future research are then discussed.

5.1 Success conditions for collaboration in local food systems

Results derived in this study reveal some key findings and overall conclusions that can be drawn about the main theoretical relationships applied in this analysis. The theoretical framework for this study argued that collaboration is fundamental in LFSs, and successful collaboration is indicated by the presence of five collaborative processes of *face-to-face dialogue, trust building, commitment to process, shared understanding* and *intermediate outcomes* indicate successful collaboration. These processes are shaped by exogenous conditions of *starting conditions, institutional design* and *facilitative leadership,* which all influence how actors engage in successful collaboration (Ansell & Gash, 2008). Building from the work of Kang et al. (2022), this theory is an appropriate lens to assess LFS collaboration and was conducive for the findings of this study.

Firstly, the five identified processes are a valuable indicator of collaborative success. Sustained and regular opportunities for dialogue are deemed as the foundation in which successful LFSs collaborations are built (Chrysanthopoulou et al., 2022; Hedberg & Zimmerer, 2020; Mason & Knowd, 2010). This was true in the Dublin case, as the absence of *face-to-face dialogue* directly impacted the extent to which other conditions were present. As argued by Prutzer et al. (2021), actors must have opportunities to share perspectives in order to ensure *trust building*. The same is true for *commitment to process,* which can be developed through continued dialogue between actors (Barlett, 2017; Knickel et al., 2018). This aligns with findings of this study, in which the lack of face-to-face interaction between stakeholders prevented some actors from trusting one another or committing to collaborative initiatives. It is also clear that having a *shared understanding* indicates successful collaboration, and in line with the work of Planko et al. (2019), actors in this case showed that they collaborated more effectively with others that had a common vision and goals. The little evidence of *intermediate outcomes* in this case also discouraged actors from collaboration. As argued by

Knickel et al. (2018), the prevalence of intermediate outcomes often reflects the success or failure of a collaborative initiative, which is true in the case of Dublin. Overall, these five indicators developed by Ansell and Gash (2008) are a useful framework to assess the success of collaboration in LFSs.

Secondly, the identification of three exogenous conditions that shape successful collaborative processes were also aligned with the findings of this study. As evident in the results, the absence of favourable starting conditions was a key barrier to successful collaboration in this case, which aligns with Ansell and Gash's (2008) argument that collaborations will be unsuccessful if actors are disincentivized and lack resources or trust from the outset. The inclusion of *private actors as leaders* based on the findings of Kang et al. (2022) was also an important exogenous condition and the only that classified as present, and it was clear that private actors played a central role in facilitating collaborative processes in many interviewee examples. Thus the condition of facilitative leadership was influential in shaping the success of collaboration, which is elucidate further by the role of government as leaders. Overall, the extent to which certain exogenous conditions were present was reflected in the (un)success of collaboration in this case, which aligns with the relationship between these variables as identified in literature (Ansell & Gash, 2008).

5. 2 The role of government in influencing successful collaboration

This study also revealed that there is relationship between the role of government and successful LFS collaboration. The novel theoretical framework applied to this research was generated through altering the Ansell and Gash (2008) model to include exogenous conditions shaped by government, as derived from a review of literature on LFS collaboration. This analytical tool was useful to elucidate the means in which governmental (in)action directly influences successful collaborative processes. The most prevalent was the fact that interviewees noted how insufficient *governmental policies or actions to promote the local foodshed* heavily affected *starting conditions* of collaboration. Actors often felt that LFSs are unappreciated and do not receive adequate support or resources from government to keep this alternative system going. This affected the success of collaborative processes as actors were often limited in what they could contribute. This links with literature that unfavourable policies reduce actor capacity, resources or willingness to collaborate within LFSs (Jarzebowski et al., 2020; Mulligan et al., 2018). Arguably, if policies sufficiently supported LFS

and thus incentivized more potential actors to join this niche system, successful collaboration would be more likely (Mulligan et al., 2018).

Additionally, this study notably elucidated that although government initiatives and representatives stated they were supporting LFS actors and promoting collaboration, this was not the case in practice for private actors. As argued by Laforge et al. (2017), opportunities for government to foster LFS collaboration must be committed and sustained in order to achieve transformative change. This was the case in Dublin, in which the government mainly facilitated collaboration through organizing networking events or trainings, but such opportunities were dispersed and lacked continuity or long-term participation. Actors noted how they deemed these events to therefore be irrelevant and unhelpful for them, whereas longer term sustained governmental interaction could entice more actors (Laforge et al., 2017) and create more opportunities for cross-learning (Jarzebowski et al., 2020). Genuine cases of governments fostering collaboration could enhance the possibility for actors to build on collaborative processes (Laforge et al., 2017). Overall, the updated theoretical framework applied to this study was a useful analytical tool to identify the relationship between the role of government and success conditions for collaboration in LFSs. As elucidated in this research, governmental (in)action impacted upon the success of LFS collaboration, and thus deserves adequate attention in future studies on LFS collaboration.

5.3 Limitations

Although this study generated some interesting and relevant results that contribute to the understanding of collaboration and governmental influence in LFSs both in Dublin and more broadly, there are several limitations to the methodology applied. Firstly, interviews were the main form of data collected, which were conducted with 13 actors representing different roles. Such interviewees provided valuable insight for this research, but the limited number of participants may impact the general conclusions which can be drawn for this case. Many of the interviewees represented producer and government roles, but further research is needed to understand and include a wider variety of perspectives, such as more insight from retailers and consumers.

Additionally, this study was limited in time and scope to fully understand the dynamics of collaboration at play in this case. Although an overview of the presence or absence of collaborative conditions was presented, this is quite a general overview based on the limited

attention that was placed on each condition. As conditions of collaboration represents quite complex social relations and are influenced by a diversity of factors, more attention is needed for each individual condition to fully understand relationships between them.

Finally, conducting a case study analysis in the LFS of Dublin to understand this topic has provided insightful results, but it is clear that there is limited evidence of successful and sustained collaborative initiatives occurring in this case. Therefore these overall findings are somewhat limited as the relationships between particular conditions, particularly in relation to the role of government, may show different results in more well-established and functioning LFS. Although it is clear that a lack of government support has affected the success of collaboration in this case, studies are needed to apply this theoretical framework to LFSs of different scales to validate the relationship between government and successful collaboration.

5.4 Recommendations for future research

Based on the limitations to this study, several recommendations for future research can be drawn. Firstly, further in-depth research is needed to gather an understanding of each collaborative condition in this case and the relationships between them. Such research would provide better insight into the enablers and barriers to successful collaboration in this case, and should include a larger range of participants to represent a more diverse range of actor roles and perspectives. The inclusion of more perspectives would provide deeper understanding into which conditions deserve most attention. Further studies could also focus on evaluating particular cases of (un)successful collaborative initiatives in Dublin's LFS and conducting an in-depth analysis into how certain conditions influenced this case. Overall, further research into the Dublin case could result in the identification of key leverage points to affect real change and stimulate successful collaborations going forward.

Further research into the conditions of collaboration and relationships between them more broadly should also examine how conditions evolve over time. This would contribute to answering some key questions, such as '*how do changes to one condition affect another? Are there feedback loops happening between particular conditions? Which conditions depend strongly on one another, and which don't?*' Although this study can provide some answers to these questions, further research is needed on a long-term case study to fully comprehend the dynamics of these conditions as collaborations evolve.

Finally, to test the theoretical framework more broadly, further research is needed to apply it in varying LFS contexts. This study could be conducted in a different country to understand how regional or national contexts influence collaboration on the local level. This is to provide a deeper analysis of how national agri-food policies shape collaborative LFSs, as it was prevalent that Ireland's productivist export-driven agri-food agenda directly prevented collaboration and the ability of local governments to facilitate collaboration in the Dublin case. This was because national policies did not provide the necessary resources to LFS actors and limited the capacity of governments, leading to limitations in their abilities to successfully collaborate. Conducting similar research in a country with a different national agenda around food would provide insight into how alternative governmental structures influence the success of LFS collaboration.

6. Conclusion

This study aimed to assess the success conditions and role of government in LFS collaboration through a case study analysis of the LFS of Dublin, Ireland. The conduction of interviews and an in-depth analysis of data provided a comprehensive answer to the main research question of '*to what extent do actors successfully collaborate within the local food system of Dublin Ireland, and how does the role of government influence such collaboration?*'

Overall, private actors show motivation to work collaboratively within this system, in which they often have a shared understanding of the importance of LFSs and want to collectively address sustainability challenges. Actors elucidated their interest and willingness to participate in collaboration, but several exogenous conditions influence their ability to do so. Findings show that almost all of the necessary conditions to foster successful collaboration are absent, many of which relate to government (in)action in supporting actors with enabling LFS policies and opportunities to effectively collaborate. The starting conditions for collaborative processes are weak, in which actors identified that they have limited resources or capacity to collaborate due to the lack of support given to this sector. This reflects the challenges faced by actors within niche LFSs more broadly, namely due to systemic issues driven by export-driven conventional food systems.

Results indicated that overall collaboration is unsuccessful in Dublin's LFS, and this is heavily influenced by the role of government. Such conclusions can be drawn from applying a theoretical framework to analyse the relationships between collaborative processes and successful LFS collaboration. This framework also integrated conditions related to the role of government to understand how they affect successful collaboration. The application of this theory elucidated some key findings and proved to be an appropriate means of understanding the dynamics of collaboration in this LFS case study. Based on the findings of this study, it can be argued that the role of government influences the success of collaboration in LFSs. Further research is needed to test this argument by analysing each collaborative condition in-depth, over time and in varying contexts to fully understand relationships between them. Overall, this study shows that LFS actors are quite willing to collaborate, but governments can do more to support this alternative food system.

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Appendices

Appendix 1: Interview Questionnaire

The following questions were used as a guidance for formatting questions in each interview. However, the questions were adjusted to reflect the actor roles and their related experiences.

1. What is your role in the LFS of Dublin?
2. Have you collaborated with other actors in this system? How?
3. What actors, doing what roles, have you collaborated with?
4. What role, if any, have the government played in this collaboration?
5. Is there an understanding or emphasis on collaboration as a means to enhance Dublin's LFS?
6. How have the government played a role in Dublin's LFS? How has this affected you?
7. Do you think actors have a common vision for Dublin LFS? Have actors had opportunities to define this together?
8. How do you think governments could better facilitate collaboration between LFS actors in Dublin?
9. What do you need from government to collaborate with other actors?

Appendix 2: Informed consent form

Utrecht University **INFORMED CONSENT FORM for participation in:**

Collaborative governance for local and regional food systems: The role of governments in fostering collaboration between stakeholders in Dublin, Ireland

To be completed by the participant:

I confirm that:

- I am satisfied with the received information about the research;
- I have been given opportunity to ask questions about the research and that any questions that have been risen have been answered satisfactorily;
- I had the opportunity to think carefully about participating in the study;
- I will give an honest answer to the questions asked.

I agree that:

- the data to be collected will be obtained and stored for scientific purposes;
- the collected, completely anonymous, research data can be shared and re-used by scientists to answer other research questions;

I understand that:

- I have the right to withdraw my consent to use the data;
- I have the right to see the research report afterwards.

Name of participant: Type here

Signature: _____ Date, place: xx / xx / xx, xxx

To be completed by the investigator:

I declare that I have explained the above mentioned participant what participation means and the reasons for data collection. I guarantee the privacy of the data.

Name: Sarah Nolan

Date: 04 / 12 / 2022(dd/mm/yyyy)

Signature: Sarah Nolan