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The role of intermediaries in promoting
small-scale farmer resilience
during a crisis

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The Farmer

The king may rule o'er land and sea,
The lord may live right royally,
The soldier ride in pomp and pride,
The sailor roam o'er ocean wide;
But this or that, whate'er befall,
The farmer he must feed them all.

The writer thinks, the poet sings,
The craftsmen fashion wondrous things,
The doctor heals, the lawyer pleads,
The miner follows the precious leads;
But this or that, whate'er befall,
The farmer he must feed them all.

The merchant he may buy and sell,
The teacher do his duty well;
But men may toil through busy days,
Or men may stroll through pleasant ways;
From king to beggar, whate'er befall,
The farmer he must feed them all.

The farmer's trade is one of worth;
He's partner with the sky and earth,
He's partner with the sun and rain,
And no man loses for his gain;
And men may rise, or men may fall,
But the farmer he must feed them all.

God bless the man who sows the wheat,
Who finds us milk and fruit and meat;
May his purse be heavy, his heart be light,
His cattle and corn and all go right;
God bless the seeds his hands let fall,
For the farmer he must feed us all.

Amelia E. Barr (1831 – 1919)

The role of intermediaries in promoting small-scale farmer resilience during a crisis

Abstract

Despite the attention placed on improving small-scale farmer resilience and sustainability in the face of climate change, very little is understood about how small-scale farmers respond during abrupt disruptions. To build resilience in small-scale farmers, decision-makers tend to invest in physical assets and in improving preparedness, reducing vulnerabilities, and implementing resilience-enhancing upgrades. However, evidence from disaster literature presents social capital, and disaster entrepreneurs and spontaneous ventures, as critical to community recovery. Therefore, this study explores the role of these types of ventures and their intermediary role for small-scale farmers during a crisis. It also describes how they use social capital to promote small-scale farmer resilience. The Covid-19 pandemic caused a dual crisis to supply chains by disrupting both the supply and demand of food. Government regulations reflected a continual undervaluing of the informal sector and exposed just how fragile small-scale farmer supply chains are.

A longitudinal qualitative study was conducted between April 2020 and March 2022 on small-scale farmers from three diverse socio-geographic regions in three provinces in South Africa. The results showed that intermediaries were critical to the recovery of small-scale farmers. Spontaneous ventures acted as intermediaries and existing intermediaries adapted to respond to the critical needs of farmers in the crisis. Intermediaries worked together to create new pathways for food to flow by constructing alternative supply chains. A key argument is that there are two distinct kinds of intermediation that have, and make use of, the type of social capital that is available to them. These are labelled 'bridging' and 'bonding' intermediaries. It is impossible for a single intermediary to fulfil both roles, especially in contexts such as South Africa with dual economies. The research thus asserts that two kinds of intermediaries are required in order to connect these two distinct but complementary competencies and relationships. This knowledge is important for disaster managers, corporations and international development organisations focussed on developing small-scale farmer resilience, especially in abrupt crises but also for more gradual disruptions, such as climate change.

Key words: Covid-19, intermediaries, spontaneous ventures, alternative supply chains

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List of terminology

Abrupt crisis	Abrupt or sudden crises are those which cannot be prepared for, are unpredictable in nature, and immediate disaster follows
Bonding intermediaries	Intermediary actors who have and make use of a relational social capital with farmers. For example, they have close ties with the farmers, are in close geographic proximity, and have similar socio-economic and demographic characteristics.
Bridging intermediaries	Intermediary actors who bring bridging ties to support farmers. These are intermediaries with loose ties to external networks that can provide information and resources not otherwise available at the local level. They provide a link between heterogeneous actors or between formal and informal institutions.
Covid-19 pandemic	A global pandemic, also known as the coronavirus pandemic, is a highly contagious respiratory disease.
Covid crisis	Weeks 0 – 22 of South Africa’s lockdown during which were the strictest Covid regulations. This crisis had disastrous consequences for both the economy and humanity. The global and national regulations of movement during the Covid-19 pandemic impacted both supply and demand-side of the domestic and international food supply chains.
Consumer donors	'Crowdsourced', low-value donations made by anonymous individuals or groups of people. In this study, consumer donors used a concept where donors 'purchased' a 'harvest bag'. The purchased product is not delivered to the buyer; it is the Rand value attached to a box of fresh vegetables that can be sourced from small-scale farmers and delivered to food relief schemes.
Hard lockdown	The nationwide lockdown that involved complete prohibition on the movement of people and goods not deemed essential service.
Harvest bag	Consists of 4 – 7 kg of mixed fresh vegetables, sometimes including eggs and additional dry goods, and 1 kg of protein, such as fish or chicken. The purchases were used to source produce from small-scale farmers and sustain their businesses and families during Covid. The food was then delivered to community organisations and soup kitchens that distributed the food to marginalised communities.
Off-take	Informal or formal agreements to purchase produce.
Pro-poor development	Growth aimed at reducing levels of poverty
Resilience	The ability and active responses of actors to rebound and return to an original or adapted version of operation.
Small-scale farmers	Farmers that may have access to large tracts of land but are operating on a small scale of production. Their operation ranges from completely subsistence-orientated farming to cash-crop farming.
Social capital	A summarising definition of social capital is; the resources (tangible or intangible) gained (immediately or delayed) from interdependent networks of existing trusted relationships with shared characteristics (norms and values) and anticipated reciprocity (directly or indirectly) facilitating collective action or a social licence to operate.
Supply chain	Linked processes and actors involved in the production and supply of a commodity, which in this study is food.

Chapter 1: Introduction

Overview of the South African context of small-scale farmers and the Covid-19 crisis

According to the Food Insecurity Experience Scale, 23.6% of South Africans in the country during 2020 experienced moderate to severe food insecurity and 14.9% experienced severe food insecurity (Department of Statistics South Africa, 2020). This is attributed to a number of factors including income, employment, and the ability to produce food (Department of Statistics South Africa, 2020; OXFAM, 2020).

In the past two decades, the inclusion of small-scale farmers into food supply chains has become a strategy for pro-poor development (Tobin et al., 2016), poverty alleviation (Ros-Tonen et al., 2019) and other national and global development goals (Hinson et al., 2019; Ros-Tonen et al., 2019). In 1994 in South Africa, the Reconstruction for Development Programme began the shift toward a more sustainable agricultural system, and in 2009 rural development was identified by the government as a national priority (Aliber et al., 2013). Focus on bolstering small-scale agriculture and including its farmers into formal commercial supply chains became the approach to restore restitution to previously marginalised rural areas of South Africa (Aliber et al., 2013) through its ability to bring food and job security (Mangnus, 2019; Nájera, 2017; Ros-Tonen et al., 2019). Aliber et al. (2013, p. 2) report that, "In practice this commitment dissolved as agricultural budgets were slashed in efforts to stabilise the overall economy and as agriculture was modernised, leading not to more small-scale opportunities but to the consolidation of land and agricultural resources among fewer large-scale producers."

Covid-19 first reached South Africa in March 2020, and within a month South Africa was declared a national state of emergency. A nationwide lockdown was enforced that involved complete prohibition on the movement of people and goods not deemed essential services. There was confusion as to what were considered essential services. Regulations grossly undermined the value of the informal food economy. Furthermore, the government's response revealed a persistent underlying bias toward large actors and formal supply chains. This 'hard lockdown' lasted from 27 March 2020 until the end of September 2020.

In the face of the Covid-19 pandemic ('Covid'), there is renewed interest in both the precariousness of small-scale farmers (Choularton & Mallory, 2020; Grootes, 2020b; Shilomboleni, 2020; van der Ploeg, 2020) and their valuable responses in times of such

disruption (Hamann, 2020; van der Ploeg, 2020). In this paper, weeks 0 – 22 of lockdown are referred as the 'Covid crisis', or 'crisis'.

For the purposes of this study, the use of the term 'small-scale farmer' was preferred instead of the well-used term 'small-holder farmer'. This was to include farmers who may have access to large tracts of land but are operating on a small scale of production. I use the term small-scale farmer and farmer interchangeably throughout this thesis. Although there is much debate on the determining parameters of small-scale farmers, researchers seem to agree that they fall into a continuum that ranges from completely subsistence-orientated farming to cash crop farming (Aliber et al., 2013; Greenberg, 2020; Jacobs & Altman, 2009; Kirsten & Van Zyl, 1998; Louw et al., 2007; Pienaar & Traub, 2015). There is cause, however, to interrogate land size and relative income as imperative to defining small-scale farmers. Kirsten and Van Zyl (1998) suggest that if gross income is used to define small-scale farmers, then small-scale farmers should be less than R500 000, which according to the 2007 Census includes 56.6% of commercial farmers. This supports the notion that small-scale farmers can range from purely subsistence-based on small tracts of land to purely commercial on large tracts of land.

The amount of land available is also an uncertain measure of the definition as some producers may have large amounts of land at their disposal but only use small portions or use it unproductively while others may have small amounts of land with a high level of productivity. Because the importance of size of land will differ depending on the intensity of the type of production Aliber et al., (2013) suggest that land size can be up to 60-80ha. This will encompass all types of extensive or intensive production, productive or unproductive producers. Then, an income measure must be applied in conjunction to filter out producers that derive large incomes from farming (Aliber et al., 2013; Kirsten & Van Zyl, 1998).

Although small-scale farmers need not be equated with black farmers only, the broad public opinion in South Africa of the term small-scale farmer, when considering pro-poor development, is synonymous with black farmers (Chikazunga & Paradza, 2013; Kirsten & Van Zyl, 1998) who are resource poor (Department of Agriculture, Forestry and Fisheries, 2012). Poor rural households usually generate some income from farming; however, Kirsten & Van Zyl (1998, p. 558) also advocates that small-scale agriculture should not be unanimous with, "backward,

non-productive, non-commercial, subsistence agriculture that we find in parts of the former homeland areas.” Using the term smallholder becomes problematic, according to (Cousins, 2010), because homogenising the producer risks producing generalised practises, and policies and definitions should be used together with a qualifying criterion. For this reason, I have chosen to focus on emerging black small-scale farmers on small tracts of land with low levels of gross income as my research area. This is in response to several global and national priorities such as the government's focus on agrarian reform, the growing need for food security, poverty and unemployment reduction strategies, the racial disparities of South Africa’s political past and the large dependency of the poor of the country on agriculture for daily nutrition, employment opportunities, and supporting household livelihoods (Aliber et al., 2013; Carelson et al., 2021; Chikazunga & Paradza, 2013; Cousins, 2010; Department of Agriculture Forestry and Fisheries, 2012, 2013; Jacobs & Altman, 2009; Kirsten & Van Zyl, 1998; Louw et al., 2007). The farmers in my sample selection are a combination of subsistence farming and commercial crops which are grown on government or tribally owned land 1 to 20 hectares in size.

Several scholars voice concerns about the low levels of resilience and high levels of vulnerability of small-scale farmers (Abdul-Razak & Kruse, 2017; Alinovi et al., 2010; Makate et al., 2019; Sinclair et al., 2014; Speranza, 2013; Vroegindewey & Hodbod, 2018; Wegerif, 2020). Past studies have exposed the fragility of their participation in food supply chains (Jacobi et al., 2018). Frequent price fluctuations and stringent “buyer-driven governance mechanisms” made formal supply chain participation risky e.g., rejection of sub-standard produce and expensive contamination risk reduction methods (Ajwang, 2020). As a result, small-scale farmers regularly exited and re-entered the market depending on producers’ perspectives on the prevailing risks (Ajwang, 2020; Granja & Wollni, 2018). The lack of access to land, water, inputs, and technology worsened their prospects of remaining in food supply chains (Jacobi et al., 2018).

The Covid-19 crisis exposed just how fragile these supply chains are, especially for small-scale farmers who are already precariously positioned. The Covid-19 regulations favoured those supplying supermarkets, and as Wegerif (2020) describes, “... have reflected a continued undervaluing and undermining of this sector to the detriment of the traders themselves, their suppliers, and their customers.” Many small-scale farmers sold to informal markets and schools

that supported 70% of township households (OXFAM, 2020). Restaurants, hotels, and big events were closed instantly by lockdown restrictions, many of whom were customers of the small-scale farmers and never opened again post-lockdown (A. Smith, 2020). At the onset of the crisis, Hall commented: "We now face the prospect that the informal sector will suffer a massive setback, further pushing large numbers of people out of economic activity and into desperate poverty and lethal hunger, while further consolidating corporate domination in South Africa's food system" (R. Hall et al., 2020). The development of small-scale farmers and their inclusion in food supply chains have been identified as a key to alleviating poverty. Therefore, it is essential to nurture an enabling environment and ensure that they remain as active participants (Chikazunga & Paradza, 2013; Cousins, 2010; Department of Agriculture Forestry and Fisheries, 2012, 2013; Jacobs & Altman, 2009; Kirsten & Van Zyl, 1998; Louw et al., 2007).

This leads to the focus of my research: creating alternative supply chains in a time of crisis in order to maintain the valuable inclusion of small-scale farmers. An alternative supply chain is either a new network of buyers or sellers or the construction of an alternative mode of supply chain functioning (Renting et al., 2003). It is important to note that there is research that shows that there can be unintended negative consequences known as 'adverse incorporation' (Hickey & du Toit, 2007), which emanate from entering the formal supply chain (Aliber et al., 2013; Granja & Wollni, 2018; Hickey & du Toit, 2007; Mangnus, 2019; Tobin et al., 2016). I have carefully considered these consequences, but acknowledge that my research focusses on the positive potential outcomes of supply chain inclusion.

Overview of relevant literature and literature gaps

The existing literature on the resilience of small-scale farmers tends to focus on climate change. Much of what is considered a crisis in this body of research refers to predictable, slow-burning, weather-related crises such as droughts or excessive rain and associated diseases (Speranza, 2013; Vroegindewey & Hodbod, 2018). Researchers point to adapting farming practise to better preparation, or to reducing farmer vulnerability through risk mitigation strategies, which include diversifying crops, building financial buffers, and adopting innovations (e.g. genetically modified weather resilient seeds) (Abdul-Razak & Kruse, 2017; Jacobi et al., 2018; Makate et al., 2019; Nwafor, 2020; Schramski & Keys, 2013; Speranza, 2013). The likelihood of

farmers adopting resilient practises depends on the level of education of farmers, gender, and access to key financial and technical resources. Some researchers suggest addressing these obstacles to improve small-scale farmer resilience (Abdul-Razak & Kruse, 2017; Jacobi et al., 2018; Khoza et al., 2019; Makate et al., 2019). Although this type of farmer resilience is well documented, knowledge on small-scale farmer resilience during sudden disruption is limited.

The literature gap directed me to review the important role of supply chain intermediaries in supporting small-scale farmer inclusion in supply chains, with the intention of discovering how they perform this function during a crisis. In agriculture, intermediaries are often referred to as middlemen, brokers, or bridging organisations, among others. Examples of intermediaries are governmental agencies, NGO's, agribusinesses, cooperatives, aggregating markets, retailers, extension officers, or farmer organisations (Iyabano et al., 2021; Koutsouris, 2012).

Studies reveal a high prevalence of intermediaries in countries such as South Africa with a dual formal and informal economy (Luiz & Guchu, 2022; Pedroza, 2013). Intermediaries traverse the contrasting formal and informal institutional environments by understanding their different rules, behaviours, and mindsets, and in so doing, buffer the heterogeneity of the actors and perform a 'translator' role (Aliber et al., 2013; E. J. Davis et al., 2015; Iyabano et al., 2021; Kivimaa et al., 2020; Koutsouris, 2012; Luiz & Guchu, 2022; Schramski & Keys, 2013; van der Meulen et al., 2005). The in-depth knowledge that intermediaries have about the unique institutional functioning of small-scale farmers has the potential to make them rapid responders during a time of crisis. It puts them in a position to be highly valuable access points between relief aid and farmers. This swift responsiveness, knowledge of external support, and understanding of the needs of farmers can foster innovative opportunities as farmers adapt to the new and unique demands of the crisis. However, in the academic literature, the role of intermediaries in supporting small-scale farmer inclusion during a crisis remains unknown.

This led me to review the literature on disaster responses. The findings present social capital, spontaneous ventures, and disaster entrepreneurs as critical to community recovery. Social capital scholars bracket social capital into different types, such as bridging and bonding social capital (Acquaah et al., 2014; Adler & Kwon, 2002; Aldrich & Meyer, 2015; Putnam, 2000).

There is evidence that having both types of social capital can improve the speed of response and recovery of the affected community (Aldrich & Meyer, 2015; Shepherd & Williams, 2014). The literature also provides empirical evidence that spontaneous compassionate responses (whether new ventures or entrepreneurial adaptations to existing ventures) are critical to community recovery (Aldrich & Meyer, 2015; Grube & Storr, 2018; Hamann, 2020; Linnenluecke & McKnight, 2017; Shepherd & Williams, 2014). Recently, scholars in this field have turned their attention to the beneficial role of social capital in supporting the responses and functions of disaster entrepreneurs. Yet, what remains unanswered are the questions “*What is the role of intermediaries during a crisis?*” and “*How do they use social capital to promote small-scale farmer resilience?*”

Overview of research method, planning, design, and data collection and analysis

My research began in April 2020 after South Africa declared a national state of emergency due to the global Covid-19 pandemic. This was when government regulations enforced immediate travel restrictions, closure of schools, and all business operations unless deemed essential services as determined by the Department of Trade, Industry and Competition. I chose a qualitative approach to my research to perform an in-depth analysis of the actors. The analysis seeks to understand the nature of the relationship between small-scale farmers and intermediaries during a time of crisis and to discover the critical role that intermediaries play. In early conversations with peers, I became interested in a spontaneous venture that performed an intermediary function by linking small-scale farmers to an alternative market. This became my primary case.

In my initial observations, it soon became apparent that intermediaries performed two kinds of roles. I therefore split them into two categories: bridging intermediaries and bonding intermediaries. This early distinction between bridging and bonding intermediaries helped me identify my cases. Together with the small-scale farmers, they formed a nested case study with an emic focus for data collection.

I applied a systematic inductive research process to understand complex social constructs and to build theories. I adapted Eisenhardt’s 8-step process to provide structure and academic rigour. I continuously adapted and responded my inquiry to the knowledge that emerged from

human experiences and my personal observations (Corbetta, 2011). To build an information-rich study, I conducted a longitudinal study that spanned from the beginning of lockdown in April 2020 (government regulations 'Level 5' strict lockdown), to the transition to 'Level 1' in March 2022 (all industries had reopened, movement restrictions were lifted, with some remaining regulations such as mask wear in public). The temporal lens of the longitudinal study provides information on how the crisis unfolded over time. It looks at the initial emerging response of the cases and at the evolving response of intermediaries. Patterns began to emerge regarding intermediaries and social capital. These helped determine the data I would collect and, together with the review of the literature, informed my research question (Yin, 2018).

Based on my research question, the proposal writing process, and peer reviews, I determined that my unit of analysis would focus on bridging intermediaries, bonding intermediaries, and small-scale farmers. I used a combination of three disaster research scholars (Grube & Storr, 2018; Linnenluecke & McKnight, 2017; Shepherd & Williams, 2014) to inform the boundaries of my case selection. These boundaries include new or existing ventures that improvised or adapted to the crisis, with a particular focus on the behaviours and practises critical to the recovery of small-scale farmers. In my quest to conduct an 'information rich' study, I purposely identified these groups of intermediaries and small-scale farmers from various socio-geographic settings within South Africa. Cluster 1 was in an urban context in the Western Cape; Cluster 2 was in peri-urban parts of KwaZulu Natal; and Cluster 3 was in the deep rural regions of the Eastern Cape. I travelled to each area to conduct the interviews in person where there were cultural, educational and technological constraints to performing these interviews online. This afforded me the opportunity to gather valuable first-hand observations.

In light of extant disaster research, there were three noteworthy features in my data collection. First, I was able to conduct in-person interviews and gather observations given the travel restrictions imposed by government at the time. Second, the fact that data collection occurred in real-time (Buchanan & Denyer, 2013) as most data collection during a disaster occurs post-event. Third, the value of field work and my insight into the farmer's circumstances given the vast distances between the clusters and their remote location.

Overview of study findings

Patterns in how the cases responded during the crisis emerged from the wealth of information afforded by the longitudinal analysis approach. By grouping participant experiences and responses into temporal brackets (Langley, 1999), I was able to view and analyse my overall understanding of social capital and the roles of intermediaries during the crisis. 'Initial disruption and response' was between 0 – 3 weeks. Government measures to reduce the spread of Covid-19 disrupted both the supply and demand for food. Small-scale farmers experienced a state of shock and confusion about what to do in order for their businesses to survive. During this time, the bridging intermediary (an NGO named FoodFlowZA) emerged as a compassionate spontaneous response to the crisis. This venture created an alternative supply chain by purchasing food from small-scale farmers and delivering it to marginalised communities. The bridging intermediary validated their venture using networks to establish mechanisms for providing trustworthiness. This validation of the bridging intermediary allowed them to operate given the required immediacy of their response. Exponential demand for food relief led the bridging intermediary to engage networks in order to expand their operations beyond the initial local community to become a national campaign. This expansion required them to forge partnerships with existing bonding intermediaries that procured fresh produce from small-scale farmers.

Weeks 4 – 12 are labelled 'crisis relief'. During this phase, the bridging and bonding intermediaries connected with each other. Their collaborative efforts to establish an alternative supply chain provided financial relief to the small-scale farmers, with the result that marginalised communities received food relief.

'Evolution of crisis response' occurred from week 13 in June 2020 until March 2022. Here, the bonding intermediaries and small-scale farmers began to experience stability. The original market function slowly returned, and small-scale farmers began selling again to these markets. Simultaneously to this stability was a period of diminishing donations made to the bridging intermediary. The bridging intermediaries scaled down their participation in providing an alternative market to the small-scale farmers until an eventual closure was reached. During this period, lockdown levels gradually loosened and schools, restaurants, and most businesses reopened although at a reduced scale of operation (Khan & Quintal, 2020) until the national

state of emergency was repealed and all restrictions were abolished in June 2022 (South Africa ends Covid curbs including mask wearing, 2022).

Overview of discussion

Within small-scale farmer literature, intermediary literature, and disaster literature, there are three scholarly conversations which have interlinking research gaps. The first demonstrates resilience-enhancing strategies to slow-burning crises, yet very little is known about small-scale farmer resilience during an abrupt crisis. The second is extant literature showing that intermediaries are instrumental in including small-scale farmers into the supply chain, yet their role during a time of crisis remains underexplored. Lastly, disaster scholars theorise that disaster entrepreneurs perform an intermediary role and are a vital source of community resilience after a disaster. However, there is limited knowledge regarding the role of intermediaries in advancing farmer resilience.

I discuss how this study contributes to filling these gaps. Firstly, the Covid-19 pandemic suddenly disrupted both food supply and demand. This provided a relevant context for producing new information on small-scale farmer resilience during a disaster. My study revealed 1) that during an abrupt crisis spontaneous ventures act as supply chain intermediaries and 2) that existing supply chain intermediaries entrepreneurially adapt their business practise to respond to the critical needs of the farmers. More importantly, these intermediaries can work together to establish an alternative supply chain and maintain the supply chain inclusion of the farmers during a disruption. This demonstrated that intermediaries make a resilience-enhancing contribution to small-scale farmers during a sudden crisis.

Secondly, two kinds of intermediation were identified, which illustrate how intermediaries respond during a crisis. My research discovered strong connections between the most prominent type of social capital available to the intermediary and the kinds of intermediation performed. I labelled these different kinds of intermediation as 'bridging' and 'bonding'. 'Bridging intermediaries' bring bridging links to support farmers. These are intermediaries with loose ties to external networks that are able to provide information and resources that are not otherwise available at the local level. They provide a link between heterogeneous actors or between formal and informal institutions. 'Bonding intermediaries' are actors who have and

make use of relational social capital with farmers. For example, they have close ties with the farmers, are in close geographic proximity, and have similar socio-economic and demographic characteristics. Recent research has yielded important insights that suggest that having both types of social capital is valuable to the recovery trajectory of communities (Aldrich & Meyer, 2015; Grube & Storr, 2018; Linnenluecke & McKnight, 2017; Shepherd & Williams, 2014). It is important to note that it was evident that the intermediaries in this study could not perform both kinds of intermediation roles simultaneously, and that to meet the needs in the crisis, more than one intermediary is required. This was true across all the cases.

Thirdly and finally, the above findings help to better understand the complementarity between the kinds of intermediaries. My research warrants that more than one kind of actor with different types of social capital is required in order to perform these essential and complementary activities. This need for complementary intermediaries stems from meeting three key demands: time, trust, and access to knowledge and resources. The sudden needs created by the disaster necessitated a *time* urgency to provide relief quickly to the small-scale farmers and marginalised communities suffering a nutritional crisis due to worsening food insecurity (R. Davis, 2020a; Grootes, 2020a; OXFAM, 2020). The bridging intermediaries did not have the existing networks necessary to access large numbers of small-scale farmers, whereas the bonding intermediaries did. Neither did the bridging intermediaries have the logistical structures that the bonding intermediaries had to physically collect produce from farmers (some without road access) widely spread throughout South Africa. The bonding intermediaries lacked the institutional networks of the bridging intermediaries to set up donation platforms and to solicit donations from wealthier actors. The bridging intermediaries were able to establish *trust* through financial reporting, transparency, and traceability mechanisms, which gave donors confidence to donate, and they had the skills to construct a national coordination of an alternative supply chain. To engage in business activities with the small-scale farmers, existing trust (which the bonded intermediaries had with their embedded locality) was essential, as the farmers were wary of outsiders after previous negative experiences. By understanding the cultural nuances that guided small-scale farmer business practise, the bonding intermediaries were a key *knowledge* resource which aided procurement for the bridging intermediary. It is

unlikely that either the bridging or bonding intermediaries would have demonstrated the necessary skills to perform all these functions, especially given the speed required to act. As a result, it is important that more than one kind of intermediary is required to perform these two distinct but complementary competencies and relationships.

Chapter 2: Literature Review

This review seeks to understand the potential role that intermediaries have in supporting small-scale farmer resilience in a time of crisis such as the Covid-19 pandemic. The review of the literature provides an overview of the resilience of small-scale farmers. It then reviews the unique resilience attributes of small-scale farmers and reflects on what makes small-scale farmers more or less resilient and why small-scale farmers struggle to improve their resilience. A considerable amount of research identifies the role of intermediaries in improving small-scale farmer inclusion (Aliber et al., 2013; Black et al., 2020; Franz et al., 2014; Kos et al., 2019; Nájera, 2017; Ros-Tonen et al., 2019; Vorley, 2013) and therefore the basic concepts of intermediaries are outlined in the review with the intention of gaining knowledge on the role they play in resilience during times of crisis. However, there is scant published literature on the role of intermediaries in responding to a crisis. This necessitated a broadening of the review to include the disaster literature in order to more fully understand social compassionate responses to sudden disasters.

Disaster literature presents social capital, disaster entrepreneurs, and spontaneous ventures as critical to community recovery (Aldrich & Meyer, 2015; Grube & Storr, 2018; Hamann, 2020; Linnenluecke & McKnight, 2017; Shepherd & Williams, 2014). In response to this, I investigate each of these in more detail. Recent developments in disaster literature describe the value of social capital; therefore, the basic principles of social capital are discussed before considering current research on disaster entrepreneurs and spontaneous ventures and their role in post-disaster community recovery. The literature review concludes with a focus on the research gap that has been identified and supports the research rationale. In response to this, my research asks the question: *“What is the role of intermediaries during a crisis and how do they use social capital to promote small-scale farmer resilience?”*

The Venn diagram below illustrates the literature review process which brings these three bodies of literature together: the resilience of small-scale farmers, the role of intermediaries in farmer resilience, and the social capital and disaster responses in a time of crisis. I hope that the discoveries of my study contribute to improving the economic

sustainability of small-scale farmers and provide motivation to advance policies that improve this sustainability. In so doing, it may positively benefit the livelihoods of those most in need.

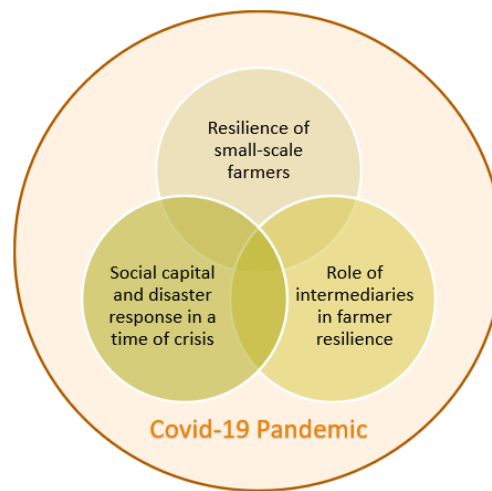


Figure 1: Venn diagram illustrating the nexus between three bodies of literature based in the context of the Covid-19 pandemic.

A brief look at the Covid-19 crisis

The Covid-19 pandemic is a crisis that has had disastrous consequences on both the economy and humanity (Battersby, 2020; K. Hall, 2021; Manolova et al., 2020; Wegerif, 2021). Global and national regulations of movement during the Covid-19 pandemic impacted both the supply and demand-side of domestic and international food supply chains (Hart et al., 2022; Manolova et al., 2020; Mastronardi et al., 2020; Wegerif, 2022). Among several negative consequences of Covid on small-scale farmers, the most dramatic was the sudden drop in demand for food due to stringent government regulations (Grootes, 2020b; R. Hall, 2020, 2021; R. Hall et al., 2020; OXFAM, 2020; The International Panel of Experts on Sustainable Food Systems, 2020; Wegerif, 2022). This appeared to affect small-scale farmers worse than large commercial farmers because of the bias of government lockdown regulations toward large-scale formal actors (Battersby, 2020; K. Hall, 2021; Ho, 2021; Kroll & Adelle, 2022; Paganini et al., 2020; Wegerif, 2020) and the undermining and immobilisation of the informal markets upon which small-scale farmers are heavily dependent (Wegerif, 2020, 2022).

Coupled with a steady economic decline causing unemployment, reduced wages, and hikes in food prices, the consequential diminished buying power resulted in a further decrease in demand which was crippling for the small-scale farmer (Battersby, 2020; R. Hall, 2021; R. Hall et

al., 2020; Kroll & Adelle, 2022; Pietermaritzburg Economic Justice and Dignity, 2020). The Pietermaritzburg Economic Justice and Dignity organisation reported that within the first two months of lockdown, families living on low incomes spent 30% on food and the year-on-year price of Household Food Basket increased by 13,8% of which 8,5% was within the first two months of lockdown (Pietermaritzburg Economic Justice and Dignity, 2020). Food insecurity increased from 24,3% of people affected in 2019 to 38,5% in September 2020.

Small-scale farmer resilience: their unique resilience qualities and struggles

Resilience literature broadly describes resilience as the ability to rebound and return to an original or adapted version of operation in the face of disturbances or changing conditions (Brandon-Jones et al., 2014; Hart et al., 2022; Jacobi et al., 2018; Sinclair et al., 2014; Speranza, 2013; Vroegindewey & Hodbod, 2018) However, the most appropriate definition found in relation to this thesis is by Morton (2020, p. 1); “Active responses that enable people to avoid the worst impacts of an epidemic at different levels or to recover faster to a level accepted as normal”. Looking at these definitions, it appears that there are two aspects of resilience, one, characteristics and capabilities that can be considered ahead of a disruption, and two, actions that occur during a disruption.

A unique resilience attribute that small-scale farmers have, relative to large-scale fully commercial farmers, is their diversity in income-generating livelihood strategies (Alinovi et al., 2010), such as generating income from multiple entrepreneurial activities as well as formal employment. Many small-scale farmers also supplement their nutritional needs through vegetable gardens and subsistence livestock, making them less dependent on cash crops and, therefore, less affected in a time of supply chain disruption. Another common resilience attribute is diversity in agro-production (Mangnus, 2019; Romero Granja & Wollni, 2018). Growing a variety of commercial crops puts farmers in a position of strength in a time of supply chain disruption because if the demand for one particular product drops or there is a crisis in that supply chain, the other products can continue supporting the farmer. This is evident in the study done by Alinovi et al. (2010) on household resilience in Kenya. Evidence showed that agropastoralists, those whose livelihoods depended on both crops and livestock, were the most resilient. However, these resilience strategies were ineffective in the Covid crisis because all food

supply chains were similarly affected. Numerous studies describe the low resilience of small-scale farmers. A study of two agrarian communities in the Northern Region of Ghana revealed that the adaptive capacity of small-scale farmers and agrarian households is low (Abdul-Razak & Kruse, 2017). Adaptive capacity is the ability to respond and adapt to a shock (Alinovi et al., 2010). In the agriculture literature, it mostly refers to adapting to climate change (Abdul-Razak & Kruse, 2017), which is typically a slow process of adjusting practises such as farming methods or, altering inputs such as seed cultivars to ensure livelihoods can be sustained in a changing environment (Alinovi et al., 2010).

Small-scale farmers typically have low levels of income and, due to their rural geographical placement, experience poor access to basic services (Alinovi et al., 2010). This creates a worsening ability of farmers to endure hardships where there is little or no financial buffer. Difficult access to basic services such as water and electricity makes it challenging to recover or start again after experiencing a shock (Matlakala et al., 2021). Disparity in farmer resilience is noticed with regards to education levels and gender (Abdul-Razak & Kruse, 2017; Alinovi et al., 2010; Makate et al., 2019). Farmers with higher levels of education have an increased potential to accept and adapt to change (Abdul-Razak and Kruse 2017). The study conducted by Abdul-Razak & Kruse (2017) found that respondents with higher education scored higher on the Smallholder Farmer Adaptive Capacity Index than those with lower education levels. Gender discrimination was found to transpire in ways such as male farmers having better access to economic resources for example, access to credit, access to training and education and thus technological agricultural knowledge and information such as soil science knowledge and climate information (Abdul-Razak & Kruse, 2017; Barrientos, 2001).

Vroegindewey & Hodbod, (2018), look at the resilience of agricultural supply chains in developing country contexts and place emphasis on the value of social capital and networks in strengthening small-scale farmer functioning (Alinovi et al., 2010). In the research by Kroll and Adelle (2022) on “Lockdown, resilience and emergency statecraft in the Cape Town food system.”, the beneficial role of social responses is observed, and suggestions are made to allocate resources to sustain social networks that support resilience. While it is generally agreed that social resources, farmer networks and supply chain connectivity contribute to improved

resilience and enduring shocks (Abdul-Razak & Kruse, 2017; Alinovi et al., 2010; Brandon-Jones et al., 2014; K. Smith et al., 2016; Speranza, 2013), how this occurs remains unknown. However, what is widely known to perform these connecting functions is the involvement of intermediaries (E. J. Davis et al., 2015; Iyabano et al., 2021; Keys, 2005; Klerkx & Leeuwis, 2008; Luiz & Guchu, 2022; Poulton et al., 2010). The following review of the literature will seek to better understand the role of intermediaries for small-scale farmers and investigate their potential contribution to small-scale farmer resilience.

Understanding intermediaries

Dualistic economies such as South Africa, where there are two separate economic sectors within one country, lead to institutional discontinuities (Luiz & Guchu, 2022). This dichotomy of economies and subsequent institutional voids fosters a prevalence of intermediaries that play a crucial role in traversing between actors from different economies (Luiz & Guchu, 2022). “Interventions result in new, traversal institutional mechanisms through innovative partnerships which connect these economies” (Luiz & Guchu, 2022, p. 2). Pedroza (2013) observes a complementarity between the formal and informal economies which offers a co-dependence and mutual benefit, but which relies on the existence of a social entity to connect and facilitate activities between both sectors. This is noticed in South Africa where there is an abundance of intermediaries bridging the institutional voids between the formal and informal economies of South Africa (Louw et al., 2007).

The makeup of intermediaries is largely dependent on who the actors are and the purpose the intermediary has come to serve (Koutsouris, 2012; van der Meulen et al., 2005). There is no agreed upon typology of intermediaries due to the vast range of purposes, actors, and activities making intermediaries highly complex, theoretically fragmented, and not well defined (Koutsouris, 2012; van der Meulen et al., 2005). Howells (2006:720) provided a list of intermediary activities, “Such intermediary activities include helping to provide information about potential collaborators; brokering a transaction between two or more parties; acting as a mediator, or go-between, bodies or organizations that are already collaborating; and helping find advice, funding and support for the innovation outcomes of such collaborations.” For the most part, literature agrees that it is about mediation, typically performed by an independent agent,

between two or more actors conducting a range of specific processes and activities (Iyabano et al. 2021; Koutsouris 2012; van der Meulen et al. 2005).

Only recently has more attention been paid to local organisations and their intermediary roles in linking small-scale farmers to supply chains (Aliber et al., 2013; Granja & Wollni, 2018; Ros-Tonen et al., 2019). The 'middleman', brokers, bridging organisations, are other labels given to intermediaries. Intermediaries can be governmental agencies, NGO's, agribusinesses, cooperatives, aggregating markets, retailers, extension officers, or farmer organisations (Iyabano et al., 2021; Koutsouris, 2012). Intermediaries, with their understanding of the different institutional actors each with their own rules and mindsets guiding practise, can absorb the asymmetries between the two differing institutional environments and support market exchange across institutional voids (Aliber et al., 2013; Luiz & Guchu, 2022). They assist in creating a collective language that both actors can understand (Luiz & Guchu, 2022) and perform a translation function of either the role, activities, results, interests, or agenda (E. J. Davis et al., 2015; Iyabano et al., 2021; Kivimaa et al., 2020; Koutsouris, 2012; Luiz & Guchu, 2022; Schramski & Keys, 2013; van der Meulen et al., 2005). By buffering the complexity that lives between two actors, intermediaries allow business collaborations to transpire, thereby creating more inclusive markets (Aliber et al., 2013; Luiz & Guchu, 2022).

Poulton (2010) expresses the heavy dependence that small-scale farmers have on such services and support. In India, an initiative called the Samriddhii model was introduced by a local NGO called Kaushalya Foundation (Vorley, 2013). Their intervention helped approximately 6 000 farmers, through the provision of training and extension services, double their income by improving produce quality and productivity. As a result, banks began offering loans to farmers which aided further improvement in production.

Intermediaries help create alternative supply chains. An alternative supply chain is a new network of either buyers or sellers or constructing an alternative mode of supply chain functioning (Renting et al., 2003). Iyabano et al. (2021) describes how farmer organisations support knowledge intermediation by providing information and facilitating the farmers' learning journey. Farmer organisations also support innovation intermediation by introducing new techniques or providing new networks and market opportunities (Iyabano et al., 2021). (Kivimaa

et al., 2020) observe the role of intermediaries in accelerating the transition of actors adopting new solutions. These innovation intermediation activities support the establishment of alternative supply chains (E. J. Davis et al., 2015; lyabano et al., 2021; Keys, 2005; Kivimaa et al., 2020; Klerkx & Leeuwis, 2008)

The review of the literature shows that intermediaries contribute to the inclusion of small-scale farmers in existing or alternative supply chains, whether formal or informal. However, there is a gap in understanding the role of intermediaries in supporting the resilience of small-scale farmers in a time of crisis.

The role of intermediaries in (farmer resilience and) disasters

Prior research on small-scale farmer resilience is focussed primarily on risk mitigation strategies (Rozaki et al., 2021) and strategies to improve sustainable livelihoods (Alinovi et al., 2010) to prepare farmers against disasters. These strategies focus on slower-burning climate-related disasters related to temperature and weather volatility (Speranza, 2013; Vroegindewey & Hodbod, 2018), which are often not even considered a crisis, but a societal challenge (Burns & Bibbings, 2009; Handmer et al., 1999). Most of the research suggests gaining an understanding of the effects of climate change (Vroegindewey & Hodbod, 2018), identifying who is affected and why, and improving their adaptive capacity (Abdul-Razak & Kruse, 2017; Sinclair et al., 2014) and buffer capacity (Jacobi et al., 2018; Speranza, 2013). Solutions mostly involve creating preparedness, reducing vulnerability, and implementing resilience-enhancing upgrades (Makate et al., 2019; Nwafor, 2020; Schramski & Keys, 2013; Speranza, 2013; Vroegindewey & Hodbod, 2018). To support this, some authors offer ICT and system solutions such as DSS (Decision Support Systems) (Mitraka et al., 2020; Ray & Vyas, 2007) and other modern technologies (Rozaki et al., 2021).

While there is broad agreement on the requirements needed for small-scale farmers to become more resilient (Abdul-Razak & Kruse, 2017), research seems to indicate that small-scale farmers have a lower adoption of resilient practises (Makate et al., 2019). The adoption of resilience innovations is attributed to economic, productive, and knowledge resources, education and training, gender, land size, and infrastructure (Abdul-Razak & Kruse, 2017; Jacobi et al., 2018; Khoza et al., 2019; Makate et al., 2019). Recent research has pointed to an

occurrence of social capital (Abdul-Razak & Kruse, 2017; Chapagain & Raizada, 2017; Rozaki et al., 2021) interprofessional collaboration (Matlakala et al., 2021) and intermediated support activities (Asahiro et al., 2015) in small-scale farmer disasters. Yet, the role of intermediaries in small-scale farmer resilience during a time of crisis is not made explicit, nor has it been fully understood.

As a response to the literature gap identified, the next section will look at the body of research arising from current studies on disaster entrepreneurship and spontaneous ventures in response to community disasters (Aldrich & Meyer, 2015; Grube & Storr, 2018; Shepherd & Williams, 2014). However, disaster entrepreneurship and spontaneous venturing is premised on social capital (Aldrich & Meyer, 2015; Grube & Storr, 2018; Shepherd & Williams, 2014), therefore the next section will begin by understanding social capital before continuing with the literature on disasters.

Understanding Social Capital

Incorporating the agreed principles of social capital theory, a summarising definition of social capital is; the resources (tangible or intangible) gained (immediately or delayed) from interdependent networks of existing trusted relationships with shared characteristics (norms and values) and anticipated reciprocity (directly or indirectly) facilitating collective action or a social licence to operate (Acquaah, Amoaka-Gyampah & Nyathi Nceku, 2014; Aldrich & Meyer, 2015; Putnam, 1995; Shepherd & Williams, 2014). Many researchers in social capital agree that social capital can be separated into distinct types based on the function, structure, types, and strength of relationships, the nature of the connections, and the diversity or similarity between actors (Acquaah et al., 2014; Adler & Kwon, 2002; Aldrich & Meyer, 2015; Putnam, 2000).

Bonding social capital is defined as, “strong relationships that develop between people of similar background and interests which usually include family and friends, provide material and emotional support, and are more inward-looking and protective” (Claridge, 2018:2). It is characterised by strong ties that are inward looking within a community or among similar groups of homogenous actors or activities who have a close association and frequency of interactions within the network (Acquaah et al., 2014; Claridge, 2018). In bonding social capital, there is a

likeness in demographic characteristics, attitudes, and resources (Acquaah et al., 2014; Aldrich & Meyer, 2015; Putnam, 2000).

Bridging social capital is described as, “a type of social capital that describes connections that link people across a cleavage that typically divides society (such as race, or class, or religion). It is associations that ‘bridge’ between communities, groups, or organisations.” (Claridge, 2018, p. 3). Bridging social capital is outward-looking. It refers to what are often loose ties that span across actors and activities that are heterogeneous in their characteristics with demographic diversity such as class or race and that provide access to new information and additional resources. (Acquaah et al., 2014; Aldrich & Meyer, 2015; Putnam, 2000). Claridge (2018, p. 3) found that bridging social capital is quite often “between people with shared interests or goals but contrasting social identity”.

Linking social capital has been identified as a third dimension which some consider a subset of bridging social. Acquaah et al. (2014, p. 6) explains linking social capital as social capital that, “connects regular citizens with those in power”. It is multidimensional and links actors across social strata and traverses power hierarchies or between formal and informal actors (Acquaah et al., 2014; Claridge, 2018). For the purpose of the study, I have folded linking social capital into bridging social capital, which is an acceptable practise by social capital theorists (Acquaah et al., 2014; Claridge, 2018).

Understanding disaster entrepreneurs and spontaneous venturing

Due to the lack of literature on the role of intermediaries and social capital in a time of small-scale farmer crisis, the ‘disaster entrepreneurs’ will be looked at as a subject matter comparable to intermediaries in food supply chains. The term ‘disaster entrepreneurship’ describes a unique display of compassionate responses from entrepreneurs during a crisis. It is defined as efforts by private sector entrepreneurs to respond during and after disaster to the unique and changing needs created by a crisis by taking advantage of opportunities created, and by doing so, restoring functioning and balance to the community (Grube and Storr 2018; Linnenluecke and McKnight 2017).

Spontaneous venturing, a term coined by Shepherd & Williams (2014), differs slightly from disaster entrepreneurship. Although disaster entrepreneurship has a focus on economic

generating activities and can include both new and existing businesses, spontaneous venturing is primarily a rapid emergence of newly formed ventures, not exclusively entrepreneurial business activities. Spontaneous venturing includes spontaneous local organising and impromptu actions in response to suffering that are not market opportunities.

Grube and Storr (2018:802) maintain that the participation of disaster entrepreneurs is crucial to disaster recovery, “The multiplicity of needs in the immediate aftermath of the disaster can be overwhelming. The post-disaster environment, therefore, represents a massive collective action problem.” Established organisations are often not able to adapt quickly enough to respond to the new critical needs of the community. Government agency responses and even established emergency relief organisations are made slow by their stringent processes and greater levels of planning (R. Davis, 2020b; Hamann, 2020; Linnenluecke & McKnight, 2017; Shepherd & Williams, 2014). Shepherd & Williams (2014) also observed that a sudden abundance of non-local resources was met with logistical obstacles in delivering to those who needed it. These problems place great value in newly formed ventures, which can be flexible and quick in delivering tailored responses (Hamann, 2020; Shepherd & Williams, 2014).

Social capital and disaster responses

Disaster researchers found empirical evidence from numerous case studies showing that networks, social cohesion, and social capital positively influence the ability of communities to resist, endure, and recover from disaster. They also highlight the role of different types of social capital – bridging and bonding social capital – in crisis responses (Aldrich & Meyer, 2015; Grube & Storr, 2018; Linnenluecke & McKnight, 2017; Shepherd & Williams, 2014). I observed a similar phenomenon in my intermediary cases where the kinds of intermediation reflected the types of social capital available to them. This trend prompted me to explore the literature which reflects this correlation between social capital and disaster entrepreneurship.

How embedded entrepreneurs use bonding social capital during a crisis

The literature points to bonding social capital as the most readily available to a community in times of disaster (Aldrich & Meyer, 2015). Both Grube & Storr (2018) and Shepherd & Williams (2014) note that locally embedded disaster entrepreneurs with bonding social capital are critical to community recovery. Embedded entrepreneurs have close ties, and

often informal relationships, with the community which benefits relief efforts through an existing sense of mutual trust (Aldrich & Meyer, 2015; Shepherd & Williams, 2014). Valuable non-physical resources available to local actors such as values, knowledge, and relationships enable an exchange of both physical and non-physical resources that shape disaster responses (Hamann, 2020; Shepherd & Williams, 2014).

There is a unique advantage to their embedded existence which can strengthen the crisis response and accelerate community recovery. This advantage is the ability to be simultaneously community focussed, with an embedded understanding of community needs, circumstances, culture, and mindsets while also disaster focussed, with a shared experience of the disaster (Grube & Storr, 2018; Linnenluecke & McKnight, 2017). Locality allows entrepreneurs to tailor their offerings to meet new or changing community needs (Grube & Storr, 2018). Grube and Storr (2018:806) elaborate on the “shared sense of place and strong place attachment” of embedded entrepreneurs. They found that local economic actors with bonding social capital are highly motivated to be involved in disaster recovery efforts and, in restoring their affected communities, they are often in a position to pursue both business and community goals (Grube & Storr, 2018).

The role of bridging social capital in disaster responses

Aldrich and Meyer (2015) findings also show that although not as prolific, bridging social capital also contributes considerably to the resilience capabilities of communities and “bridging ties alter the recovery trajectory” (2015, p. 7). Access to bridging networks and loose ties provide essential external information and resources not otherwise available within the local bonding social capital (Aldrich & Meyer, 2015; Grube & Storr, 2018; Shepherd & Williams, 2014). Responses that are rooted in bridging social capital enable institutional channels of support, such as financial and physical donations from charities, churches, and other external entities (Aldrich & Meyer, 2015). They are instrumental to the coordination of collective efforts from actors with different socioeconomic contexts and across formal-informal boundaries (Aldrich & Meyer, 2015; Shepherd & Williams, 2014).

The employment of a combination of social capital types

Scholars in disaster literature agree that following natural disasters, combinations of types of social capital are critically important to community resilience and vigorous restoration, and these types are required to interact in novel ways (Aldrich & Meyer, 2015; Grube & Storr, 2018; Linnenluecke & McKnight, 2017; Shepherd & Williams, 2014). Grube and Storr (2018) found that in times of post-disaster uncertainty, disaster entrepreneurs leveraged both strong and weak ties to navigate their response and that both locally embedded entrepreneurs and external commercial entrepreneurs were important. Aldrich and Meyer propose that, “Bonding and bridging social capital work in complementary but distinct ways during and after crises” (Aldrich and Meyer 2015:8). Spontaneous relief ventures with loose ties to the affected community rely on local ventures with existing relationships and local knowledge to customise and deliver resources to meet the needs of the community (Shepherd & Williams, 2014). Trust in these loose ties is afforded through ventures with close ties and long-standing relationships with the community (Iyabano et al., 2021; Lyon, 2000). External disaster relief organisations coordinate multi-organisational support activities to alleviate suffering and provide access to critical resources (Linnenluecke & McKnight, 2017; Shepherd & Williams, 2014).

In my findings, I will show how particular kinds of intermediaries responding to the Covid crisis are associated with disaster entrepreneurs and how they make use of types of social capital in the roles they perform. I will also show that collaboration between these two kinds of intermediation enables a rapid response in the aftermath of a disaster (Shepherd & Williams, 2014).

Addressing the literature gap

Intermediaries are prevalent in developing countries with institutional voids, such as South Africa with dual (formal and informal) economies. Researchers have a strong body of evidence on the important role of intermediaries in facilitating the inclusion of farmers in supply chains. Because disasters often lead to a crisis in the supply chain of either supply or demand, intermediaries have great potential to support small-scale farmers’ access to markets (whether traditional or alternative) in such a crisis.

Reviewing the literature on community disaster recovery, we know that social capital and intermediaries (either existing entrepreneurs or spontaneous emergent ventures) are critical to disaster recovery. Among social capital researchers, there are broadly agreed types of social capital – bonding, bridging, and linking – and disaster research convincingly demonstrates that relief efforts rely on these types of social capital to alleviate suffering.

However, the review of literature shows that the three bodies of literature (small-scale farmer resilience, the role of intermediaries, disaster entrepreneurship, and the significance of social capital) that are the basis of my study have not yet been connected, despite their opportunities for mutual benefit, especially in a time of crisis. What remains to be known is the role and response of intermediaries during a disaster and how intermediaries use or develop social capital to help small-scale farmers in a crisis. For this reason, I will integrate these three bodies of literature into my thesis focussing on the similarities between intermediaries, disaster entrepreneurship, and social capital. The relevance of the research is to recognise the important value of intermediary-driven crisis responses and, knowing that there are different kinds of intermediation that require more than one intermediary, to ensure that these intermediary functions are supported in some way.

Chapter 3: Methodology

The first South African lockdown, in response to the Covid-19 pandemic crisis, occurred in March 2020 just after I completed my first module of the MPhil in Inclusive Innovation. This caused an immediate disruption to the supply and demand of food. As I had already identified small-scale farmer resilience as my area of interest, during the initial weeks of lockdown (which became known as 'hard lockdown' with the most stringent restrictions), I soon became involved in conversations and read news articles that articulated the demise of small-scale farmers and the impact of lockdown had on food security (America et al., 2020; Battersby, 2020; Choularton & Mallory, 2020; R. Hall et al., 2020). I decided to use the Covid-19 pandemic as a context for my farmer resilience research and to produce a study on a crisis that was currently unfolding and not an historical inquiry. I joined dialogues organised by the Southern Africa Food Lab and attended several webinars and co-learning sessions such as those hosted by ISS Africa, Community Chest and Southern Africa Food Lab. The involvement of intermediaries in facilitating the ongoing sale of produce and the the flow of food from small-scale farmers using an innovative alternative supply chain to connect produce to consumers struck me as pertinent. This informed my thesis topic.

A group of students under the supervision of my supervisor gathered to share stories of different responses to the Covid crisis and one particular response to the crisis, caught my attention. I chose to place my research focus on this specific response with an eye on my broader research area - the meaningful contribution of intermediaries to enhancing the resilience of small-scale farmers. Buchanan & Denyer (2013) conclude through their analysis of the disaster literature that crisis research has used "unconventional methodical practices" such as the use of single case studies to generalise the findings.

I expanded the focus of the single case intermediary to include the interactions between the intermediaries involved, the social capital available to them, and the nature of the intermediary relationships with actors both 'up' and 'downstream' which formed a 'nested case' sample (Patton, 2015). Patton (2015) in his study on qualitative research methods explains how, when more than one unit of analysis is used, especially in longitudinal studies, a nested case sampling must occur. Frequently used in long-term fieldwork, nested cases are a collection of

cases (often a single case made up of many smaller cases that are intersecting) with different purposeful sampling strategies. I used a stratified purposeful sample to capture the major variations in heterogeneous units where each stratum was a fairly homogeneous sample. Snowball sampling, a method that gathers samples suggested by interviewees, was used to collect cases within the overall primary case (Goodman, 1961; Patton, 2015). Nested purposeful sampling presents an opportunity for thematic analysis across the cases and units of analysis (Patton, 2015). While I acknowledge that there may be similarities in the data results due to the nature of the nested-case sample, this “theory-method fit” approach aligned with my desire to understand the relationship between the actors within a case and illustrate inclusive innovation (Gehman et al., 2018).

The various elements of the research framework are indicated in the figure below. This chapter explains the decisions taken in building the research framework and substantiates it with the literature.

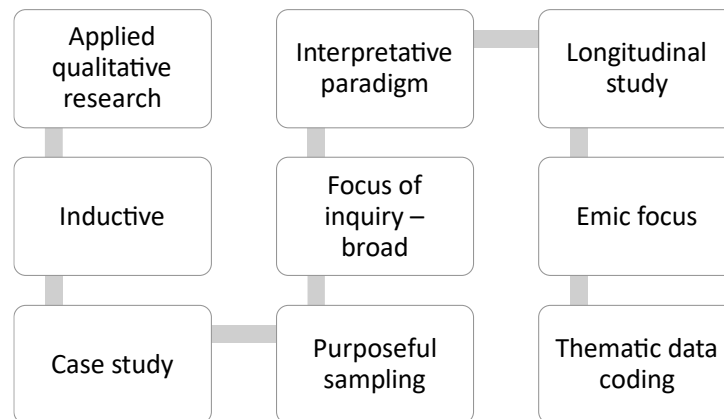


Figure 2: Overview of research framework

Research planning: determining the type of study, research question, and cases selected

I wanted to understand the nature of the relationships between small-scale farmers and intermediaries during a time of crisis and to discover the critical roles that intermediaries played. This determined that I chose a *qualitative approach* to take an in-depth view of the actors in the alternative supply chain that was created. A qualitative approach can dig deeper into the data than a quantitative approach by having a smaller group of participants and a more closely connected data capture process (Maxwell, 2012; Patton, 2015). The nature of applied qualitative

research is that it “illuminate(s) a societal concern or problem in the search for solutions” (Patton, 2015, p. 379). A qualitative study offers more room to build an adaptive and responsive approach to the research, and the research takes shape as the information and learnings begin to influence the methods and the construct of the conceptual framework. By using recognised methods of qualitative research, the authority of the findings and the scholarly rigour will not be diminished as it supports the elimination of possible risks and inconsistencies that could emerge (Gioia et al., 2013)

Part of the planning phase involves determining whether a *case study* is the most appropriate sample method for research (Yin, 2018). I chose to use this method based on the depth of evaluation I sought to pursue in a smaller group of participants and how the iterative evaluation process fits the research method of a qualitative study with an inductive process (Gehman et al., 2018; Yin, 2018). Based on the single case that presented itself as mentioned above, a case study was considered most fitting (Eisenhardt, 1989; Gehman et al., 2018; Patton, 2015; Yin, 2018). Case studies produce in-depth insights and knowledge within real-world contexts which can contribute towards theories and interventions that solve human and societal issues (Patton, 2015; Yin, 2018).

I based the research process on Eisenhardt's building theory process (Eisenhardt, 1989) unpacking the 8-step process shown in Figure 3. Using this process, my research builds theories from an *inductive research design*. The inductive approach allows openness and flexibility to the inquiry, providing a process of continuous adjustments and iterations to the scope of research by adapting and responding to the knowledge that emerges (Eisenhardt et al., 2016; Gioia et al., 2013; Patton, 2015; Yin, 2018). This systemic inductive process provides rigour to understanding complex social constructs and concept development (Eisenhardt et al., 2016; Gioia et al., 2013; Patton, 1999). Eisenhardt et al. (2016) recognise inductive methods as “essential for making progress on the grand challenges” p. 1113. Demonstrating this iterative research process using constant comparisons between theory and data (Eisenhardt, 2021), I moved back and forth between steps 4, 5 and 6 (entering the field, analysing data, shaping hypothesis) on Eisenhardt's process of building theory (Eisenhardt, 1989) and responding to the data collected to capture concepts drawn from human experience (Gioia et al., 2013).

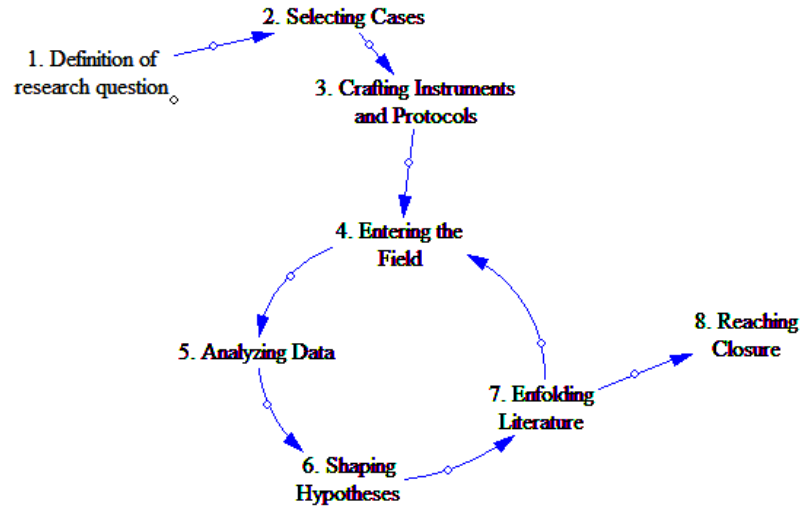


Figure 3: Adapted from Eisenhardt's (1989) process of building theory from case study research to illustrate the iterative research process of my research approach.

My initial review of the literature during the development of the proposal guided the key topics to be examined in the literature and refined my broad research area. In line with the methodical approaches to conducting qualitative case studies recommended by Eisenhardt (1989) and Yin (2018), my process of determining the research question was iterative and I continually reviewed the findings and literature before reaching a conclusion. My initial research question was broadly on the resilience attributes of small-scale farmers, and the process of developing the research proposal led me to sharpen and refine my research question. By examining the responses of small-scale farmers and intermediaries to the Covid-19 crisis, I revised the question to focus more specifically on the role of intermediaries in a crisis and understanding the complementarity between them. The proposal writing process allowed me to talk through my potential case selection and focus area with my advisors and present it for critique by other academic reviewers and classmates. This process helped to clarify the units of analysis, intermediaries, and small-scale farmers, that would provide the relevant data to answer my research question. These are explained in the sub-section below.

I committed to a *longitudinal study* and gathered data from this nested case until a relatively 'normal' state of operation for the small-scale farmers was resumed. This involved data capture over a period of 23 months which spanned across lockdown 'Level 5' in April 2020 to lockdown 'Level 1' in March 2022. I used this temporal lens to study how the support from the

intermediaries adapted over time, which contributed towards making my cases “information-rich” (Patton, 2015). It allowed me an opportunity to observe active responses to the crisis, follow the development of the activities as they took place, and observe the critical role of social capital. These temporal and spatial lenses helped me to clarify the cases I would use to build my nested case sample and determine what data sources (internal or external, observations or interviews, field, or desktop research) I would collect on the subject to conduct an inductive, comparative case study analysis (Patton, 1999; Yin, 2018).

The *focus of inquiry* is relatively broad and is not limited to a narrow qualitative focus, such as some case studies that look at a single relationship. This study briefly looks at small-scale farmers, how they are affected by Covid-19 and identifies their ‘sustained’ resilience attributes. The research inquiry then shifts to focus more deeply on intermediaries. It seeks to understand the nature of the relationship between farmers and intermediaries and how intermediaries contributed towards the resilience of small-scale farmers during the crisis. A final focus of inquiry includes analysing the engagement between the intermediaries themselves. The inquiry boundaries are open; it considers broad ranges of responses by the farmers and intermediaries, capturing the differing interactions between and dependencies on other intermediaries (Corbetta, 2011; Patton, 2015).

Within the ontology of the overarching qualitative paradigm, I approached my research through an *interpretive paradigm*, which is inductive in nature and allows multiple realities to be constructed through human interactions with each other and their environment (Corbetta, 2011; Patton, 2015). Sönmez (2013) associated the interpretive paradigm with subjective human experiences, “The interpretive paradigm is concerned with understanding the world as it is from subjective experiences of individuals.” (Sönmez, 2013, p. 296). Looking at the epistemology of interpretivism, there are several possible outcomes of the research based on the interpretations of reality by the subjects. Interpretivism also incorporates the nature of research techniques which require subjective interpretation by the researcher. It involves an “empathetic interaction between the researcher and the object of study.” (Corbetta, 2011, p. 19). Patton (2015) explains this inductive interpretivism approach as a process that extrapolates insights from both an initial predetermined inquiry, and through reflective interpretations of insights that emerged during

the data collection. Levers (2013) identifies this as a “reflective emergence framework” which involves a “bidirectional relationship” between the information gathered and the emergent knowledge interpreted by an interpretivist grounded theorist. This inductive interpretivism and reflective emergence align with my desire to gain deeper knowledge of the cases, to allow the learnings to emerge and shape the study, and to construct theory.

Case selection

Purposeful and snowball sample selection

I determined that my unit of analysis would focus on intermediaries and small-scale farmers. The initial crisis response which became the inspiration for my nested-case study approach and sample selection was FoodFlowZA (FoodFlow). With an eye on my broader research area (the meaningful contribution of intermediaries to enhancing the resilience of small-scale farmers) I noticed that FoodFlow played the role of intermediary and in many cases, they used other intermediaries through which they procured food. This was of particular interest to me, and it quickly became apparent that these intermediaries played different roles and thus the unit that was ‘intermediaries’ split into two. To easily distinguish between them, I labelled them, ‘bridging intermediaries and ‘bonding intermediaries’ which reflect the role and type of social capital that the intermediaries have and make use of. ‘Bridging intermediaries’ bring bridging ties to support farmers. These are intermediaries with loose ties to external networks providing information and resources not otherwise available at the local level. They provide a link between actors from differing races, classes, or between formal and informal institutions. ‘Bonding intermediaries’ are actors who have and make use of the bonding social capital with farmers; they have close ties with the farmers, are located in close geographical proximity, and have similar socio-economic and demographic characteristics. To strengthen my emic focus and ground-up approach to data collection, I also included small-scale farmers in my units of analysis.

My case selection was guided by my research question and, therefore, I chose not to include all small-scale farmers in their network and to only include groups of farmers that were using bonding intermediaries to conduct business with the bridging intermediary. The figure below illustrates the structure of the nested cases, the three units of analysis used, and how the small-scale farmers with associated bonding intermediaries are grouped together into what I

refer to as clusters. Tables 1 and 2 included below outline the broad characteristics of each of the units of analysis.

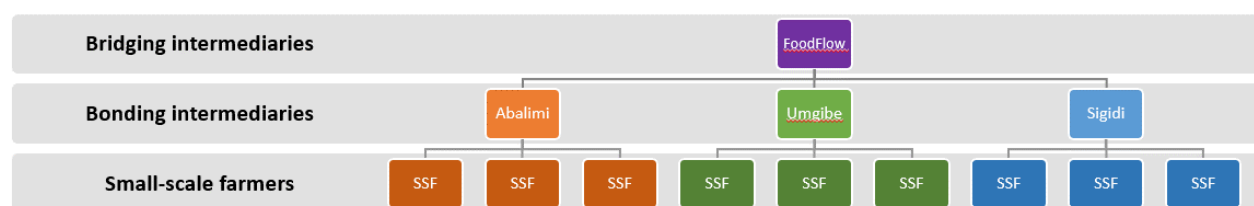


Figure 4: Structure of nested-cases and the units used.

Characteristics	Bridging intermediaries	Bonding intermediaries
Historical existence	New venture	Existing business
Relationship to SSF	Loose ties to SSF with differing socio-economic status and demographics to the intermediary	Close ties to SSF with similar socio-economic status and demographics to the intermediary
Type of networks and relationships	External heterogeneous networks and vertical relationships across contrasting social strata	Internal homogeneous networks and horizontal relationships within similar social strata
Location of operation	Operating remotely	Close geographic proximity
Trust relationship	Trust among donors	Trust among farmers
Purpose	Provide access to external information and resources.	Provide logistical access and relationship access to SSF

Table 1: Broad characteristics of the bridging and bonding intermediaries

Characteristics	Small-scale farmers
Land size and tenure	1 - 10 hectares Does not own land Tenure determined by the chief or municipality.
Type of farming	Combination of commercial and subsistence farming With diverse crops Sell produce collectively No external financing
Type and access to markets	Sell to both formal and informal markets. Access market through an intermediary
Income streams	Multiple income revenues
Labour	Use family members to tend the land

Table 2: Broad characteristics of the small-scale farmer

In seeking academic inspiration to guide my case selection criteria, the case study on disaster entrepreneurship by Linnenluecke & McKnight (2017) closely aligned with my study and I used the selection criteria of their cases to inform my case selection boundaries. The case

selection of Linnenluecke's body of research was based on entrepreneurs who were pre-existing and who built "bilateral exchange relationships with the community" (Linnenluecke & McKnight, 2017, p. 171). They highlighted cases that activated latent business structures and improvised or emerged to scale or adapt organisational responses (Linnenluecke & McKnight, 2017, p. 171).

I broadened these criteria to incorporate spontaneous ventures as Shepherd & Williams (2014) put forward in their crisis research. This loosening of the criteria allowed both the bridging and bonding intermediaries to be incorporated into the units of analysis. I substituted the Linnenluecke and McKnight (2017) focus on community resilience with small-scale farmer resilience and included both supply and demand-side responses. Aligning with the focus of analysis in Grube & Storr (2018), I looked at specific behaviours and practises of intermediaries that were critical to the recovery of small-scale farmers. The nature of the Covid crisis, which was sudden and unpredicted yet long-lasting, allowed a large portion of my study to take place during the disaster as the crisis evolved during transitioning levels of lockdown. Data collection spanned a longer period than seen in similar studies on disaster responses, of which many studies were performed after the crisis (Aldrich & Meyer, 2015; Grube & Storr, 2018; Linnenluecke & McKnight, 2017; Shepherd & Williams, 2014).

Identifying socio-geographic diversity

I purposely identified clusters of small-scale farmers and intermediaries in diverse socio-geographic settings within South Africa. Patton (2015, p. 401) reminds us that "*purposeful sampling* focuses on selecting information-rich cases whose study will illuminate the questions under study." The clusters were strategically selected from three regions in South Africa: Western Cape – urban context, KwaZulu Natal – peri-urban, and Eastern Cape – deep rural. The distribution of the clusters is illustrated in figure 5 below. This approach aimed to identify the patterns that emerged across different contexts and contribute to deeper insights. It sought to provide information consistency, highlight similar findings, and reveal possible findings that contradicted and challenged each other.

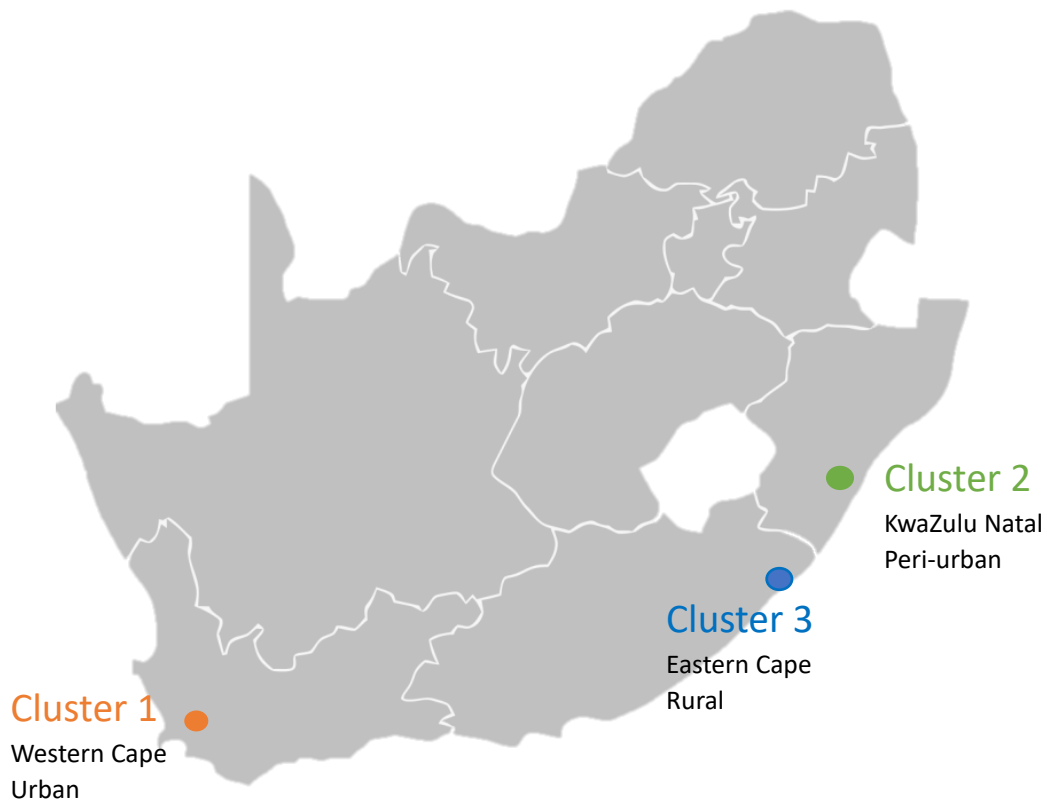


Figure 5: Geographic spatial distribution of the clusters.

Introducing the selected cases

This subsection details the socio-geographic context of the cases and describes their respective functions as intermediaries. It explains how the intermediary came into existence and provides background information on the founders or primary actors in the intermediary.

FoodFlow

FoodFlow started in Cape Town, Western Cape, at the end of March 2020, the week before South Africa entered a government-regulated ‘hard lockdown’. With the world already facing a global pandemic, Iming Lin anticipated the closure of the hospitality industry and realised that this would be an imminent market collapse for many small-scale farmers across formal and informal markets. Parallel to this, with the closure of schools and other feeding schemes, people who depended on these forms of food relief would be left without access to nutrition. Below is a photo of Iming Lin and Ashley Newell, co-founders of FoodFlow.



Figure 6: Ashley Newell and Iming Lin (source: Newell)

Iming Lin has a Master of Public Health degree and is an activist in social development in Hout Bay, Cape Town. She co-founded Sprung, a social enterprise generator, and was operational manager of Thrive, an environmental sustainability organisation focussed on incubating social entrepreneurs. She is a small-scale farmer selling speciality vegetables to restaurants and hotels in Cape Town.

Ashley Newell, a social and economic development consultant originally from the United States of America, has been living in South Africa for ten years and in Hout Bay for the latter seven of those years. She has worked in Hout Bay as the Social and Economic Development Project Coordinator of All Out Africa, managing an international volunteer programme, and as the Programme Manager of Learning Innovation Design Lab, a learning hub for disadvantaged learners. While being the secretary of the Hout Bay Health Forum, she recently completed her Master of Philosophy degree in Inclusive Innovation at the University of Cape Town Graduate School of Business.

Newell and Lin knew each other through their overlapping involvement in community initiatives in Hout Bay. Newell reflects on the early conversations she had with Lin before lockdown was implemented:

She [Lin] was losing clients and realised that other farmers in less well-off conditions would have the same problem, plus schools were closing. With her background in public health, she recognised that school feeding schemes played an important role. So, we discussed how we can redirect this food flow; use donor funding to purchase the crops and deliver to communities who need it. That was the lightbulb moment; she called me because she knew I was well networked and was unemployed. I got in touch with some organisations that I had long-term relationships with. (AN1)

This led Newell and Lin to partner and set up what became known as FoodFlow. FoodFlow appealed to their audience to make donations by purchasing 'Harvest Bags'. Because of the nature of the large number of individual donors making online purchases of Harvest Bags, these donors are called 'consumer' donors. The Harvest Bags consisted of 4 to 7 kg of mixed fresh vegetables, sometimes including eggs and additional dry goods and 1 kg of protein, such as fish or chicken. The purchases were used to source produce from small-scale farmers and sustain their businesses and families. The food was then delivered to community organisations and soup kitchens that distributed the food to people experiencing increased food insecurity as a result of the pandemic. This created an alternative supply chain that solved the urgent needs of both ends of the supply chain by generating a demand through donor purchases and linking it to the small-scale farmer supply network. In doing this, FoodFlow supported a third urgent need, alleviating a nutritional crisis. Figure 7 is a marketing illustration of the quest of FoodFlow to benefit both small-scale farmers and communities in need.



Figure 7: An illustration showing the role of FoodFlow in providing a compassionate response to the critical needs that arose during Covid-19 (source: FoodFlow report)

To ensure traceability and transparency of distribution, FoodFlow required photographs and GPS locations of every purchase and delivery and used a traceability platform called Proof of Impact to track the data points. Proof of Impact is a blockchain-based data collection and verification platform providing auditable and traceable data records (www.proofofimpact.com).

You have the full story of the Harvest Bag that you purchased and you're able to see the photos... We did that level of data collection of every purchase for the first 20 weeks. And that was our best effort, in the rapid scaling and working remotely during quarantine, to build that trust and transparency.
(AN3)

Abalimi Bezekhaya

The Abalimi farmers are based in the greater Cape Town area in townships which are collectively referred to as the Cape Flats. This is a densely populated low-income urban area with high levels of unemployment and a high prevalence of informal sector workers (depicted in the photograph below). These areas are easily accessible by road and are close to formal hospitality markets and informal trade markets.

The name Abalimi means, “farmers of the home” in isiXhosa. It is a registered NPO which started in 1983 with the purpose of teaching people how to grow vegetables to meet their own

nutritional needs. Abalimi promotes small scale urban farming (referred to as urban farmers) by assisting with seeds, seedlings, and fertiliser. They have two garden centres ('hubs') where training is provided and from which they offer farming support and resources. In 2008, Abalimi grew to assist with market access for urban farmers, calling this initiative Harvest of Hope, initially connecting them with upmarket schools selling boxes of fresh produce, and then linking them with the Cape Town-based hospitality industry. In 2018, there were 105 urban farmers from 65 communities in the Cape Flats selling their produce through Abalimi.



Figure 8: Alakhe Langa visiting an urban farm in Khayelitsha (source: author)

Urban farmers sold their excess produce exclusively to Abalimi until 2018 when Umthunzi Farming Community and Philippi Economic Development (PEDI) began serving as fresh food aggregators for small-scale urban farmers. In early 2020, with Umthunzi and PEDI fulfilling the role of aggregator and market access, Abalimi returned their main focus to farmer development.

Grace Stead (GS) is the Managing Director of Abalimi and has been with Abalimi since 2018. She is a qualified town planner who started her journey in local government in 1994. Early on in her career she shifted her focus towards sustainable development and in 2000 was the co-ordinator of the City of Cape Town led Local Agenda 21 campaign. "LA21 is a voluntary process of local community consultation with the aim to create local policies and programs that work towards achieving sustainable development", (Global Development Research Centre, www.gdrc.org). Stead started Icologie, a 'practical sustainable living' consulting company, and WrapZERO, an organisation that promotes sustainability in the film industry, and she serves on the boards of several organisations in the sustainable living sector.

Zodidi Alakhe Langa (ZL) is the Market Access Support for Abalimi. She is originally from the Eastern Cape, where her family is mostly subsistence farmers who grow livestock and vegetables. Langa has been in the Western Cape since 2006 and has since attained several qualifications related to care, upliftment and development of people. She became an Abalimi employee in 2007 as a Pack Shed Manager. Stead explains the details of Langa's role:

While Harvest of Hope [the market access division of Abalimi] was running she was the Pack Shed Manager, her responsibilities were to engage with the farmers, seeing what the availability is, check on the quality, go out to the gardens, see what is happening who is growing what, encourage them to grow other things as well, but very much engaging with the different gardens with the purpose of getting the produce to market. She initially didn't need to engage with the hotels but at a later stage she was also directly engaging with the clients. There was quite a good relationship where the clients would WhatsApp her the orders. Firstly, she will get an availability list from the farmers WhatsApp it through to the clients and the clients would place an order with her directly through WhatsApp. So, she had quite a good working relationship between the farmers and the restaurants and then also for the boxes, if we knew how many boxes, we needed she would arrange and make sure it gets filled and everything. So basically, managing the pack shed with a group of people. (AL)

Although Harvest of Hope has ended and Langa does not work directly with buying and selling, Langa still works to support the farmers so that they can sell their vegetables and access the market. Figure 9 is an author photo of female farmers living in the nearby township. The farmers are proud to show off their produce.



Figure 9: Urban farmers who work together (source: author)

The small-scale Abalimi farmers (AB:F1-F10) are a mixture of South African cultures, Xhosa, Zulu, and Cape Coloured. Many of the Xhosa and Zulu farmers moved from Eastern Cape and KwaZulu Natal to Cape Town in search of work. Not all the farmers had prior farming experience before joining Abalimi and the number of years they have been farming varies between 3 and 20 years. The Abalimi farmers grow a variety of vegetables on municipal land ranging between 1 – 2 hectares scattered across Khayelitsha. These plots of land were previously unused, and the farmers worked to clear the rubbish and prepare the soil for farming (photograph below). The farmers work together in small cooperatives to tend the fields, share expenses, and sell their produce. This helped with the labour; required to maintain the fields therefore not needing to pay for employed labour and to collectively grow enough produce to meet order sizes.



Figure 10: Urban farm with low-cost housing in the background (source: author)

They grow a variety of crops, making it possible to always have something ready to be harvested and sold, as well as to relieve the pressure of selling only one type of vegetable. The farmers make sure to have an abundance of spinach and kale that grows easily, withstands weather conditions, and it is a popular vegetable that can be sold locally. On some of the plots, the government had supported urban farmers by allowing them to farm on open pieces of land, but in most cases the support did not extend much further than this and there were no basic services available, such as water and electricity.

Umgibe Farming Organics

Umgibe Farming Organics and Training Institute (Umgibe) is an NPO operating in the peri-urban areas of central KwaZulu Natal. Farmers lived on land that was 2 to 5 hectares in size and between 1 and 2 hours from Durban, the main city in the province. Although the roads were not well maintained and required navigating several potholes, they were tarred up to the last few hundred metres before reaching the farms and vehicles could access the farm 'gate'.

Umgibe was started by Nonhlanhla Joye when she was diagnosed with cancer in 2014 and was unable to work. She took to farming as a way to feed and support her family and designed a growing system involving suspended bags that prevented chickens and goats from eating her vegetables.

In 2014 when I was diagnosed with cancer, unable to work it meant I had no food to put on my table. I decided to grow my own vegetables but unfortunately the chickens from the neighbours ate everything on site. I had to be innovative or starve so I created a growing system that enabled me to stop the chickens from eating my vegetables, it worked, before long I had food and a surplus. I sold some to my neighbours. One thing led to another I found myself working with cooperatives, and today we have 102 cooperatives all working under Umgibe Network producing food for themselves and selling the surplus to Umgibe. (NJ1)

This innovation became popular, and others began asking for help to establish these growing systems. Joye worked together with these farmers and soon they had a surplus which they sold to local informal markets. Below is a picture of an Umgibe farmer (one of the first to join Joye in her innovative way of growing vegetables) and two interns who were interviewed. The photo shows the vegetables that are farmed using suspended bags.



Figure 11: Two interns and one of the founding members of Umgibe who adopted the raised bag growing system (source: author)

Umgibe now teaches people how to grow their own vegetables to feed themselves and to collectively sell their surplus produce. It supports the development of cooperatives that work together to grow crops, and Umgibe links the supply to the market, as well as advises farmers on what to grow to meet certain market requests. *“As Umgibi, we sit down and plan what is going to be planted depending on our client’s preference in terms of vegetables. So, we don’t put anything in the ground not knowing where it’s going.”* NJ3

Focus group discussions were held with more than 40 farmers in Dududu (UF Dududu Group) who are recent members of Umgibe. They began farming in 2019 as a group of more than 350 farmers split into smaller cooperatives that work together primarily growing beans. Many lost interest in farming and began doing other work, especially during Covid-19 when they lost their crops and had to start again. When they partnered with Umgibe, they were given requirements of what is expected from them as cooperatives and what not to expect. This led to more people leaving because they felt they were not up to the responsibility of farming or that their expectations did not align with those of the group’s expectations.

There are now only 112 farmers in the Dududu farmers group and they grow a variety of vegetables advised by Umgibe. The land they farm is 10 hectares of tribal land with permission to farm for 20 years. It is located in the South Coast region of Kwazulu Natal, one hour from Durban city. The geographic makeup of the area is peri-urban, moderately populated with houses and homesteads, and surrounded by commercial sugarcane farming. They heard about

Umgibe through an article in the Isolezwe newspaper and reached out during Covid-19 to ask for help.

Several one-on-one interviews were held with small-scale farmers who were members of Umgibe. Although not mentioned individually, the story of a woman farmer, Balungile Enhlenyama (BE), is highlighted in this study to personalise farmers' experiences. Enhlenyama, photographed below, is a female farmer in a cooperative with two other people and is pictured below. She farms on two hectares of municipal land 30 minutes from Durban city and within the same Ethekewini metropolitan area. The plot is amidst a densely populated residential area, as portrayed in the following photo. It was previously used as an illegal waste dump. Enhlenyama grows a variety of vegetables and sells to locals who pass by on foot, to a nearby market, and to Umgibe. She came to know Umgibe when she attended the Agri Indaba (agricultural conference) at the Durban International Convention Centre where Umgibe hosted a booth displaying their farming methods.



Figure 12: Balungile Enhlenyama showing her variety of crops grown (source: author)

Sigidi Development

Kwamadiba is a sparsely populated region on the coast of the Eastern Cape province that is only a three-hour drive from Durban, the nearest formal market. Small-scale farmers are widely dispersed and are only accessible by four-wheel-drive vehicles forging across open land without roads. In some places it was completely unnavigable and here I walked for hours to conduct interviews. This landscape is depicted in the photo below.

Vuyisile Dlamini from Sigidi Development procures sweet potatoes and ‘madumbe’ (indigenous tuber vegetable similar to a potato) from Sigidi village and six other villages: Mdatya village, Bhekela village, Mtolani village, Mpindweni village, Mtentu village and Gobodweni village.



Figure 13: Scenic view overlooking a typical homestead with rolling hills heading towards the ocean (source: author)

Vuyisile Dlamini (also referred to as Malombo) left the village to study a Diploma in Policing, Laws, and Procedures. He went on to do a BTech in management and did an internship at the Department of Agriculture. It was during his time as intern that he felt called to return to his home village and begin farming. In 2016 Dlamini began farming commercially on communal tribal land, where he was awarded permission to farm the land by the Sigidi chief and head women. Before this, there was mostly subsistence farming with a very small portion being sold commercially. These subsistence farmers were already successfully growing sweet potatoes and

yam, and occasionally sold the excess to external buyers who took the produce to other markets. Dlamini was the forerunner in growing produce as a commercial crop with the sole purpose of selling to the market. Dlamini established Sigidi Development Pty Ltd and helped establish over 100 micro-farmers (mostly women) across the seven villages. He encouraged the subsistence farmers to start growing yam and sweet potatoes by providing them with seed and fertiliser and offering to buy their produce. Their produce feeds into his supply chain and therefore equipping them with the basic inputs they require to farm was beneficial to him as it increased the volume he took to the market. In this way, he served as an intermediary, aggregating their produce, and arranging transport directly from the farms to the market. Dlamini helps set up young people who are interested in becoming farmers by plowing their fields, giving them seed, and coaching them on farming methods. Produce is sold to the informal markets at Durban Station and the formal municipal market at the City Deep Joburg Market, the largest market for fresh produce in South Africa.

Sinegugu Zukulu was a key informant interviewed. He was instrumental in the growth of Dlamini's farming business and mentoring him in his capacity as an intermediary. He works for the South African Faith Community and Environmental Institute (SAFCEI) in partnership with Sustaining the Wild Coast (SWC) and funded by the Swedish Society for Conservation. His role is to promote sustainable land use and agroecological farming methods. He also farms a variety of produce in Gobodweni village that is consumed by his family and sold to local and external markets.

The small-scale farmers interviewed are spread out within 10 km of Sigidi Village and Mdatya Village. Access was on foot with many homesteads having no roads, or they required a four-wheel drive vehicle to navigate which involved river crossings and several hours of drive time. Walking was the quicker and easier alternative for me to conduct the interviews. The size of the fields being farmed ranges between 1 and 5 hectares. They grow a variety of crops, but only 'madumbe' and sweet potato are sold to Dlamini for the market. The villagers rely predominantly on vegetable and livestock subsistence farming and fishing. They sell crayfish and fish to the tourist market at the Wild Coast Sun Casino.

The proximity to roads affects the access of farmers to markets. Dlamini travels to

farmers in areas without roads to acquire their produce. This costs him dearly in time, fuel, and wear and tear of his vehicles, but if it were not for his dedication to doing this, these farmers would have no means of moving their produce off the land to sell to markets. Below is a photograph showing a structure pulled by cattle to transport produce to the nearest accessible point if the vehicle cannot make it to the fields. *“The other villages which are far away from the road that we are driving, it is hard for us as farmers to go buy from them. In terms of costs, we drive the bakkie, the roads are bad, and everything is involved in that process.”* VD2



Figure 14: A cattle-drawn structure used to transport produce to the road (source: author)

It was evident through observation that the farmers also relied heavily on subsistence living. They had a wide variety of livestock, mostly chickens and goats, roaming freely around the compounds. The livestock were not prolific in numbers which indicated that this was not for selling to the market but for personal consumption. They also fished and caught crayfish and some were involved in ecotourism and ‘homestays’ which involves renting your home out to guests. *“We also catch the crayfish, we also fish, guiding. We do the cannabis.”* SV: F1-F10. The photo in Figure 15 is taken during a field visit to the Eastern Cape. It tells a story of remoteness and demonstrates the isolation of the small-scale farmers and how widely spread apart they are.



Figure 15: A landscape photo showing the proximity to the ocean and river mouth and, a photo of a husband and wife proudly standing in front of their homestead (source: author)

Entering the field: crafting instruments and protocols

The process designed by Eisenhardt (1989) of building theory from case studies was followed to create a methodical structure to the iterative process design. After formulating the initial research question and selecting the cases which informed the research construct, I designed the instruments and protocols for data collection. Multiple data collection methods and multiple sources allow sufficient data to conduct rigorous analyses and find confirmatory or contradictory evidence towards building a theory (Patton, 1999, 2015). A longitudinal study with multiple points of data collected over time verifies and validates the findings through data triangulation (Patton, 1999, 2015) which builds richness and reliability in the evidence of case studies and is a unique strength of the method (Patton, 2015; Yin, 2018). I have detailed the longitudinal data collected for each of my cases in the table below and indicated the different data sources used for each. Yin lists six potential data sources relevant to case studies and I made sure to include as many of the six as possible for each cluster (Yin, 2018). The primary data source for my cases was interviews.

Table 3: Longitudinal data capture and sources of evidence

Phase	Abalimi	Umgibe	Sigidi	FoodFlow
PHASE 1 Initial disruption and response (week 0 - 3)		1 x Interview with intermediary via WhatsApp voice notes Documentation - Social media posts	1 x Interview with intermediary via WhatsApp voice notes Documentation - Social media posts	Participant observations – research group dialogue 1 x Interview with intermediary via WhatsApp voice notes Documentation - Social media posts
PHASE 2 Crisis relief (week 4 - 12)	4 x Online interviews with intermediary and key informants Archival records - website and reports	4 x Interviews with intermediary via WhatsApp voice notes Participant observations of intermediary in webinars and online forums Archival records - website and reports	3 x Interviews with intermediary via WhatsApp voice notes	2 x Online interviews with intermediary Participant observations of intermediary in webinars and online forums
PHASE 3 Evolution of crisis response (week 13 – 22+)	1 x Online interview Documentation - email newsletter 3 x In-person focus group interviews of SSFs 1 x In-person interview of intermediary Direct observations of SSF in the fields and interactions with intermediary Participant observations of intermediary and SSF Physical artefacts - produce	1 x Online interview with intermediary 1 x Interview via LinkedIn chat with key informant 2 x In-person focus group interviews of SSFs 2 x In-person interview with SSF 2 x In-person interview with intermediary Direct observations of SSF in the fields and interactions with intermediary Participant observations intermediary in webinars and online forums Physical artefacts - produce	1 x Online interview with intermediary 1 x Interview via LinkedIn chat with another key informant 8 x In-person interviews of SSFs 3 x In-person interviews of intermediaries and key informant Direct observations of SSF in the fields and interactions with intermediary and key informant Participant observations of SSF, intermediary and key informant Physical artefacts – produce	2 x Online interview with intermediary 1 x In-person interview with intermediary 3 x Online interviews with intermediary Participant observations of intermediary in webinars and online forums Documentation - Social media posts, news clippings, intermediary report

Taking inspiration from the work of Grube & Storr, (2018), I used two of the three (random, purposeful, and snowball) interview sampling methods used in their study. My interview subjects were identified through a combination of purposeful sampling (Patton, 2015) and snowball sampling (Goodman, 1961). The initial selection of the interviewees was

purposefully selected by the founder of the bridging intermediary based on who, within the newly established supply chain, aligned with the aforementioned cluster bounding. Many of my interviews were prompted by my participation in a research group with Professor Ralph Hamann. The research group collected data on emerging responses and food relief during the pandemic, and the ethical clearance obtained for this covered my online data collection. In September 2020, once government restrictions for inter-provincial travel had loosened, I motivated for and obtained special ethical clearance from the UCT Department of Commerce to conduct in-person interviews.

Individual interviews were between 30 and 60 minutes long and were semi-structured and exploratory. Group dialogues were longer and lasted between 60 and 120 minutes. Covid-related restrictions on movement influenced the platform for interviews and during higher levels of lockdown the interviews were conducted via Zoom (Archibald et al., 2019; Gray et al., 2020) and WhatsApp. Interviews with the founders of the bonding intermediaries heavily relied on WhatsApp voice note capabilities. The reasons for this were that participants were often in areas of poor connectivity; they did not always have data to make video calls online and WhatsApp voice notes use comparatively low data. Another reason for using voice notes was that participants struggled with availability and were always 'on the run' due to the demands of the crisis. The voice notes recorded by WhatsApp helped to overcome language barriers. It allowed both me and the interviewees the freedom to listen to the recordings a few times and fully grasp what was being asked or said. WhatsApp voice notes were an ideal form of data collection for participants because of the flexibility in sending and receiving WhatsApp voice notes as and when it was suitable for the interviewee with respect to their available time or network connectivity.

To determine the best way to conduct interviews with the small-scale farmers, I engaged with the bonding intermediaries and local community leaders in each of the three cluster communities and discussed a number of options. We discussed online platforms and ICT-based solutions such as WhatsApp, Zoom, Survey Monkey, and USSD-based surveys. With the absence of spectrum connectivity and lack of phone capabilities, digital and online options are not possible. Even if these obstacles did not exist, the lack of comfort of being interviewed online

and language barriers would hamper the integrity of the interview. Even the option of USSD, which can be accessed with feature phones and does not require spectrum, would require that someone physically goes to the farmers to help them read, understand, and respond to the questions asked. This shaped my planned approach to interview methods, changing it from a distant approach to incorporating face-to-face interviews with the small-scale farmers.

Government regulations restricting interprovincial travel, as well as restrictions by UCT's Commerce Research Ethics department, meant I could potentially miss vital information during the early phases of the pandemic. I considered conducting interviews using someone already in contact with the farmers, but careful consideration needed to be given regarding who the interviewers should be and that the nature of the relationship and reputation with the interviewees did not risk participant reactivity and hamper the objectivity of the interview. Eventually the work-around was to extract insights from the bonding intermediary founder interviews, who were embedded locally among the small-scale and had hyper-local knowledge of the clusters. This unconventional method of data collection is accepted as a means of accessing data by crisis researchers (Buchanan & Denyer, 2013). This form of data collection provided the necessary information to understand the perspectives of small-scale farmers during the time I was unable to travel and collect the data myself. Thankfully, once the provincial air-travel restrictions were lifted, I was able to travel and conduct field interviews in-person.

Data collection

Interview protocols

The broader research group that I was involved in developed an interview protocol for three rounds of interviews, although it is important to note that the interviews that were used for this thesis I collected and analysed myself. The questions were semi-structured with open-ended divergent-type questions to nurture participant ground-up perspectives (Brinkmann & Kvale, 2018; Maxwell, 2012; Patton, 2015). Because the focus of the research group was similar to mine, I used these interview protocols as the basis for my protocols and added questions that took inspiration from the Grube & Storr (2018) interview protocol, which aligned with my research question. A total of 103 people were interviewed and all interviewees gave their consent for the interviews to be recorded and the data used for research purposes. I used the

same interview protocol for the bridging and bonding intermediaries, and although the interviews with the small-scale farmers were conducted very differently, many questions were repeated across all the units. In the next section, I start by explaining the intermediary interview protocols and then follow with the detail of the small-scale farmer interviews.

Protocols for intermediaries

The first interview protocol collected information during the initial crisis phase of the pandemic. It asked questions about the personal story of the interview subjects and how small-scale farmers viewed them in terms of status and trust. It asked about the origins of the intermediaries and the personal involvement of the interviewees in fulfilling the intermediary role. The interviewees were asked how their 'business life' was before Covid and how has Covid affected this? What expectations did the small-scale farmers have of them to respond to their sudden needs? In what ways have they responded to the initial crisis? The interview questions followed a line of enquiry that revealed several key aspects related to social capital. They asked about pre-existing social capital available to the intermediaries and helped understand the nature and strength of these existing networks. The questions enquired about new relationships and how both new and existing networks helped respond to the crisis.

The second round of interviews was conducted during the phase where stability (of the farmers) and withdrawal (of FoodFlow) were evident. It assessed how things had evolved for the intermediaries in terms of scale of impact coupled with scale of response. Open-ended questions sought to understand the role of social capital in aiding responses and providing access to external resources. The insights that began to emerge were the different kinds of intermediaries and how these different kinds enabled unique support to small-scale farmers.

The third round of interviews looked again at the evolution of the crisis and the corresponding scale of responses. It assessed the impact of the responses and noted a change in their response based on the needs of the farmers. The key questions covered how relationships had been instrumental in the responses of the intermediaries and the idea of complementarity between different kinds of intermediaries became apparent. The interview protocols can be found in Appendix A.

The travel time by road from where I live in the Western Cape, to the Eastern Cape and KwaZulu Natal sites is >20hrs making frequent field visits impractical. This, along with the government-enforced Covid-19 travel restrictions, presented possible limitations to data collection at important moments. However, the pandemic led to a sudden transfer of these participants to online or remote forms of communication, which presented itself as an opportunity to have more frequent encounters given the vast distances between locations (Archibald et al., 2019; Gray et al., 2020).

Over time, participants became more familiar and comfortable with engaging through online platforms. To maintain continuity of the longitudinal data collection, I conducted several informal, unstructured interviews with the founders to maintain a positive relationship and trust with the participants and to stay close to the developments as they unfolded. These were either by using the WhatsApp chat function or by phone calls.

Protocols for small-scale farmers

The interview protocol involving small-scale farmers had some additional questions. The added questions sought to gather information on their unique farming context, the history of their farming activities, size of the land, level of education, cultural laws, and types of crops grown to broadly understand what appeared to contribute towards sustained small-scale farmer resilience. The intermediary and a key informant at my first location suggested that the interview protocol that I had prepared was reworked to better suit the audience. Together, the questions were simplified, translated into the local language, and recorded on a cell phone to accompany me and my local guide. Due to how difficult it was accessing small-scale farmers, only one round of interviews was conducted in each location, but direct and participant observations that were made improved the quality of the information collected during these interviews (Maxwell, 2012; Yin, 2018). Data collected from small-scale farmers was supplemented by gathering data from key informants, which in this case were intermediary founders. Buchanan & Denyer (2013) recommend engaging and soliciting information from practitioners who have frequent interactions with interview subjects as an acceptable method of data collection in disaster studies. I have documented my personal experience of conducting interviews in-person in these remote regions. I refer to these personal experiences as 'lived moments'. Lived Moment 1 below

describes working together with key informants to adapt the interview protocol to be appropriate for the unique language and cultural requirements of the participants.

Lived Moment 1: Adapting to the social environment

Soon after arriving, I was introduced to Lonwabo, the translator and guide who would accompany me on my interviews the following day. Lonwabo was a young man who had qualified as a local tour guide and was very proud of this, but his English was poor, and I could tell he felt intimidated by my presence and the responsibility of his role. I was also worried how we would handle his struggling English and my limited ability to speak isiZulu, which is similar to isiXhosa. I sat with Malombo and Lonwabo and, as daylight began to fade and the room grew dark, we went through the questions I had written for my interviews. After the second question I was stopped by Malombo. He said the people won't understand what it is I am asking, I need to make the questions simpler, more concise and change the superfluous language I was using. I was coached through my questions, which were cut, changed, and reshaped to be more applicable to the audience I would be approaching. Malombo also decided that to further help overcome the communication and cultural barriers and the difficulty that the farmers would have understanding even the reworked questions, he would record himself reading and explaining the questions and that way Lonwabo could simply play them on his phone. By this time, it was almost completely dark and Malombo had called for some candles to be lit.

Noteworthy features of my data collection

There are three noteworthy qualities of my in-person research that are valuable contributions to the data collection and warrant further elaboration. The *first is the opportunity* I had to conduct in-person interviews and capture vital learnings during a time of multiple government lockdowns where travel and physical interactions were restricted and in-person data capture was limited. The *second is the timing* of the data collection relative to when the crisis occurred. The field visits took place during the crisis which gave rich insight into the current situation of the small-scale farmers, the impact of the time-sensitive intervention of an alternative supply chain, and observational data on the nature of the engagement of the farmers with the bonding intermediaries. The *third is the location* of the clusters. The difficulty in getting to the sites means that it is not an easy method for researchers to collect data and therefore heightens the value of the opportunity to do so. Cultural voids between the researcher and participants often create negative participant reactivity. Because I am originally from KwaZulu Natal, my (although limited) ability to speak the local languages and understand some cultural etiquette was beneficial in quickly building trust and a degree of 'street cred' among the

participants. See the boxes 'Lived Moments 4' and 'Lived Moments 5' which gives a first-hand account of these interactions. These three features of my data collection are significant because disaster research typically takes place after a disaster, as it is difficult to gather real-time data in a crisis (Buchanan & Denyer, 2013).

Recording and storing the data

The online interviews were recorded using built-in recording functions of the platform and the nature of WhatsApp voice notes meant that the interview was automatically recorded. I downloaded these recordings to a password-encrypted cloud-based backup location. To collate the case studies, I used Nvivo, which is the qualitative data analysis software recommended by my supervisor Professor Ralph Hamann. I used the built-in transcription feature of Nvivo to manually transcribe the recordings and Nvivo was also my coding tool of choice. The process of manually transcribing and coding the data improved my analysis of the information by having multiple opportunities to listen and reflect on the participant responses. The research group collectively analysed the cases in our shared study, and these discussions guided my personal analysis. It also provided an academically inclined audience to discuss findings and share personal and participant experiences. Having multiple sources from which to collect and analyse data was important for eliminating researcher biases through triangulation of the data and qualifying converging insights that emerged (Patton, 1999).

Analysing the data: coding to find meaning

During the research period, I took a one-year leave of absence to be a parent full-time. The risk of stagnating in the research collection was overcome by continuing with some time-sensitive data collection and ongoing group research discussions. Although I continued with data collection during my leave, I only analysed the data upon my return. The additional year benefited my analysis by extending the longitudinal aspect of data collection from an initial 10-month period to just under 24 months. The break allowed me time to step back from intensive data collection and revisit the data with a fresh and more objective perspective. It also allowed me to view the data holistically and focus on the convergence of evidence across the timeline.

My strategy for coding was an inductive coding process (Glaser & Strauss Anselm L., 1967; Yin, 2018) with an *emic focus* (Schutt & Chambliss, 2013) that involved examining the data

per case, distinguishing patterns and listing these as *thematic codes*. The built-in analytical features of Nvivo aided the construction of meaning by helping to build connections between the codes, highlighting patterns, and showing comparative insights. Once most of the codes had been listed, I revisited my cases using these codes as layers of analysis to further extrapolate trends.

Because of the iterative approach of my research stemming from the nature of an interpretative paradigm, I used an inductive coding process and constantly reviewed and re-labelled codes during the analysis.

As thematic structures and overarching constructs emerge during analysis, the qualitative analyst keeps returning to fieldwork observations, interview transcripts, social media entries, and relevant documents, working from the bottom up, staying grounded in the foundation of case write-ups, and thereby examining emergent themes and constructs in light of what they illuminate about the case descriptions on which they are based. (Patton, 2015)

An initial observation is that resilience attributes began to fall into two distinct categories, 'pre-existing sustained resilience' attributes and, 'in-crisis resilience response' attributes. I grouped attributes that enable the farmer to be more resilient ahead of experiencing a crisis into a category 'pre-existing sustained resilience'. These were attributes such as communal laws, multiple income streams, diverse crops, previous farming experience of farmers, land size, distance from the road and multiple market routes. The attributes of the 'In-crisis resilience response' revealed a large dependency on networks, intermediaries, and entrepreneurial responses. I was more interested in these in-crisis responses that supported my research area of interest on the role of intermediaries during a crisis and therefore directed my research focus here.

Below is a visual of the frequency of codes extracted from interviews, documents, and forum discussions. Observing the prevalence of codes within and across my cases, it became apparent that networks were a significant aspect of disaster recovery and that intermediation and entrepreneurial responses were important. I used the same Nvivo coding tool to review the relevant literature and these codes were useful in comparing with the 'bottom-up' generated

interview codes from my data analysis (Patton, 2015) which helped identify similarities and identify gaps in the literature.

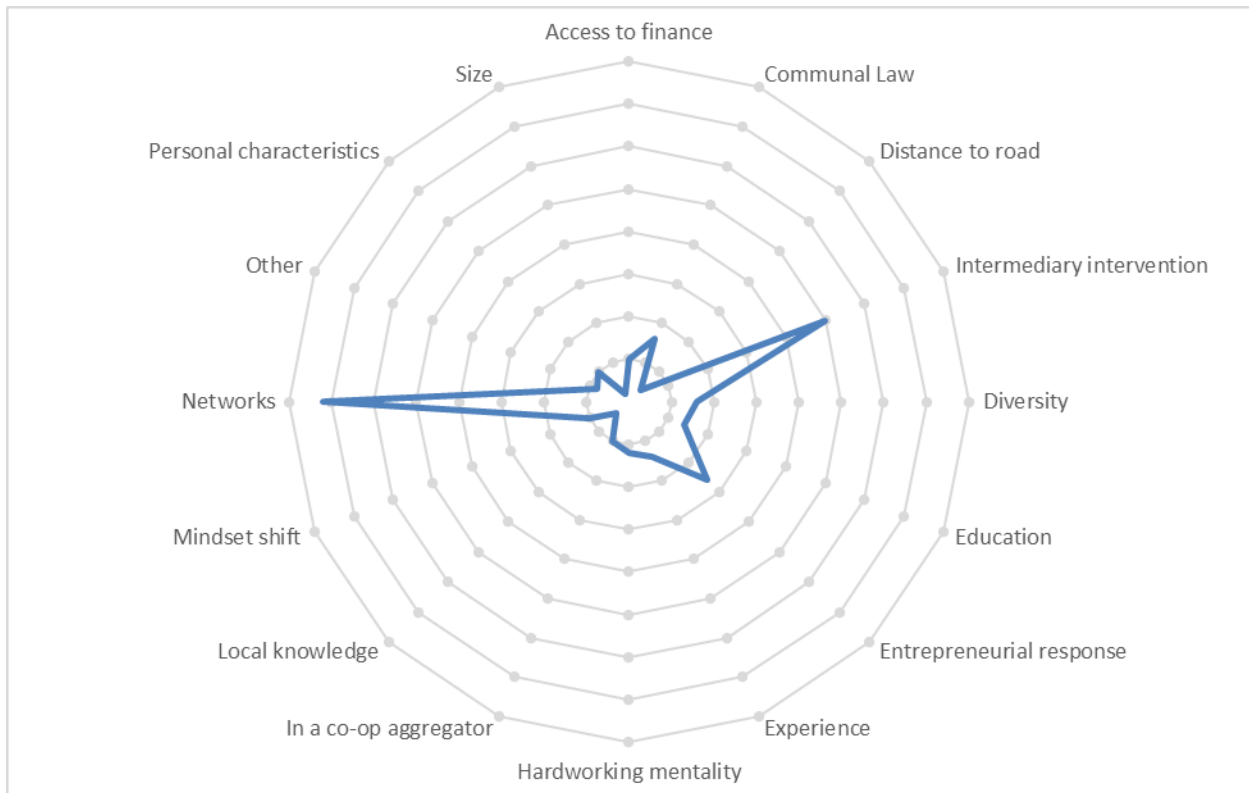


Figure 16: Code frequency found in the data

The period of time used to document the experience of the participants was bracketed using the period of intervention from FoodFlow as the boundaries which spanned 22 weeks starting with the first week of lockdown. The strictest restrictions began in March 2020 and was referred to as ‘hard lockdown’ which took place over the first five weeks. Following this, there were lower levels of lockdown until April 2022 when the national state of emergency was repealed, and all government restrictions were lifted. Looking at the insights chronologically, patterns emerged in how participants experienced and responded to the pandemic and how intermediaries engaged with small-scale farmers. This was arranged into three phases. These temporal brackets shaped my analysis of intermediaries, social capital, and how the responses evolved over time. The figure below shows the relationship between the phases and the lockdown levels over the research period.

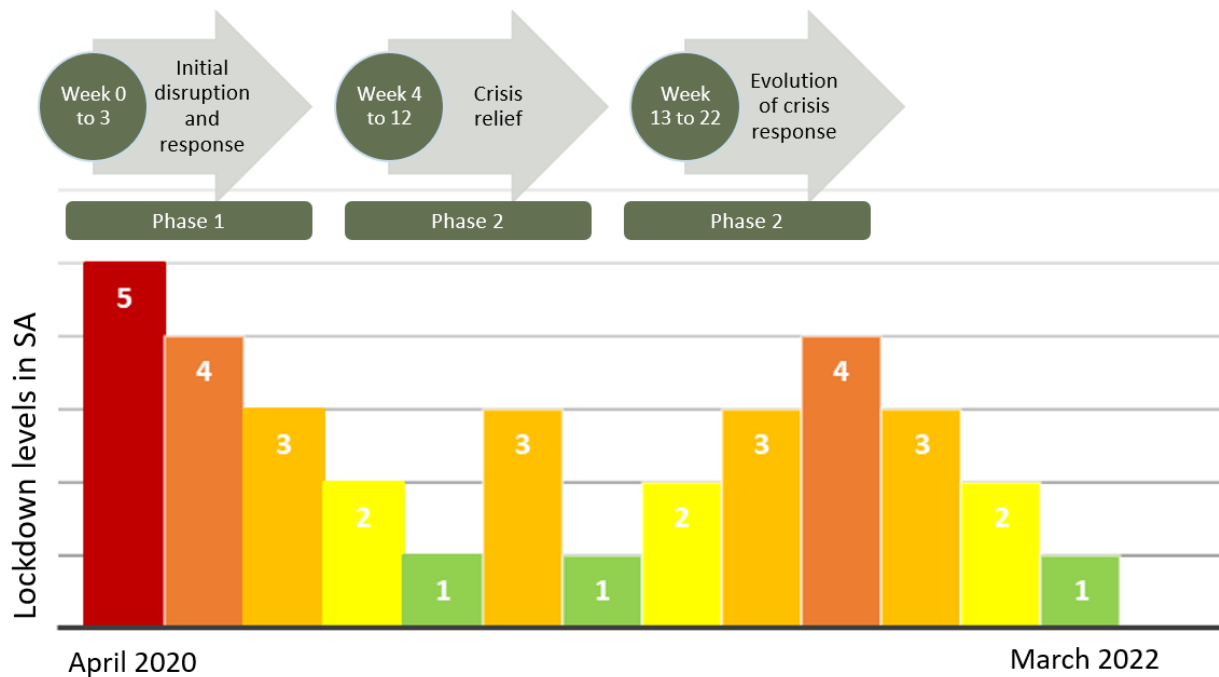


Figure 17: The relationship between phases and lockdown levels during the research period.

The interviewee responses were arranged according to the phase in which they took place, and I then created an abbreviated participant code that was used in the Findings chapter to give context to the circumstances the interviewees were experiencing at the time of the interview. The table below shows the data collected during each of the phases and provides participant codes. The original participant data can be found in Appendix B.

To ensure ethical considerations were made, participants were invited to comment on the findings, correct any mistakes, and request for specific information to be removed or adapted. There were no requests for the removal of information, and the comments and corrections proved valuable to ensuring authenticity of the data. Participants were given the opportunity to be anonymously referred to, but all participants chose not to do so and were comfortable with having their information used.

	Abalimi	Sigidi	Umgibe	FoodFlow
Interviewees	Grace Stead Alakhe Langa Abalimi small-scale farmers	Vuyisile Dlamini Sinegugu Zukulu Umgibe small-scale farmers	Nonhlanhla Joye Brittany Kesselman Umgibe small-scale farmers	Ashley Newell
Initial disruption and response (week 0 - 3)	None	Week 4 - VD1	Week 3 - NJ1	Week 3 - AN1
Crisis relief (week 4 - 12)	Week 10 - GS1 Week 15 - GS1	Week 7 - VD2 Week 8 - VD2 Week 9 - VD2	Week 6 - NJ2 Week 8 - NJ2 Week 9 - NJ2 Week 12 - NJ2 Week 15 - NJ2	Week 6 - AN2 Week 8 - AN2 Week 9 - AN2
Evolution of response (week 13 – 22+)	Oct 2020 - AL Oct 2020 - AB:F1 - F10 Nov 2020 - AB:F1 - F10 Feb 2022 - GS2	Week 22 - VD3 Week 22 - SZ Week 22 - SV:F1 – 10 Feb 2022 - VD4 March 2022 - AB	Week 22 - NJ3 Week 23 – UF: Dududu Group Week 23 - UF: F1 – F10 March 2021 - NJ4 Feb 2022 - NJ4 March 2022 – BK	Week 14 - AN3 Week 17 - AN3 Week 22 - AN3 March 2021 - AN4 Feb 2022 - AN4

Table 4: Data collected over phases and interviewee codes

The first phase began with the implementation of a national state of emergency on March 27, 2020 and is recorded as week ‘zero’ in my study. This phase was called the ‘initial disruption and response’ and took place in the first three weeks. The bonding intermediaries and farmers reflectively described the initial shock of the crisis as a period of despair, disaster, confusion and ‘stuckness’, (“didn’t know what to do”, “stuck”, “things were really bad”, “we were standing still”). The intermediaries expressed how the farmers looked to them for help, and the intermediaries, understanding the needs of the farmers, reached out to their networks for solutions. The bridging intermediary emerged as a spontaneous response to the crisis.

The bridging intermediary formalised its spontaneous existence by establishing the donation platform, finance and reporting mechanisms, farmer procurement networks, and food scheme beneficiary. This period involved considerable reliance of actors on networks within their available social capital to gain access to resources. The bridging intermediary used existing networks to help establish the alternative supply chain and to procure and deliver produce. Given the urgency to do so, the bridging intermediary experienced the need for already

established locally embedded and trusted organisations. The initial round of interviews with the bonding intermediaries took place towards the end of this period, and the participants reflected on the sudden disruption caused by Covid. It was during this period that I noticed that intermediaries played different roles which I later labelled as ‘bridging’ and ‘bonding’ intermediaries to differentiate between them.

The second phase was between weeks 4 – 12 and is called ‘crisis relief’. The bridging and bonding intermediaries came together to create an alternative supply chain and the small-scale farmers were relieved by having a new alternative market to sell to. The bonding intermediaries commented on the relief that came from FoodFlow buying produce from the small-scale farmers. They described this as FoodFlow “coming to the rescue” and shared the sentiment that they didn’t know what they would have done without FoodFlow.

In weeks 13 – 22 the levels of lockdown eased. This period was termed ‘evolution of crisis response’. The original supply chains slowly began to reopen and a degree of market stability returned to the small-scale farmers. This coincided with a reduction in the involvement of the bridging intermediary as donor funding decreased until the eventual withdrawal of support. In this paper, weeks 0 – 22 are referred as the ‘Covid crisis’, or ‘crisis’.

This period lasted until March 2022. During this time, there were varying levels of lockdown and associated negative impacts, and the small-scale farmers and bonding intermediaries felt like things were “getting back to normal”. Figure 18 demonstrates the correlation between lockdown levels and the weekly amount of donor funding received.

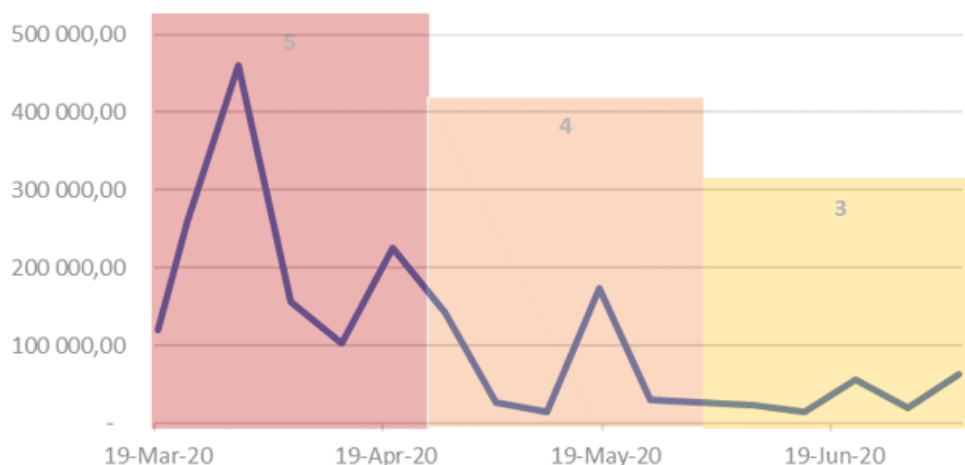


Figure 18: Graph illustrating phases of responses, levels of lockdown, and donations received.

Recognising the heterogeneity of the socio-geographic contexts

Only through the in-person interviews I conducted at each of the locations did I become fully aware of the different socio-geographic contexts between each of the clusters. I learnt that while they were similar in terms of how the disaster impacted them, they had different rules and mindsets guiding practice and this influenced the nature of the relationship with the intermediaries.

The small-scale farmers in *Cluster 1* referred to themselves as ‘urban farmers’. They were situated on very small pieces of municipal land (1 – 2 hectares) scattered across Khayelitsha. Khayelitsha is an easily accessible densely populated low-income area located close to Cape Town, which is the largest city in the Western Cape. The land they were farming on was recently cleared (between 3 – 20 years ago) cleared of waste and urban debris and used for farming purposes. The farmers had mixed origins and most of the farmers were originally from the Eastern Cape and had come to Cape Town in search of work. Not all farmers had prior farming knowledge, and experience and the intermediaries were instrumental in teaching technical farming skills.

Further detailed descriptions of the contexts of each of the clusters are in the Findings chapter. While I make no claims that the different types of socio-geographic contexts of my data are exhaustive, I believe that the heterogeneity of the contexts gives sufficient evidence to

identify patterns and reach conclusions on the identified roles of intermediaries and the way they promote resilience of small-scale farmers during a time of crisis.

Cluster 2 was located in moderately populated peri-urban areas in KwaZulu Natal province. The farmers lived on land that was 2 – 5 hectares in size and between 1 – 2 hours from Durban, the main city in the province. Although the roads were not well maintained and required navigating several potholes, they were tarred up to the last few hundred metres before reaching the farms and vehicles could access the farm ‘gate’. The intermediaries helped farmers farm together as cooperatives, they determined what crops should be grown based on soil testing and customer requests and gave some technical advice. The following vignette paints a vivid picture of the socio-geographic context.

Lived Moment 2: Driving out to interview the Dududu group of farmers.

After an hour driving on the national road from Durban, we turned off heading further inland and continued on for another half an hour of driving on tarred road, the journey becoming slower as the potholes became more frequent. We were entering KwaZulu Natal’s chiefdoms that are still under authority of the local chief. The area is fairly densely populated with houses built from brick and mortar with tiled rooves. The small homesteads are packed closely together, most having a version of a vegetable garden growing and chickens and goats being a common occupant of the road. At some point, the tar road ends and we navigate washed away dirt roads between houses that don’t appear to have municipal services, made evident by the frequency of long drops (pit toilet) and a few solar powered geysers on the rooves.

When we arrived, I saw a field of about 3 hectares under farming with roughly 30 people bent over tending to the fields diligently. I had been told to expect about 10 farmers, but as we arrived, all the people in fields immediately stood up and began filtering down the hill towards us to join us for this very important arrival. They were all eager to discuss the latest off-take agreement and to meet this “umlungu” [white person] who had arrived with them.

Cluster 3 is a sparsely populated area more than three hours away from the nearest formal market, with significant portions of the roads being mostly unnavigable dirt roads. The small-scale farmers were located even further beyond the local hub of Sigidi Village on land that was only accessible using four-wheel drive vehicles forging across open land without roads. The size of the land ranged between 5 –10 hectares and the farms were sometimes up to 2 km apart. The intermediaries provided vital logistical resources. The approach the intermediaries took

regarding the choice of crops grown by the small-scale farmers was different from the other two clusters. They suggested that small-scale farmers grow crops that were familiar to the farmer and historically known to grow well in that area. Both Cluster 2 and 3 were on tribally owned land operating under the authority of a chiefdom with active communal laws. Correct cultural etiquette played an important role in fostering meaningful engagement with farmers and I was fortunate to be familiar with some of them. Lived Moment 2 is my personal account of the journey taken to meet with small-scale farmers. It describes the remoteness and practical difficulty of travelling to farmers.

Lived Moment 3: Heading into 'deep rural' Amadiba, Eastern Cape.

I had arrived at Sigidi Village after several days of travel having taken a flight from Cape Town to Durban, driven from Durban to Port Shepstone where I overnighted, and then hired a car to take me to the 'deep rural' parts of the Eastern Cape. The vehicle I had hired was chosen based on its attractive affordability, which translated into a vehicle that resembled a small tin and was far from what was required to navigate the extreme road conditions that met me once I turned off the tarred national road. A tedious drive that seemed to go on forever as I coaxed my little tin to crawl over boulders and climb over what was left of the road that had endured years of soil erosion with no real sign of maintenance.

The roads I had driven were not even the worst that Malombo faced in his weekly drive to the farmers to collect their madumbe [indigenous African root vegetable similar to a potato]. The roads had cost him dearly as he shared how the brand new Kia bakkie (light pickup truck) he bought only lasted 2 years because of the frequency with which he drove these deteriorated roads.

I arrived at Malombo's father's house, who hosted me for the night in the best-looking building in their homestead contained within the boundaries of a stick-made fence. This was a house Malombo had built for himself as part of the cultural tradition that if you go to university and have found a job, you must come back and build a room for yourself at your parents' house and leave it to them when you get married. Malombo now uses this house to host guests from out of town.



Figure 19: Malombo and Lonwabo rewriting the interview questions

I was unprepared for such simplicity. Having diligently packed a charger for my phone, I quickly realised that there would be no means to charge it, which created a predicament as my interviews the following day were to be recorded using my phone. So, borrowing Malombo’s car charger, I left my phone on charge overnight in the tin car, knowing I’d likely have to jump-start a flat battery when it was time to return home.

Being 5 months pregnant required regular trips through the night to the long-drop (pit toilet) 50 metres from the room. With no way to tell the time because my phone was charging in the car, I crept out at first light to retrieve my phone, relieved that it had charged and that I had not overslept. My first interview for the day was at 6 am with Sinegugu Zukulu. Seeking a space to chat to Sinegugu out of the chilly morning wind, we sought refuge in a half-built chicken shed.

Grateful for the snacks I had brought with me, Lonwabo and I set off for a full day’s hiking, heading towards huts that were tiny in the distance against a few rolling hills that foregrounded the beginning of our trek. These distant huts were only our first stop for the day. Malombo had advised against driving to the farmers because it would take too long and is much easier to walk.

Spatial scope	Cluster 1	Cluster 2	Cluster 3
Cluster characteristics	Western Cape	Kwa-Zulu Natal	Eastern Cape
	Urban	Peri-urban	Rural
	Mixed cultures and languages	isiZulu	isiXhosa
	Farmers ‘new’ to farming	Some farmers are ‘new’ to farming, some with legacy farming knowledge	Farmers with legacy farming knowledge
	Municipal land	Tribal land	Tribal land
	Municipal authority	Municipal and chiefdom authority	Chiefdom authority
	1 -2 hectares	2 - 5 hectares	5 - 10 hectares
	Farm together with a group	Farm together with a group	Farm individually
	Commercial crops	Commercial and subsistence crops	Commercial and subsistence crops
	Variety of commercial produce	Variety of commercial produce	Only two types of commercial crops
	Contract farming	Contract farming	Non-contract farming
	Formal markets with some farm-gate sales	Formal and informal markets	Formal and informal markets
	Easily accessible by road	Reasonably accessible by road	Difficult to access by road
	Semi-irrigated land	Semi-irrigated land	Non-irrigated land

Table 5: Characteristics of clusters across different geographies

Validity threats and responses: seeking academic rigor

Some possible limiting conditions arose during the data collection. In my analysis of the validity threats and reviewing my actions I have taken to mitigate these, I also identified potential positive outcomes. My intention was to gather a holistic view of the data and conduct thorough analyses using multiple methods to provide insights that have sufficient scholarly rigour which I can use to confidently generate credible concepts and ideas. Lincoln and Guba (1985) identified three main threats to qualitative studies, and to address these threats, Robson (2002) suggested six strategies. These strategies are prolonged involvement, triangulation, peer debriefing, member checking, negative case analysis, and keeping an audit trail. I have listed potential validity threats and used some of these strategies to ensure that rigour and validity are achieved in my research. I also identified a few potentially positive outcomes of the limitation. These validity risk mitigation strategies helped control possible biased views of the data, and allowed me to focus on the convergence of evidence.

Participant familiarity

Because of the long-term data collection period and frequent interactions with the participants, I built friendships with some of the participants, some of which were maintained during the research period and some which have continued afterwards. The possible threat of having this level of engagement with the participants is that I develop a research bias which influences the way I view responses and observations.

To reduce this risk, I used *triangulation of data, methods, and theories*. I triangulated the data by using several data sources as suggested by Yin (2018) and using different instruments and styles of data collection such as semi-structured, unstructured, individual interviews, focus groups, and using different platforms such as Zoom, WhatsApp, and in-person field visits and gathering participant and observational data. This is listed in Table 3 earlier in this chapter. I also applied different methods of data collection, these being purposeful and snow-ball sampling methods, which provided methodical triangulation. Triangulation of theories was achieved through my literature review and discussion, where I looked at existing theories and perspectives on small-scale farmers, intermediaries, and disasters and compared these to my theories.

Peer debriefing was very helpful. Class attendance as part of my MPhil meant I had several opportunities to discuss my research and get input from other classmates. Presenting my research proposal to a panel of accomplished academics led me to talk through potential discoveries, and the feedback received helped clarify my ideas and offer guidance to the research journey. I engaged practitioners in the research area and solicited reviews on draft sections of my paper which I had emailed to them. Other opportunities to present my research helped in this way. This peer review process offered valuable objective and critical feedback, and it helped recognise and address possible limitations.

Lastly, I tested emergent themes with participants through frequent *member checking* (Patton, 2015). I engaged with the participants to obtain the accuracy of my data collection and regularly checked in while considering theoretical contributions. Once I had concluded my findings, I sent the chapter via email to validate the discoveries and solicit feedback to confirm whether I had understood the participants correctly, that they had been accurately quoted and represented, and to ensure that they were comfortable with the concepts I had formulated.

An advantage of participant familiarity is that a closer relationship and regular contact can foster a greater sense of trust, and respondents may feel more comfortable sharing sensitive information. This reduces the respondent bias of engaging with a stranger with whom they may feel guarded and might filter their responses given. Ignorant assumptions which might have influenced my interpretation of the findings were reduced by having a fuller perspective of the participants involvement and their unique contexts. Prolonged involvement offers richness to the data by capturing changes as they occur and provides in-depth insights over an extended period of time (Patton, 2015)). Patton explains this using the term “thickened observations” (Patton, 2015, p. 1061) which refers to records that have accumulated, have multiple perspectives and longitudinal dimensions. This enabled me to present a detailed study of the cases.

Participant reactivity

In consideration of my race and socio-economic background, (classified middle-class white South African) which is of different ethnicity and economic status from the research participants, a degree of participant reactivity was expected. In one interview, I observed a sense

of respondent bias and felt the participant was tempering their answers to emphasise their struggle and to not appear to have had great success in the likely event that I might be in a position to support them financially either personally or through my networks. This interview ended with a direct request for money. This reactivity may have been the case in other interviews, but was perhaps less obvious.

To lessen this possible reactivity to my race and class, I ensured that I stated my purpose upfront and, where appropriate, mentioned this during the interviews. I also explained what I was not in a position to help directly, but I really wanted to learn from the interview subjects. Prolonged involvement in the study reduced participant biases and improved clarity in relationship boundaries by regularly returning to the participants and reinforcing my research-based purpose of engagement.

My perspective as an 'outsider' reduced researcher bias by offering a fresh perspective that allowed me to observe interview responses without presuppositions and assumptions which might have led me to overlook noteworthy insights. Similarly, if I was closely connected to the respondents, they may have assumed similarities and shared experiences and may not have thought it necessary to share some key information.

Sampling limitations

There was a limitation to the number of clusters that fit the sampling boundaries. There were three clusters of cases within the primary case that were selected by purposeful sampling based on their characteristics.

To improve the validity of my research, I chose to conduct a qualitative nested case study analysis which engenders depth to the cases using thorough data collection methods on each case. To develop generalisations and notice cross-case patterns, 8 – 10 cases are sufficient (Eisenhardt, 1989; Langley, 1999). My study had one bridging intermediary case and three bonding intermediary cases connected to three groups of small-scale farmers (between 10 – 50 farmers interviewed in each group).

Language limitations

I am English speaking and have a limited conversational level of isiZulu and only understand enough isiXhosa to share greetings. The intermediaries spoke proficient English, and

we were able to use English for interviews in ad hoc engagements. When interviewing the small-scale farmers, either the intermediary founders were present and translated on my behalf, or a translator accompanied me.

Although there was a risk of participant reactivity by having a translator accompany me, there were a few noticeable benefits. In instances when participants spoke among themselves in their preferred language, I was able to ask the translator to share with me what they were saying. If the interview questions were not understood by the interviewee (even when asked in the participant's preferred language) the translator was able to give a longer explanation of the question, helping the participant to understand what was being asked. The translator was also able to share cultural perspectives which I would otherwise have been unaware of, such as the communal laws governing the grazing movements of cattle.

Reaching closure

The overarching theme across the cases regarding the resilience of small-scale farmers in a crisis was the potential role of intermediaries, this was important for examining other prominent themes that arose in relation to these intermediary roles. As I looked at interviews and documents, what began to emerge was the idea that there were types of social capital available to the intermediaries, and I pursued this theme further to better understand how this influenced the intermediary responses. Within and across all the clusters and temporal brackets, a theme of particular interest was the relationships that formed between the intermediaries and the reliance they had on each other, which I referred to as a 'complementarity'.

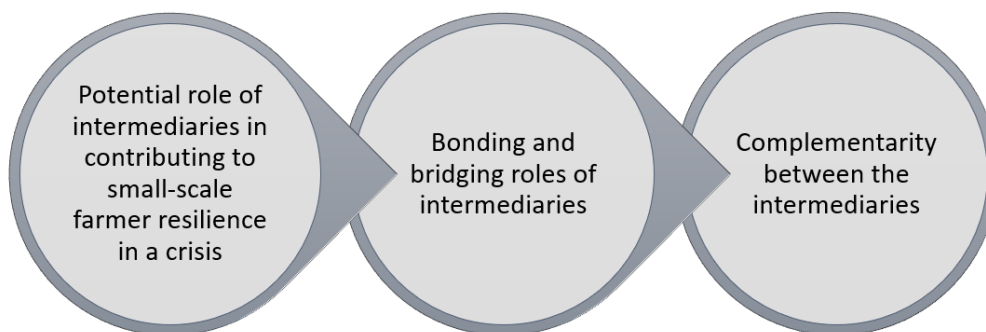


Figure 20: Broad themes underpinning the research rationale

The figure above is an illustration of the flow between the broad themes of the research which forms the basis of the rationale. The Findings and Discussion chapter provide further insights into these significant discoveries. The important value of understanding intermediary-driven crisis responses is useful in praxis and in policy writing for institutions such as government and IDOs involved in either small-scale farmer development or crisis response, and the Practical implications sub-section describes this in greater detail.

Chapter 4: Findings

The cases presented in this chapter form a nested case sample as depicted in figure 4 in the Methods chapter. FoodFlow ZA (FoodFlow) is the primary case and because of the correlation between intermediaries and social capital observed early in the findings, I have labelled FoodFlow as a ‘bridging intermediary’. During ‘hard lockdown’ of the Covid-19 pandemic, FoodFlow activated an alternative supply chain while existing markets were closed. These new markets were community organisations or soup kitchens distributing either fresh food or cooked meals to destitute people. FoodFlow procured fresh produce directly from farmers and indirectly through locally embedded intermediaries. I chose to focus my research on three of the embedded intermediaries, Abalimi Bezekhaya, Umgibe Organics, and Sigidi Development, and included the associated cluster of small-scale farmers within each of their respective networks. These three clusters, each based in a different province of South Africa, were selected for my study based on their socio-geographic diversity. To differentiate between the kinds of intermediaries, I refer to embedded intermediaries as ‘bonding intermediaries’. Within the bonding intermediaries are small-scale farmers, which are included in the units of analysis. These units of analysis are illustrated below in Figure 21.

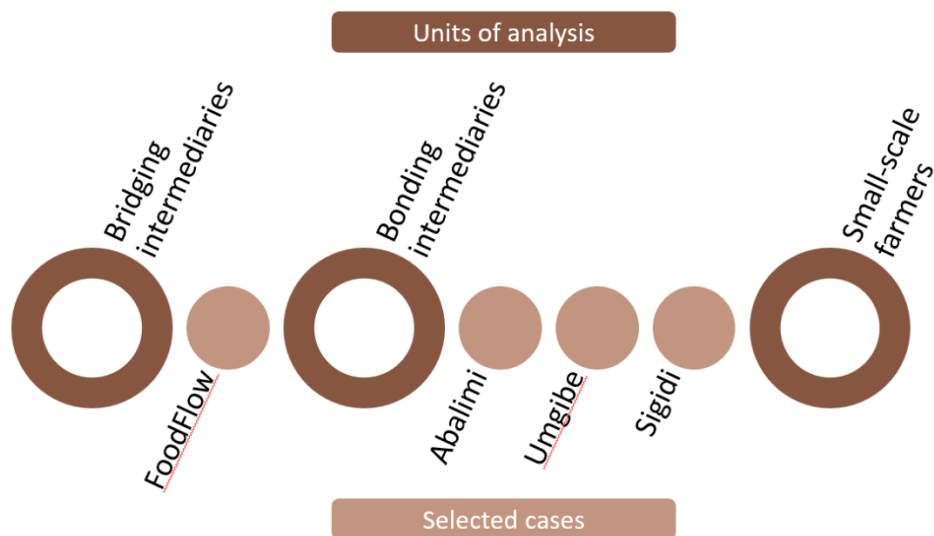


Figure 21: Three units of analysis

The analysis of the findings begins by explicating similar experiences and responses between all cases to understand how the needs changed and the responses evolved after 'hard lockdown'. The initial Covid disruption experience is captured including the impact this has on the intermediaries and their associated farmers. I investigate the importance of timing, the rapid establishment of new ventures, and the entrepreneurial adaptations of existing intermediaries to create an alternative supply chain. I extrapolate these findings into temporal brackets which I label as phases: 'initial disruption and response', 'crisis relief', and 'evolution of crisis response'. I pursue insights on the social capital available by looking at the role of existing relationships and the formation of new relationships. Following this, the discovery of two different kinds of intermediary is detailed, and I conclude the findings with observations on the co-dependency of the intermediaries on each other and the complementarity between them. The figure below provides a visual representation of the findings structure described above.

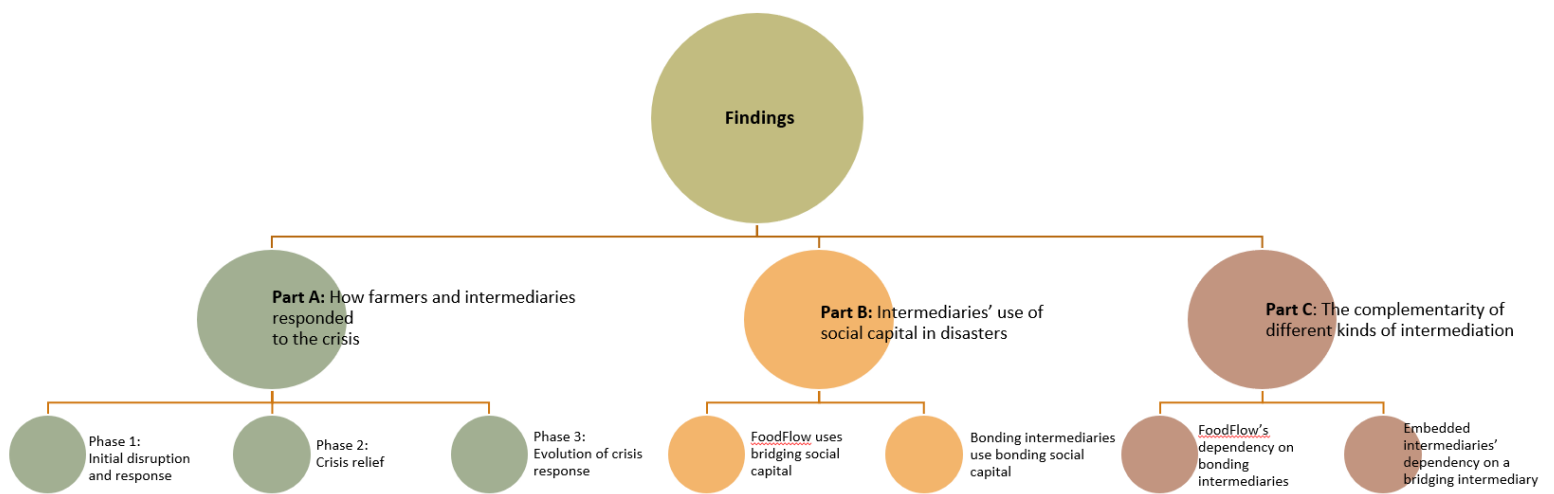


Figure 22: Structure of the findings analysis

Part A: How farmers and intermediaries responded to the crisis

The Covid-19 pandemic experiences and responses of the three units of analysis; *bridging intermediaries*, *bonding intermediaries*, and *small-scale farmers*, are grouped into phases which I labelled, *initial disruption and response*, *crisis relief*, and *evolution of response*. Figure 17 in the Methods chapter illustrates these temporal brackets.

Phase 1: Initial disruption and response – week 0 to 3

This period of initial disruption occurred at the end of March 2020 following the announcement made by President Cyril Ramaphosa on 23 March 2020 saying that drastic measures were being taken and South Africa would be subjected to a level 5 state of emergency calling all non-essential businesses to stop operations. In the first few weeks of lockdown, there was an emergence of spontaneous ventures and a flurry of networking. A “spontaneous venture” is a term used by Shepherd & Williams (2014) describing the emergence of newly formed ventures as a compassionate response to a disaster. This includes existing entrepreneurs who adapt their standard business operation to respond in new ways to the unique community needs that arise as a result of the crisis. In this paper the word ‘networking’ refers to the use of existing and creation of new networks for the purpose of establishing a new alternative supply chain in response to the disaster. The following subsections describe the initial experiences and responses of each of the cases.

FoodFlow

Lin, a speciality vegetable farmer based in Hout Bay, Cape Town, and the founder of FoodFlow, experienced the demise of the hospitality industry before South Africa’s ‘hard lockdown’ became effective. Cape Town’s hospitality industry is heavily dependent on international travellers, and the boom in infection rates experienced in other countries around the world forced several restaurants to close. When South Africa went into lockdown, the hospitality industry shutdown completely and Lin was left with fresh produce and no clients to sell to.

Newell and Lin worked in partnership to establish FoodFlow as a compassionate response to the Covid crisis. The venture aimed to use consumer donor funding to purchase ‘Harvest Bags’ (an assortment of fresh produce) from small-scale farmers and deliver to marginalised communities in close proximity to the farmers through community organisations and soup kitchens. Newell and Lin originally intended to redirect the flow of food within Hout Bay (the community in which they themselves were located) between local small-scale farmers and the community. It quickly became evident that there was an eagerness from the public to support

food relief ventures, and in the second week of existence, the exponential increase in donations led to the rapid growth of FoodFlow which Newell describes below.

The initial goal was 153 bags for the Hout Bay region only. The first delivery day, Food Flow went beyond the local organisations and delivered 474 bags. In week two, Food Flow went 'viral' and raised funds for 1400 bags in one day and 3500 bags in that same week. (AN1)

To help launch FoodFlow quickly, Newell and Lin brought in three key actors with whom they had prior relationships. Oxfam South Africa, Webtickets and Department of Social Development. Lin knew Oxfam South Africa from working together several years earlier. As a recognised and registered entity, Oxfam South Africa allowed FoodFlow donations to be received into Oxfam's registered bank account. This inclusion endorsed FoodFlow and provided the necessary transparency and legitimacy to ensure that FoodFlow was trustworthy.

Newell had connections with Webtickets, an event booking platform that used their e-Commerce site to facilitate online donations made to FoodFlow. Webtickets also provided additional marketing for FoodFlow by integrating them into their website and promoting FoodFlow through their digital marketing campaigns. FoodFlow gained rapid publicity through media coverage featured across several media spaces such as TV programmes, news broadcasts, radio, newspapers, and social media. With each mention in the media, a corresponding response was noticed by way of funds received. *"Any time there has been an article or any kind of media coverage that hits a large audience, we can see the difference that that makes. Which is great."* AN3. In a period of 20 weeks, FoodFlow paid over R1.6 million in purchases, delivering more than 14000 Harvest Bags to more than 30 communities benefitting over 400 farmers in 3 provinces (FoodFlow, 2020).

Key connections in provincial government that were instrumental in connecting FoodFlow with the Western Cape Department of Social Development ('DSD') were mutual friends of both Newell and Lin. Their relationship had started several years earlier when they were working together on a social development project in Hout Bay. *"These things worked in our favour, and they built upon relationships that were already established. They gave us validity and accountability. All those foundational partnerships were before we launched"* AN1.

Many of the newly created FoodFlow supply chains used embedded intermediaries who had existing relationships with farmers. FoodFlow identified these intermediaries through word-

of-mouth. In interviews with Newell, she refers to these intermediaries as ‘partners’. *“Our partners have said our value has been in playing that connecting role [between producers and buyers]” AN3.*

Abalimi, Umgibe and Sigidi are pre-existing intermediaries who facilitate market access for small-scale farmers. They adapted their *modus operandi* and coordinated the purchase of fresh produce to be delivered to the alternative markets set up by FoodFlow. These intermediaries adopted new payment systems and complied to FoodFlow’s reporting requirements.

Sigidi Development

The Sigidi farmers based in the Eastern Cape supplied mainly the informal markets at the Durban Market, and when ‘hard lockdown’ regulations were enforced, the Durban Market closed, and street vendors immediately stopped operating. The timing of lockdown coincided with the harvest season, which meant that the produce was either ready to be harvested or had already been harvested and was ready to be collected and taken to the markets. The small-scale farmers were at risk of losing the annual crop, which was their primary income, and Dlamini was suddenly unable to pay his employees.

In the beginning of Covid-19 things were very bad because it came at a time where we were supposed to start harvesting. So, it just stopped everything. So, I told my employees to go home because I would not be able to pay them. (VD1)

Zukula, a key informant involved in teaching agroecology to small-scale farmers, explains how the lockdown forced the hawkers [informal street traders] to stay home. He describes the key role of these informal retailers and how their sudden removal collapsed his supply chain.

The biggest market, almost 90% goes to the informal market in Durban. So, you remember when the lockdown happened, hawkers, they were sent home, and so that was the biggest threat in Durban. So, when Malombo goes there, he sells in bulk these bags, 20kg to the hawkers and go sell. So, when those hawkers were sent home under level 5, that meant there is absolutely no market for this sweet potato, which means people are sitting with stock. (SZ)

Even once the government amended their regulations to allow informal food traders to resume selling, only essential service business employees were allowed to commute to and from

work. This meant that the volume of foot traffic that bought fresh produce from the Durban Market street vendors remained dramatically low.

Luckily our business was classified as essential services, and so I got the certificate to transport food to Durban market. The problem now was that Durban market (I supply the informal market), those traders there are selling to people who go to work or go to shop. During Covid-19, town was clear, no one was in town at that time when the Covid-19 started. So, I had to stop again to transporting the food to the market because there was no one, those ladies there in the street, and some of those ladies went home because at the market there was no one to buy my produce. (VD1)

Although the essential services permit was easy for Dlamini to attain, lack of information disseminated to the local police regarding the permit protocols led to obstructions when travelling to deliver produce. This caused additional difficulty and unnecessary delays in accessing markets during Covid, further exacerbating the impacts of the crisis.

But the problem was the police at uMzamba, where we were crossing in terms of going to Durban. They did not understand the permit. They always stopped me there, saying no this is not what is required, you must bring so and so and so. I said no, this is the only permit we have, this is my company I am delivering food, there is nothing else I can produce except this permit that I have given you. I remember that day it was around 10 o' clock, I was stuck there with a load to Durban, the customer waiting there for me, so I had to call the colonel, the station commander to ask him to help me because I got a lot of stuff in my bakkie, people are starving that side in Durban. So, he drove up, he came to me, then he looked at my papers, and then he said, no let him go, these papers are okay. (VD3)

Figure 23 shows Dlamini's 'cry for help' on Facebook. Dlamini reached out on social media and shared about his personal crisis that was unfolding as a result of the lockdown.

"Malombo was very quick to put something on Facebook. That's his component of work. That was picked up by NGO's, I know that ACB, Andrew Bennie was quick to pick that up. And then started looking for organisations that are providing food to the destitute and the vulnerable." SZ.



Figure 23: Dlamini's post on social media voicing the impact of the Covid disruption (source: Dlamini)

Research Coordinator Andrew Bennie (AB) at the African Centre for Biodiversity (ACB) is a long-standing connection of Dlamini. During the Covid crisis, Bennie was involved in the C-19 People's Coalition Food Working Group in Gauteng and saw a post on the WhatsApp group on the dire situation of Dlamini. He offered to help Dlamini by looking on-line for food organisations who could buy his produce. In doing so, he came across FoodFlow. Bennie describes how he facilitated the connection between FoodFlow and Dlamini.

So, I gave Malombo a call to ask more about the situation, and we agreed I'd start phoning charities etc that were organising food distribution in KZN to see if any of them wanted to purchase [fresh produce]. I just started looking up and phoning them, but then came across FoodFlow. Luckily, FoodFlow was able to do so, and we worked together to find a charity (in Port Shepstone) and it all happened from there. Malombo and Singegugu [who is SWC's programme manager on the ground in the Amadiba region] then worked to organise the transport for the produce, and coordinated with the charity in Port Shepstone to get it all to them. (AB)

Umgibe Farming Organics

Umgibe farmers in Kwazulu Natal were left with a similar sudden drop in demand for their produce as restaurants, schools and informal markets closed. Due to the peri-urban nature of mixed urban and rural land use characteristics, Umgibe famers did not live on the land they

farmed. Covid restrictions on movement meant that these small-scale farmers were unable to tend to their fields, and the land quickly became overgrown with weeds, damaged by pests, and the produce that was ready to be harvested and sold was left to rot in the fields.

During Covid-19, some of the people we supply are closed. We had rotten vegetables we couldn't really cope because when the restaurants are closed that are taking the lettuce and chilies you end up not having anyone to supply and the street vendors and vegetables vendors that order from us in bulk were nowhere to be found during the lockdown on level 5. (NJ1)

During lockdown, the restriction of movement and anything considered as non-essential services caused a halt on several plans that Umgibe had made. Many projects that were scheduled to launch and would have made a great impact on food supply and income generation for poor communities were cancelled or stalled. Joye estimated that they have been set back a year. Projects such as the 'Seedpreneur Programme', which was set to launch in schools in early April 2020 were cancelled due to school closures.

Figure 24 below is a photo of high school children and the seedlings they have grown from seed. "This [seedpreneur programme] enabled each of the 25 schools to grow their own fresh, organic vegetables using the Growing System, as well as provide an additional income for the girls." (Umgibe Farming Organics, 2020)

Some of the projects that we are about to commence were stopped. For example, the seedpreneurs programme where we were going to do with 31 schools to propagate seedlings was left and I lost a lot of money. On the seeds that I had bought, and the investment that I had done to make sure that we get as many seedlings done by the kids in school, and it has also affected the part where the kids could actually learn and make money for their families and for themselves. With the Covid-19 lockdown, we had to leave all the projects not done. Secondly, we had another project with iLembe district where we are going to be growing our vegetables in 18 tunnels and at the same time empowering 25 youth graduates. We are standing still; we couldn't go on with it because of the lockdown. So that is another time that has been wasted. Maybe in about 4 weeks from now we would be harvesting our first crops but now we haven't done anything. (NJ1)

The Seedpreneur programme

School children are given an "Umgibe Seedbox" which contains a variety of vegetable seeds. The children germinate the 200 seedlings with coaching from Umgibe. A portion of the seedlings are bought back by Umgibe while the remaining seedlings are kept to use for starting food gardens at home and school.



Figure 24: Seedpreneur proudly showing the seedlings that they have grown (source: Joye)

Prior to lockdown, the Dududu group of farmers had only just begun to farm for commercial purposes. The lockdown restricted them from tending their crops during the precarious time of establishing their farmlands and the Dududu farmers were forced to 'start from scratch'. In a focus group dialogue session, the farmers explained how they chose not to continue farming on their current plots. Instead, they moved to an area that was further away from the main roads where they could tend to their crops unnoticed by the police, who were having to enforce the movement regulations.

Covid-19 has been very bad because everything we have done, we had to restart because the clearing that we had done, when we come back everything was back as if they hadn't done anything. So, we are starting afresh. We were not allowed to come and that's why we decided to come this side to work because it's far from the road. (UF Dududu Group).

A female small-scale farmer, Balungile Enhlenyama, shares her experience of the sudden advance in poverty and hunger in the community surrounding her farm. She described how people who were hungry and desperate came to steal food from her land, which was unprecedented behaviour in that area.

It affected us really, most of the people from this place are not working. There is a degree of unemployment here. So now during this time, everybody was sitting in their houses, no jobs then they opened up here, they came up here at night. They took everything, even chillies, they took everything. When I come the following day, gone. And you can see even the bags, dragging all the food out. It made people hungry and desperate. It was so terrible (UF F1 – F10)

Before the pandemic, Joye was actively engaged online with other urban agriculturalists, food system projects, research and organisations either through social media, WhatsApp groups, or email. In the initial period of disruption Nonhlanhla Joye heard of Gauteng farmers selling

food to feeding schemes by word-of-mouth (WhatsApp groups, emails, and social media engagement). She reached out to Brittany Kesselman, a food researcher and activist who worked with the food security working group of the C-19 People's Coalition. Through the Coalition, Kesselman knew of FoodFlow, as they were involved with similar efforts on a smaller scale, linking small-scale farmers to food relief efforts in Gauteng and put Joye in touch with Newell from FoodFlow. *"We have seen now more than ever how important social capital is"* NJ3

Abalimi Bezekhaya

Similarly, to the experience of the Umgibe farmers, the urban-based Abalimi farmers did not live on the land which they farmed, and they had difficulty accessing their farms during 'hard lockdown', especially in the first few weeks of stringent level 5 regulations. Abalimi farmers usually sold their produce to restaurants and hotels, as well as to local street vendors and pedestrians. With the government restrictions imposed on non-essential business, the hospitality industry stopped operating. The restriction of movement on civilians not conducting essential business meant there were no pedestrians buying vegetables directly from the farmer, and the local informal markets such as street vendors who bought produce from the farmers to resell had no customers to sell to.

Abalimi had existing working relationships with Umthunzi and PEDI who aggregate produce from the same urban farmers. Abalimi was invited to join a WhatsApp group that was started by Umthunzi and PEDI to collaboratively navigate the sudden drop in food demand and find ways to support the farmers. When Umthunzi heard of FoodFlow working to link produce from small-scale farmers to feeding schemes, they invited Lin and Newell to the WhatsApp group. The purpose of the WhatsApp group was to discuss ways to solve this sudden shortfall and connect the farmers to new buyers. Using the WhatsApp chat group, these actors collectively pursued logistical solutions to this dilemma.

Abalimi held the closest long-term relationship of almost 40 years with the small-scale farmers compared to Umthunzi and PEDI's relationship of roughly 1 year, and this allowed for FoodFlow to have direct contact with them. *"Abalimi was a good networking opportunity, they worked directly with a lot of the farmers that supplied PEDI and Umthunzi, they understood*

FoodFlow's concept. They had the closest long-term relationship with the farmers and allowed for direct connection." AN3.

Phase 2: Crisis relief – week 4 to 12

The informal alternative supply chain that was quickly established by FoodFlow provided financial relief to small-scale farmers and their associated intermediaries. It enabled the flow of fresh food from the land, avoiding mass food waste and provided food to those left destitute from the impact of the crisis on household nutrition.

Dlamini describes how, although the original markets slowly began to open, the agreement with FoodFlow helped keep the produce moving off the land during this early period of lockdown. *"So, when that was happening, the time they [FoodFlow] were buying from us, the market again opened, but at small pace. But with FoodFlow things were moving."* VD2. This allowed Dlamini to fulfil his buyer commitment to farmers and purchase market-ready produce from them and redirect it to the alternative market created by FoodFlow. Dlamini's procurement of produce for FoodFlow extended beyond his routinely sourced farmers to an estimated amount of more than 300 farmers. He opted to clear the produce off the smaller remote farms first because the produce on his own land and the Sigidi Village produce was closer to the road and he knew it would be easier to clear when the demand recovered. Joye shares about the sense of being rescued by FoodFlow by bringing their buying power to purchase vegetables from her cluster of farmers.

What has happened now is that FoodFlow came to the rescue, so I've been collecting the vegetables from our fields as well as the other co-operative network to supply to a charity organisation then we [also] distribute those foods parcels to the communities around where I'm staying. We are managing to feed a lot of people. (NJ3)

FoodFlow was able to activate this supply chain quickly with the aid of the bridging intermediaries, as already established and locally trusted intermediaries who held critical knowledge of the local farmers. Due to the rapid response from FoodFlow and the bonding intermediaries, the small-scale farmers experienced very little disruption to business as usual. *"Malombo is the one who helped them out and made it possible to continue selling. If it wasn't for Malombo they would have lost everything. Overall, there was no real effect of lockdown and Covid-19 on them due to their relationship with Malombo."* SZ. The table below shows how much

in Rand value was purchased from small-scale farmers, how many Harvest Bags were delivered, and how many farmers benefited.

Summary of FoodFlow relationship with intermediaries			
	Abalimi	Umgibe	Sigidi
#Farmers benefitted	60	56	300
Amount received (rands)	R304 961	R158 040	R216 000
Period of support (weeks)	19	9	17
#Harvest bags delivered	2560	1317	1801

Table 6: Summary of FoodFlow relationship with intermediaries

- Abalimi: 60 farmers benefitted, R304 961 was received over 19 weeks, and 2560 Harvest Bags were delivered. *“May it [support from FoodFlow] last until they [small-scale farmers] don’t need it anymore.” GS1*
- Umgibe: 56 farmers benefitted, R158 040 was received over 9 weeks, and 1317 Harvest Bags were delivered. *“FoodFlow helped us continue farming and giving people nutritious food.” NJ3*
- Sigidi: More than 300 farmers benefitted, R216 000 were received over 17 weeks and 1801 Harvest Bags delivered. *“Today we are still standing because of FoodFlow.” VD3*

Phase 3: Evolution of crisis response – week 13 to 22+

During this phase, there were two prominent experiences. The stability of the small-scale farmers and the withdrawal of FoodFlow. ‘Stability’ refers to the re-emergence of formal and informal supply chains and the small-scale farmers returning to their original supply chains. The return to ‘normal’ supply chain functioning was slow, but as lockdown levels eased and business began to operate again, the previously established supply chains resumed their regular activities.

‘Withdrawal’ refers to withdrawal of the ‘gap-stop’ relief provided by FoodFlow. Parallel to the relief of the initial disruption and the re-emergence of original supply chains was a steady downscaling of support from FoodFlow as donations slowly began diminishing until August 2020 when FoodFlow discontinued their support.

Our goal was to be this ‘gap-stop’, to be filling in for the clients that the farmers have lost, whether that be restaurants or informal vendors, and our timeline of the scale and amount of time that we’ve been able to partner with certain producers. I think some of those relationships have absolutely bridged that gap (AN3).

The peak of funds received and produce purchased was in week six after which funding began to taper until week 20 when a lack of funding led to the discontinuation of deliveries in the Eastern Cape and KwaZulu Natal provinces. *“We peaked in week six, we are now in week 18, so for actually the majority of FoodFlow, we've kind of been in a scaling down pattern which is a bit strange at this stage.” AN2*

As the Covid regulations were lifted and ‘business as usual’ returned, the intermediaries reflected on how their businesses had changed as a result of the pandemic. The sentiment from Newell was that the need for food relief was not only still necessary, but growing in severity. *“It seems like the need is definitely still there. In certain communities, the need is only increasing and just the overall energy and momentum around addressing the issue is continuing to decline.” AN4*

In September 2020, FoodFlow began the process of introspection and future planning and split the focus into two streams. One, to continue food distribution within communities on a smaller scale responding only as funds were received, and two, to research a self-sustaining way of continuing to enable small-scale farmers to sell produce within their own communities. FoodFlow launched a crowd-funding campaign to conduct market research and community mapping, mapping the fresh fruit vendor markets to understand their landscape.

At the moment, starting last month, I launched a crowd-funding campaign to continue this research; an on-the-ground research and some market research. That launched last month, and we are at about 62% of our goal, and we went ahead and started doing the community mapping process; mapping the vendors, fruit and veg vendors, spazas, to understand the landscape. (AN4)

Through this process of research, brainstorming, and stakeholder engagement, Newell began to question the evolution of FoodFlow and its path to becoming a long-term sustainable organisation. What began to emerge was the realisation that FoodFlow may have existed as a response to a disruption in the supply chain, but may not be an entity that continues beyond the crisis.

Like many initiatives working in Covid, we have had to assess the viability of continuing, and then also, we really wanted to scrutinise, whether we needed to; we weren't an existing organisation with a wide mandate; we existed for a very specific purpose, to be this stopgap until producers' regular customers came back" ... “So, we had to say, okay, job well done, that's fine, or is there still a need?

Do we still have value to add, that is the research process that I am in; this incubation programme that I am in. (AN4)

The diminishing donations and the scaling back of the produce purchased coincided with the farmers' regular clients resuming their buying behaviours. *"In many of our partnerships we were successful, as donations diminished, we could see farmers' regular clients coming back online"* AN4.

There was, however, a desire to continue selling to FoodFlow as a new and additional marketplace to the existing client base.

For some it worked out quite well; their regular customers were back on board. But I think everyone they viewed FoodFlow as one of their customers and would have liked to sell to us, even though regular customers were coming back. Also, some of the restaurants and regular customer could not provide regular demand. (AN4)

Although FoodFlow had to shut down ongoing purchases, they kept relationships with suppliers which have been utilised in isolated occurrences of further donations. *"We've proven that we can scale if we have the resources to do so and all the partnerships that we have had even if we've had to scale back from them are still there."*AN4. In July 2021 they received a donation from PwC and were able to quickly reactivate the supply chains using the intermediaries to procure from the farmers and deliver to the designated charity organisations. The post by FoodFlow on their Facebook page says:

Thanks to support from @pwc_za we were able to reactivate our farming partnerships in KwaZulu-Natal and the Eastern Cape to get much needed nutrition into communities along KZN's South Coast, purchased from the Sigidi Farmers, and into Mpolweni, a rural area north of Pietermaritzburg supplied by Umgibe. It was wonderful to be able to reconnect with our partners across the country who are so well positioned to keep the food flowing locally to those in need. (AN4)

With the relief of the initial disruption, less donations were made to support food relief, and orders from FoodFlow scaled down until eventually it came to an end in August 2020. FoodFlow funding lasted 17 weeks and amounted to R2,012,789. Some relationships with the Harvest Bags beneficiaries briefly remained in place until this too dissipated. The crisis evolved from an immediate emergency to one that will have a long-term impact.

Umgibe farmers were unable to plant their crops in time before the planting season ended. Because of this, some of the farmers' businesses did not survive lockdown and no longer produce vegetables, leaving Joye with a reduced tonnage and unable to fulfil orders. Some restaurants Umgibe supplied to have closed permanently, leaving a loss in their market offtake making the crisis one that entails both a supply and demand disruption.

I think after Covid-19 things are going to be a little bit difficult because some of the farmers that were affected by the lockdown are not going to be able to reproduce. So, as a result I'm going to have less tonnage and also, I won't be able to fulfil some of the orders. And another thing is that some of the restaurants might not be opening; for example, one of the people that we are supplying in Overpoort is not going to be reopening. The property is to let now. Because they are not going to be able to get back on their feet. So obviously that is going to affect our production and our market. (NJ4)

The donations received by FoodFlow for the purchase of Harvest Bags from the Umgibe farmers began in week 5 of FoodFlow's operation and from then onwards involved a scaling down pattern until week 13 when funding to provinces other than the Western Cape ended (A. Newell, personal communication). The timing of the funding provided the bulk of the relief during the weeks following the sudden closure of schools and other food relief programmes. It supplied a market for the produce at a crucial time when the established markets collapsed, and food was destined to sit in the fields and rot.

Joye plans to help more cooperatives grow vegetables to feed themselves to ensure that there is no another food supply shortage and that communities and the indigent always have access to nutrition. The system that FoodFlow created, which involved external funders buying food directly from farmers and delivering it to nearby feeding schemes, kept nutrition within the same community. Although the funding from FoodFlow has discontinued, this system is one that Joye hopes to replicate, as well as maintaining the quick payment arrangement established by FoodFlow, which made the flow of funds from the buyer to the farmers swift and seamless.

They pay so well, they pay on time, so I'm actually able to pay the farmers in time and it has been quite a great system to work with and I'm looking forward to continuing working with other charity organisations in that manner. I was hoping that perhaps one day the DSD would be able to look at systems like that. Systems that talk to farmers on the ground and help them by buying through them and making sure the money circulates around the communities. (NJ4)

There has been a keen interest in growing food gardens in response to the crisis either as individuals wanting to secure their own nutritional needs or as organisations wanting to teach communities to grow their own food. Joye had people, such as youth and Islamic Relief, who previously seemed unlikely to consider growing their own food, approaching them to develop food gardens.

We also ended up getting some youth to actually become part of the projects. I gave them some spaces where they can be able to grow their own vegetables. And surprisingly, they took it quite seriously and I will send photographs. It is an amazing experience that during covid you see people doing this you wouldn't normally see... People who would never have thought of food gardens have approached us and they are now seeing a new way of developing new communities rather than a handout which is only useful for one day and then the following day the people are back again. (NJ4)

The photo below was taken by Joye outside a primary school that has dedicated a section of the school grounds to be used to grow vegetables. The young learners are involved in the process of planting seedlings and watering and maintaining vegetables.



Figure 25: School children with a small piece of ground that has been prepared for planting seedlings (source: Joye)

The Covid-sparked movement to online and digital communication has had an interesting effect on interaction with others and the way things are done. Meetings are happening more online, and access to broader network support has expanded as the need for people to be physically present has reduced. People who would otherwise not have engaged on digital platforms have been pushed to learn to navigate the online communication space.

What I've noticed is that most people have been exposed to technology, which is something that they would not have thought of before the covid. So yes, it has really evolved and whether in a good way or a bad way, some of the things that are good about this social media communication method is that we are learning every day for new things, we are achieving, we [small-scale farmers] have become really resilient. (NJ4)

One of the farmers describes how she felt that a positive outcome of Covid is that it has given her the opportunity to become more advanced in her online capabilities, *"I can tell you now how to open WhatsApp for the business and Teams, Zoom, all those things. I was not aware, but I have learnt."* UO F1 – F10

Dlamini saw the value of social media as a marketing tool and is motivated to continue to use this as a platform to expand his networks. Figure 26 is a screenshot showing Dlamini actively sharing posts on his Facebook profile to maintain good relationships with those in his online network. The new market route that came about through FoodFlow provided a supply chain during the disruption to existing supply chains. Dlamini learnt that this type of partnership was necessary to survive such disasters.

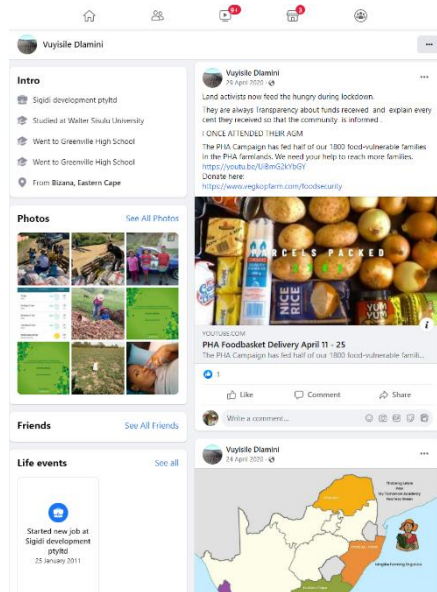


Figure 26: Dlamini using Facebook to engage with his networks on social media (source: Dlamini)

The sentiment of Dlamini during this time revealed great tenacity and persistence. *“I think with the disaster we had with Covid, I felt like there is nothing else that can come that can be more than this one. We are strong. What I realised is that food is what people need, everyone needs food each and every day.”* VD4

Stead from Abalimi comments on a noticeable increase in the need for farmer training, *“What I can say is that there has been a huge increase in the need for training.”* GS. Typically, per annum they train 300 people. In 2020 it was more than double that, which is high considering that for several months they could not train due to Covid and when they did the numbers were limited and in 2021 over 1 000 people were trained. When enquiring about the reason for the dramatic rise in demand for training, Stead shares how this is a direct consequence of the impact of Covid on local economies.

It’s about food security. People are hungry, people don’t have work, people have lost their jobs and need to make other arrangements. I think it’s pure economic pressure and need. I don’t think that anybody is all of a sudden more interested in gardening per say, I just think people need the food and we’ve had a lot of people come wanting to do training and can’t even afford the R70 to pay for the training. (G2S)

Stead noticed that staff members were paying the R70 ‘out of their pockets’ for people to attend the training. This led Abalimi to provide a Covid ‘Voucher’ which replaced the training fee

and field team members (working as extension service officers) could issue a Covid Voucher when they met people who really wanted to come to the training but couldn't afford it. *"But ya, lots of stories of people coming back and saying they were hungry, their husband lost their job, there was no food, no income, and they came to Abalimi just to learn to grow veggies."* GS2.

Abalimi is now changing its focus to look at local markets.

We have done some market research and some interesting stuff with the locals to see; do they buy, how do they buy, do they want organic, do they know what organic is. But it is interesting because they don't know that A the veggies are available and B that it is organic. But they are willing to buy, and they are willing to pay even a bit more, and they are happy to buy local produce. So, there is a definite market available for the farmer, but they don't quite trust it yet. (GS2)

They are now working to help farmers understand how to sell to local markets and what they need to create and access external markets themselves. They have started a small local farmers market every Friday as a teaching platform to show farmers how a local model can work. *"We encourage the farmers to take turns to man the stand. So, they get money in hand, and we are hoping that this will show them that they can actually sell locally."* GS2

Abalimi is also hosting a few stakeholder engagement events where urban farmers, chefs from prestigious restaurants, and aggregators can forge either new relationships where there were none, or stronger relationships where they were already existing.

Part B: Intermediaries' use of social capital in disasters

The bridging intermediaries engage formal institutional actors and traverse diverse socio-economic boundaries, and bonding intermediaries engage informal actors from homogeneous actors within the same community and culture. Both the bridging social capital and the bonding social capital, if operating in isolation and without the complementary other, would not have been able to fulfil all the logistics required to establish an alternative supply chain and successfully link the demand to the supply. Figure 27 below demonstrates a complementarity between the primary case intermediary with bridging social capital and embedded intermediaries with bonding social capital providing two purposes for existence, generating demand, and securing supply.

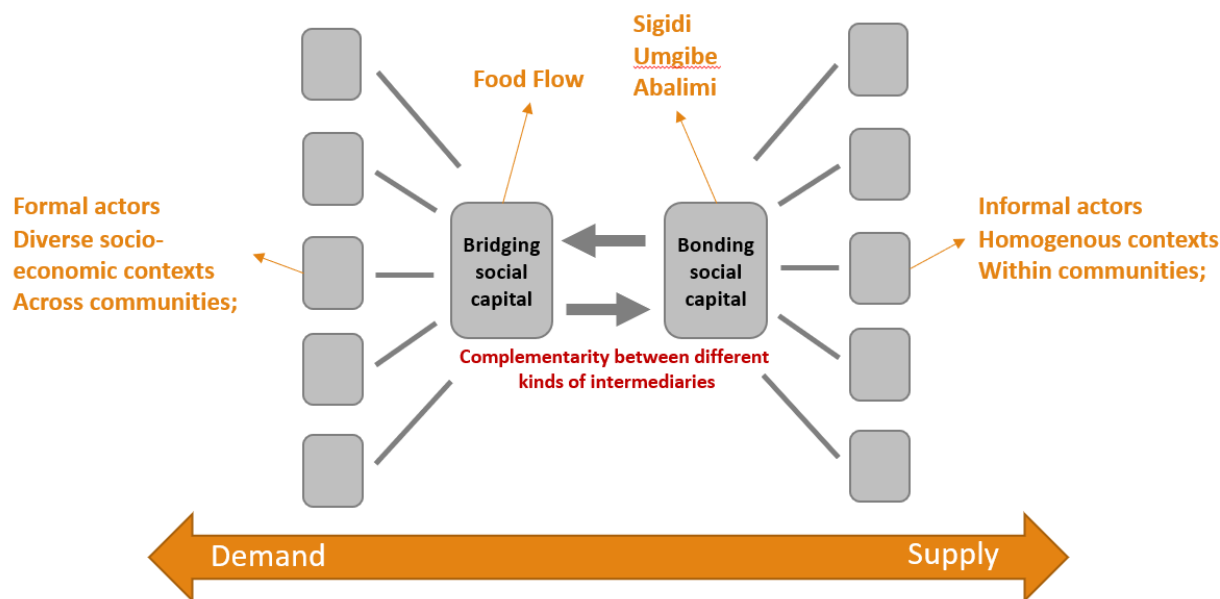


Figure 27: The complementarity between different kinds of intermediation

The section below describes and substantiates the different kinds of intermediation, those who facilitate bridging social capital and those who facilitate bonding social capital. Following that, evidence is presented which explains the interdependency and complementarity between the two.

FoodFlow uses bridging social capital

Lin from FoodFlow, with her background in public health and farming involvement, held networks among other small-scale farmers, aggregators, and restaurants, while Newell's networks in community development connected her to social impact organisations involved in Cape Town. FoodFlow used these established networks to bridge horizontally between individuals and communities of different social groups and bridge vertically between different institutional actors and between social strata. This enabled them to gain a social licence to operate (Acquaah et al., 2014) and transcend wealth hierarchies to lobby financial backing for their venture. As Newell explains, *"That's what our skill set is and what our partners have said our value has been in playing that connecting role."* AN3.

As described in the previous subsection, FoodFlow's founders had existing relationships with institutional actors such as Oxfam South Africa, the Department of Social Development, and Webtickets which served to help establish their spontaneous venture. Oxfam South Africa, a

social justice organisation with more than 60 years of experience in South Africa, endorsed FoodFlow’s venture by allowing FoodFlow to use its bank account to receive donations. *“The bank details weren't a random organisation that had just started. It was that people were donating to Oxfam and that said in itself that Oxfam was supporting this initiative.” AN2.* FoodFlow invoiced Oxfam South Africa for the amounts required to purchase the Harvest Bags from the farmers and other associated operating costs and Oxfam South Africa then produced a third-party financial report that was independent of FoodFlow. *“In the mad dash, we were looking for an organisation to provide financial accountability; they became our financial conduit; money goes to them, and we invoice them to pay the farmers” AN2.* This provided FoodFlow with the necessary transparency and legitimacy to operate without having to embark on the process of registering as an NGO and the operating time required to build a trustworthy reputation. *“These things worked in our favour, and they built upon relationships that were already established. They gave us validity and accountability.” AN2*

Webtickets is an event booking platform that used its e-Commerce site to facilitate online donations from FoodFlow. The addition of FoodFlow to the Webtickets website as a Covid-19 relief effort was marketed to the Webtickets followers with a call to action to donate; see Figure 28. The partnership with Oxfam South Africa and Webtickets helped to quickly expand the reach of FoodFlow’s marketing. FoodFlow also utilised traditional communication channels, such as print news, radio and television, and digital public communication channels such as social media and websites, to rapidly expand exposure.

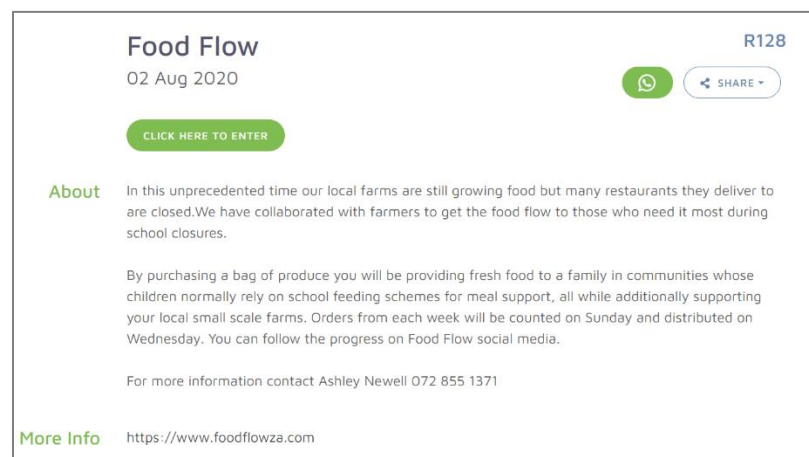


Figure 28: Listing on Webtickets to purchase Harvest Bags (source: www.webtickets.co.za)

Initially, the selection of recipient organisations was guided by a list provided by the DSD. The DSD is responsible for managing the funding for school feeding schemes in the Western Cape, both within metro areas and further afield to the winelands. The advice given by the DSD was to rotate through the list of identified organisations to reach a larger number of beneficiaries.

The newly formed FoodFlow network facilitated the growth of its operation in both funds received and produce delivered. Inbound contact from people and organisations who had seen or heard of FoodFlow through the above-mentioned marketing platforms reached out to offer donations. *“In that week [week 2], all of a sudden; the phone was blowing up; people wanted to donate; I felt like a customer service agent.” AN1*

Newell loosely partnered with Cape Town Together (CTT). Cape Town Together is a network of self-organising neighbourhood-based teams engaged in rapid, community-led responses to Covid-19” (Daily Maverick, 2020) and sold produce to a few of the Cape Town Action Networks (CANs) that delivered to identified communities and organisations that needed food support in and around the Cape Town metropolitan area. Soon, however, Newell sought to expand the list of beneficiaries beyond the Western Cape. This expansion happened organically as people in organisations from other provinces who had heard of FoodFlow either through their own networks or through the media began reaching out directly to Newell asking to get involved.

Simultaneously with the expansion of beneficiaries, FoodFlow needed to broaden the farmer network to support this expansion. *“There was a lot of pressure; looking for partners; trying to quickly get more farmers on board; reaching out to a lot of farmers. So, we put feelers out about how to expand; because there was interest, and also here in CT we are maxing out the farmers.” AN2.* This saturation of small-scale farmers in the Cape Town surrounds and their awareness of the need for food relief across South Africa led them to explore farmer networks in other provinces. *“We kept hearing of the pressure of hunger. We need to get the food out” AN2.* So, Newell investigated the viability of expanding to other provinces in response to this food crisis, *“We thought there is a need and perhaps opportunity in other provinces.” AN2.* Newell spoke with Kesselman from the Covid-19 Coalition who was working with WITS University

(Johannesburg, Gauteng Province). Kesselman had a list of small-scale farmers throughout South Africa, and although they were unable to partner with them, they connected them with farmers in other provinces.

In summary, intermediaries with bridging social capital were new spontaneous ventures that emerged as a compassionate response to the social crisis. They had loose ties to small-scale farmers with differing socio-economic status and demographics. The bridging intermediaries had external heterogeneous networks across contrasting social strata. They operated remotely to conduct a national campaign and provided valuable access to external information and resources. Their ability to quickly align with reputable organisations provided acceptable levels of trust, transparency, and traceability, which was a principal asset for donor confidence.

Bonding intermediaries use bonding social capital

The findings showed that Abalimi, Umgibe and Sigidi were all similarly embedded within the same community as the small-scale farmers that they procured from, and they performed similar roles and activities to each other. The intermediaries were locally based, and the founders spoke the local language and had intimate knowledge of the community and its cultural nuances. Joye and Dlamini both shared the sentiment that when Covid hit they felt a lot of pressure and responsibility toward the farmers who viewed them as their leader and looked to them to find a solution. *“We felt the pressure, the people were looking to us for answers” NJ2*

In response to asking one of the Sigidi farmers how they know Dlamini, this is what he said, *“It’s very hard for me to explain, you know my father, we are extended family. Our grandfathers were brothers. Most of the people [in Sigidi Village and surrounds] are Dlamini’s [surname], we were all born here.” (SV F1 – F10)*. Positive long-standing reputations maintain embedded intermediaries as trusted by the farmers and seen as community leaders. When asked why a farmer in the Sigidi area started farming, he attributed his farming ambitions and success to Dlamini who helped him prepare his fields and collect his produce to take to the market. He also acknowledged the positive financial impact that it had on his community. *“We are old now [farming for several years] and Malombo motivated me, we are doing it for the money to help people around in the community.” (SV F1 – F10)*.

Dlamini is one of the original farmers in the area who began to sell his produce commercially, and is now the largest farmer in the area and buys the produce from the smaller farmers in the seven villages of the Amadiba region. Because Dlamini had been instrumental in setting up most of the farmers in the Amadiba region as described in the case above, there was a reciprocal feeling of trust that this had created and still existed. Dlamini shares how it took several years to build trust amongst the farmers who were initially jealous towards Dlamini. *“But today things have changed a little bit now, they have welcomed me, they understand me.”* VD1

The embedded intermediaries represented the small-scale farmers and became the channel through which FoodFlow was able to procure from the farmers without needing to hold direct relationships with them. The embedded intermediaries had knowledge of what variety of produce the small-scale farmers grew and what was ready to harvest. They communicated FoodFlow’s order requests to farmers and arranged delivery to the designated feeding schemes. Payment and associated administration were facilitated by the embedded intermediaries; they invoiced FoodFlow for the bulk purchase and then paid the farmers in cash for their individual orders. *“Each week I bring plus R50k into the community through selling of their produce”* VD1

In the 2022 floods in KwaZulu Natal, Joye shares about her role in the community as an embedded intermediary with bonding social capital. Joye is trusted, holds existing relationships, and has a deep understanding of the complex social dynamics of the people and is often a voice for them when engaging with other actors.

Recently we had floods in KZN as small-scale farmers we were hardest hit, however, no one understands the plight of small-scale farmers like ourselves. I am not an important person, but I am an ear to their plight the network is growing and as such we connect and share challenges at grass root level. Sometimes it's not even about funds it's about advice it's about reaching out as a part of them not as an observer or a visitor.

Most of the time small scale farmers have problems that needs solutions that are suited for that particular area, they know the problem and they also know the solutions but sometimes they lack the confidence to explore those solutions; that is where we come in as part of the farmers network. We liaise with izinduna [chiefs], amakhansela [ward councillors], LED [Local Economic Development] managers and, as one voice, we raise our concerns. As small-scale farmers, we have learnt that the challenges we face have no political or religious boundaries. ' (NJ4)

The intermediaries with bonding social capital entrepreneurially adapted their existing business to respond to the sudden disaster needs of small-scale farmers. They had close ties and frequent engagement with farmers and a high density of interconnected relationships across socio-economically homogenous networks. The bonding intermediaries were in close geographic proximity to small-scale farmers, which gave them an embedded understanding of the impacts of the disaster and a strong sense of place attachment, which motivated them to help small-scale farmers and their communities. They were familiar with the cultural nuances, spoke the local language, and had a mutual sense of trust with the farmers. The bonding intermediaries provided logistical access and relationship access to small-scale farmers.

Part C: The complementarity between different kinds of intermediation

There is a dual dependency between FoodFlow and the embedded intermediaries. FoodFlow made use of bridging social capital, while Abalimi, Umgibe, and Sigidi made use of bonding social capital. The urgency of the formation of a new supply chain juxtaposed with the scattered geographic nature of the small-scale farmers required both types of social capital.

FoodFlow's dependency on bonding intermediaries

The pace at which FoodFlow needed to move between receiving funds and delivering food meant that the model was such that it could not spend the time required to manage logistics or afford the financial outlay of paying for transport. *"So, we realised we need to find community partners that can collect if farmers cannot deliver [to the organisations]."*AN1. This placed importance on the type of intermediary that was needed to ensure a rapid flow of food. The intermediaries needed to be geographically close to the recipient communities and able to deliver directly without third-party transport services.

So, then, in week two, when things started going really big (our first few days it was 400 boxes, and by end of week two we raised 3500), we felt, if it continues at this rate, we need to figure out how to deliver. My panic was people are donating to us and we said we would be feeding people... There was pressure. We need to show we can get food from farmers to communities. We, as FoodFlow, need to show we can deliver and justify all these thousands of people that are supporting us when they could have been supporting others. There was a lot of pressure, looking for partners, trying to quickly get more farmers on board; reaching out to a lot of farmers. (AN1)

Newell comments on how FoodFlow solved these rapid growth and urgent delivery needs while ensuring trustworthiness of partners. Through word-of-mouth, Newell sought partnerships with intermediaries that were registered organisations and have these types of networks in place. *“With farmers that were further away from Cape Town we found organisations that were already established, so it wasn't just someone calling out of the blue and us sending produce without us having eyes on the ground.”*AN3. To procure from a large base of small-scale farmers, especially given the demand for speed, FoodFlow would not have been able to access the volume of small-scale farmers without the aid of embedded intermediaries who already held existing procuring relationships with the small-scale farmers. When asked on how many farmers Sigidi procured from using FoodFlow donations, Dlamini comments on the expanded scale of farmers (300) from his original base of farmers who supplied to him.

“Yoh, when FoodFlow came there were more than that [the original 120 regular farmers that Dlamini procured from], because I remember when FoodFlow came in we bought from Sigidi, we bought from Mdatya, we bought from Bhekela, we bought from Nyavini, we bought from Tolani, we bought Gobodweni, so I can say maybe above 300 farmers that we bought from because we made sure that we split them, we bought from everyone, they are above 300, that we bought from. Because, let's say, if you say we need about 200 bags, we were dividing those bags according to each village, that is what we were doing. Everyone was passed [included] when FoodFlow came.” VD3

Dlamini makes reference to the difficulty of accessing the small-scale farmers, *“Because you know here at Sigidi, there are some villages where you can't just go.”* VD2. What Dlamini means by this is captured in my personal experience while interviewing farmers in the ‘deep rural’ regions of the Eastern Cape. I refer to these personal experiences as ‘lived moments’. There seemed to be intangible interactions that had implications on the willingness to engage, and there were particular moments of cultural exchanges that somehow granted permission to begin business interactions. The following vignette portrays the complexity, both physically and culturally, of accessing the small-scale farmers.

Lived Moment 4: Intangible cultural exchanges before business begins

Lonwabo, my guide and translator, handled the cultural formalities involved in approaching and meeting with the farmers. This involved standing at a distance from the homestead calling out for the head of the family to come out and greet us. Handshakes were exchanged that resembled much of what I would imagine a secret club in one's childhood would conjure up. Lonwabo would proceed with bringing greetings and blessings from his family and would then ask after the farmer's family. Only then could the interview begin.

As a thank you gift to the farmers for allowing me to visit them and conduct an interview, I gave each homestead that I visited a bottle of soda and some biscuits. Their response was humbling. Recognising how hard it is to get anything store bought and that it is a day's travelling with transport costs and a significant amount of walking, luxuries such as soda were seldom on the shopping list. It was met with clapping of hands, bowing of heads, and thanks offered to God. The utter glee expressed was on par with what I would imagine someone would show if they were given their dream Christmas present.

The distance we walked in that direction measured 10 km on my sports watch and brought us to only 3 homesteads highlighting the remoteness and vast distances between the farmers. It was clear from both the cultural aspects and the remoteness of the farmers that an intermediary sitting in Cape Town could not possibly purchase directly from these farmers without the aid of an intermediary like Malombo.



Figure 29: Photos from the Amadiba region depicting the vast expanses of natural land between (author photo)

This lived moment demonstrated the importance of an intermediary in facilitating interactions with the small-scale farmers. In the process of translating and adapting the questions, sending an accompanying guide with to conduct greeting formalities, as well as ratifying my presence through voice notes recorded in Dlamini's own voice, Dlamini was ensuring that not only were language barriers overcome, but most importantly that cultural etiquette was adhered to and that my interaction with the farmers was endorsed by him as the farmers' trusted liaison. This transfer of trust that Dlamini gave me was observed through the willingness of the farmers to engage and share personal details.

Dlamini's role as an intermediary was shaped by his social identity in the community. Although he had developed small-scale farmers to be growers from which he purchased and sold produce, he had inadvertently become the custodian of the small-scale farmers of Amadiba, and there was a deep sense of care and responsibility felt by him.

It feels good for me to see people who have grown up in terms of farming, and some they still acknowledge that it is me, I am the one who pushed them to do this thing, it's working. I'm bringing everyone who is doing this, I am helping them, they are farming. So ya, it feels good to know you have done something good. (SD3)

The remoteness of the farmers and the lack of basic infrastructure portrayed in the lived moment highlights the practical difficulty in engaging with the farmers. Technology that allows for communication, such as electricity and spectrum, to power cell phones is scarce. Road access in many instances is non-existent and Dlamini talks about the difficulty of physically reaching farmers which he overcomes in his role as intermediary, *"The other villages are far away from the road that we are driving... we drive the bakkie [light pickup truck] to collect, the roads are bad and everything [logistics pertaining to the aggregation of produce] is involved in that process."* VD1.

FoodFlow lacked the long-standing and trusted social identity of Dlamini, they lacked the ability to physically access the farmers and the cultural, language, and technological means of communicating. In the areas such as that of the Sigidi Village farmers in the Amadiba region of the Eastern Cape, and the Umgibe farmers in the tribal lands of Kwazulu Natal, cultural nuances were important in engaging and conducting business interactions. These are not behaviours that FoodFlow is *accustomed to and, therefore*, relies on local intermediaries to navigate. Lived Moment 5 exposes the fragility of trust and emphasises the cultural rites of passage required.

Lived Moment 5: Cultural formalities experienced in the KwaZulu Natal chiefdoms

Everyone gathered under the shade of a very large tree casting out a big shade which offered relief from the blazing sun (see figure 30). As traditional Zulu protocol dictates, the ladies sat with the children on one side and the men sat on the other. The meeting began with a song led by one of the women farmers. Once the singing had ended, Nonhlanhla took her cue and carried out the greeting rituals, thanking God for his provision, thanking everyone for their attendance, and introducing each of us by saying our names, who we represented, where

we are from, and that we bring blessings from our families. This was followed by another song, this time led by Nonhlanhla.



Figure 30: Dududu farmers gathered to meet with Nonhlanhla to discuss off-take agreements (author photo).

Thankfully I was familiar enough with the Zulu culture and could mostly sing along to the familiar tunes. My broken Zulu was much to the delight of the participants, who clapped hands and responded to my questions with a fast string of words that were completely lost as my language skills quickly met their full range. Nonhlanhla facilitated the group interview, using my list of questions printed out, she translated the questions, and I ran around with my cell phone to each person to record their responses. During the time she engaged with them on the off-take agreement, I could tell by the concentration of the audience and their open and inviting expressions that they respected Nonhlanhla and valued her presence. I would imagine that without Nonhlanhla paving the way for my interviews so deftly, I could have been met with a far more hostile and distrustful approach.

Our time together ended with a prayer said by one of the ladies and a closing song. I had been told to expect about 10 farmers and I had bought several bottles of soda to give as thank you gifts. But with the change in numbers, this was clearly not enough for everyone, and I was worried that some people would take for themselves only and leave others without. Surprisingly this wasn't the case and they made sure to divide the cooldrink as best they could among everyone present.

In 'lived moment 5', the farmers' interaction with each other and with Joye exemplified the importance of having local cultural knowledge. The farmers expressed an openness and respect towards me as an outsider that could only be attributed to the presence of Joye and the role she played in being an auxiliary connection with whom the farmers felt safe. Farmers were likely to have been far more sceptical had I arrived on my own, especially given their recent encounter with a fraudulent person claiming to support farmers with market access.

The bonding intermediaries' inherent understanding of the different rules, behaviours, and mindsets guiding practise of the local farmers, was crucial for FoodFlow. They acted as a buffer for FoodFlow against the complexities of procuring from farmers with these differing institutional environments located in regions that are socially and geographically diverse.

Part of the learning process for us was really hearing the small-scale farmer space is really different in different provinces. It functions differently depending on who their clients are; here [Cape Town] they are connected to restaurants and farmer markets; in Eastern Cape, they feed into informal traders and the distances are greater. (AN2)

Such intermediation allowed FoodFlow to operate efficiently using short supply chains between donors, farmers and beneficiaries which facilitated the speed at which food needed to be sourced, collected, and delivered.

No, to be honest, I feel like FoodFlow and again maybe just the nature of the fact that we're connector and that we're not on the ground, but I feel like our model has really been able to stay out of the complexities of some of what is happening as far as the confusion initially around lockdown and whether or not we are still going to be able to operate and kind of where there was a few weeks when it seems like it might be declared that it is illegal to give food to people and all these things because we actually operating in a market function as far as just paying a farmer to deliver food and paying an established business to make a food delivery, it has been very simple, we are not having to figure out how to get a bunch of volunteers into community and drive around making purchases from shops. (AN2)

Embedded intermediaries' dependency on a bridging intermediary

When the Covid crisis hit, the initial disruption left the intermediaries feeling desperate and in despair. They felt responsible for the well-being of the small-scale farmers, and in a crisis like no other where both supply and demand were being jeopardised, the intermediaries did not know what to do. *"There was Covid, then we were stressed, we didn't know what to do. Then FoodFlow came in, they took our stock, now we are relieved now in that our stock produce would go, and everything would be sold" VD3.*

Similarly to the dependency of Foodflow on bonding intermediaries, the embedded intermediaries would not have been able to access vertical ties that span institutional actors and social strata to solicit donations and obtain new market routes. While the embedded

intermediaries have good networks beyond their community, their attention and relationships are largely at the local level. The bridging nature of FoodFlow meant that it could configure the relationships across these social strata and trigger them to create linkages that the donors, institutional actors, or embedded intermediaries were not able to do in isolation. FoodFlow provided business and marketing expertise that was absent in the embedded intermediaries. The bonding intermediaries had close relationships with small-scale farmers and some loose relationships with external networks, but they did not have the kinds of networks that could mobilise external donor funding. The bonding intermediaries also lacked the skills, experience and the capacity of time and resources to activate a new alternative supply chain.

While the embedded intermediaries may have been able to identify a demand, the rapid pace of the creation of the alternative supply chain, the scale at which FoodFlow was able to establish this, along with the mechanisms for distribution, is attributed to the spontaneous entrepreneurial nature of FoodFlow. Newell's natural adeptness at organising actors and triggering linkages into action is evident in Lived Moment 6.

Lived Moment 6: Ashley's comfortable existence as the role of FoodFlow founder.

These were Covid times and I had never met Ashley in person, but we had spoken several times and I felt as if I knew her well, comfortable to have a conversation about what is happening in each other's lives. Jumping on another Zoom call to hear of the updates of FoodFlow now that the initial crisis had abated, I marveled at how she had pretty much single-handedly set up a successful venture that served such a crucial role in South Africa during this crazy period of existence. And she appeared to do it so naturally and with such ease. Ashley seemed very comfortable playing the role of networker, engaging with such a diverse array of actors, from government and well-known organisations such as Oxfam and Webtickets, with universities, entities such as the Southern Africa Food Lab, Covid-19 Coalition forum, intermediaries like Umgibe and Abalimi, and even corporate companies. She seemed to effortlessly engage across institutional actors and social strata.

Ashley also had an amazing ability to think strategically, to see the full picture linking an entirely new supply chain together, and identifying the areas that needed to be bridged to allow the flow of food. She was able to very quickly draw on her expertise and put in place reporting measures to ensure trust, traceability, and transparency. Ashley appeared at ease in the role of founder, strategist, and liaison, and it spoke volumes of her experience in social impact and programme management.

Lived Moment 6 depicts Newell as having an inherent understanding of the needs of each of the actors and how to meet them. Institutional actors, such as the DSD and Webtickets, wanted to see legitimacy or operations. Donors needed acknowledgement, transparent reporting, and tracking of donations received and food delivered, farmers needed their produce bought, embedded intermediaries needed off-take linkages into new supply chains, feeding schemes needed produce, destitute people needed food.

There was an observed correlation and complementarity between bridging intermediaries providing the demand and bonding intermediaries bringing the supply. Newell with her bridging social capital was able to create a demand model with anonymous 'consumer' donors which created a purchasing power. The word 'consumer' refers to anonymous individuals who make personal donations. FoodFlow gathered donor support through media platforms that had a viewership far greater than that of the embedded intermediaries in their individual capacity. The embedded intermediaries with their bonding social capital had the local influence to organise farmers and secure the complementary supply. FoodFlow worked to link this demand to supply as the 'stop-gap' referred to by Newell during the Covid crisis.

Chapter 5: Discussion

The global crisis that forms the context of this study hit suddenly and was unpredicted. It impacted both the supply and demand of food, creating a disaster for small-scale farmers (Manolova et al., 2020; Mastronardi et al., 2020; Mthembu et al., 2022; Paganini et al., 2020; Wegerif, 2022). Food insecurity rapidly escalated, worsening the nutritional crisis of impoverished communities in South Africa. Many people in South Africa receive daily nutrition through employee benefits (such as lunch provided at work), school feeding schemes, and formal food relief channels. Movement restrictions made this form of food access suddenly unavailable to those most in need. The combination of hikes in food prices, loss of jobs, loss of breadwinners through deaths, and reduction in household income further exacerbated the nutritional crisis. All the while, food was going to waste as markets had closed and the purchasing power of households had diminished. Farmers had fresh produce in their fields ready to be sold, but without buyers for it, and the vegetables began to rot. The situation was dire, farmers were desperate and people were hungry. Urgent action was needed.

This chapter applies the research findings to the gaps identified in the literature review and discusses how the data broadens our understanding of the role of intermediaries during a time of crisis. It highlights an association between intermediaries and their use of social capital to facilitate collective action. The implications of the findings and how they can contribute towards improved practise and policy for intermediaries and small-scale farmers, are described. Finally, research opportunities are presented.

Contribution to literature

First contribution: The potential role of intermediaries in contributing to small-scale farmer resilience in a time of crisis

The resilience of small-scale farmers is understood as the ability to recover after a disturbance and to return to the original state or the adapted state of functioning (Brandon-Jones et al., 2014; Sinclair et al., 2014; Vroegindewey & Hodbod, 2018). I begin by articulating the gap identified from a combination of three scholarly conversations, farmers resilience in a crisis, the role of intermediaries, and the role of spontaneous ventures in a crisis. The subsection concludes by addressing the literature gap.

a) Farmers' resilience in a crisis (and limited knowledge of the role of intermediaries in this)

Past studies on farmer resilience refer to ways of improving preparedness, robustness, and adaptive capacity to 'slow burning' and predictable crises such as climate change (Abdul-Razak & Kruse, 2017; Alinovi et al., 2010; Jacobi et al., 2018; Makate et al., 2019; Sinclair et al., 2014; Speranza, 2013; Vroegindewey & Hodbod, 2018). Education levels, gender (men are more likely to adopt innovations), and access to key resources (such as credit) are highlighted as significant factors in the willingness and ability of farmers to adopt resilience innovations, also referred to as adaptive capacity (Abdul-Razak & Kruse, 2017; Makate et al., 2019; Rozaki et al., 2021). Many strategies for enhancing resilience involve predicting climate change impacts and implementing adapted farming practises such as soil protection, climate-resilient crops, irrigation or mechanisation, and livelihood diversification (Makate et al., 2019; Speranza, 2013). Recommended resilience interventions involve a process of profiling farmers with low adaptive capacity and by using this profile to identify farmers, support them with risk and vulnerability reduction tactics (Abdul-Razak & Kruse, 2017; Jacobi et al., 2018; Speranza, 2013; Vroegindewey & Hodbod, 2018).

Some scholars have highlighted the role of intermediaries in improving farmers' likelihood of adopting these risk mitigation innovations by offering innovation support services such as providing knowledge and information, supporting the learning journey, providing innovative inputs and advocating for inclusive policy changes (Iyabano et al., 2021; Kivimaa et al., 2020). These resilience support functions refer to slow-burning crises, but do not explain how intermediaries help farmers during a sudden disaster. Sudden disasters are qualitatively different in that they cannot be prepared for, are unpredictable in nature, and immediate disaster follows. In this context, Morton (2020, p. 1) describes resilience as, "Active responses that enable people to avoid the worst impacts of an epidemic at different levels or to recover faster to a level accepted as normal".

Recent literature on small-scale farmers that have experienced such abrupt crises makes a cursory mention of the occurrence of and need for intermediated support activities (Abdul-Razak & Kruse, 2017; Asahiro et al., 2015; Chapagain & Raizada, 2017; Matlakala et al., 2021; Rozaki et al., 2021). Rozaki et al. (2021) express the essential need for social capital, collective

action, or compassion venturing and recommend stakeholder coordination which Matlakala et al. (2021) similarly refer to as “inter-professional collaboration”. Chapagain & Raizada (2017) advocate for using pre-existing distribution networks to provide rapid disaster relief. However, what is not fully understood is *the role of intermediaries in supporting farmer resilience during a sudden disruption*.

b) The role of intermediaries in supporting farmer inclusion in supply chains (and limited knowledge of how this pertains to crisis)

We know from the literature that intermediaries are instrumental in aiding small-scale farmer participation in supply chains (Franz et al., 2014; Iyabano et al., 2021; Kivimaa et al., 2020; Klerkx & Leeuwis, 2008; Koutsouris, 2012; Luiz & Guchu, 2022; Pedroza, 2013; Poulton et al., 2010; Schramski & Keys, 2013; Xhoxhi et al., 2018). Intermediaries can provide access to a greater number of buyers, increase transparency, and improve negotiation power (Kos et al., 2019). They play an important role in stakeholder coordination and commonly seek to address supply chain coordination failures to ensure the inclusion of small-scale farmers (Ros-Tonen et al., 2019).

Intermediaries buffer the heterogeneity of small-scale farmers by having a specialised understanding of both farmers and the agribusiness industry (Aliber et al., 2013). They can traverse institutional voids and perform a ‘translating’ function where there is both a formal and an informal economy, each with its own complexity (Luiz & Guchu, 2022). This traversing role supports effective engagement between the farmers and actors in the supply chain, which assists the inclusion of small-scale farmers.

The literature has established that intermediaries play an important role in maintaining farmer inclusion in supply chains, but little attention has been paid to *how intermediaries maintain supply chain inclusion in a crisis, thus promoting farmer resilience by improving the ability to recover in a crisis* in a crisis (Brandon-Jones et al., 2014; Sinclair et al., 2014; Vroegindewey & Hodbod, 2018)).

c) The role of spontaneous ventures in a crisis

In recent research, scholars have studied the appearance of disaster entrepreneurs (Grube & Storr, 2018; Linnenluecke & McKnight, 2017) and spontaneous ventures (Shepherd &

Williams, 2014) as a response to restoring a community after a disaster event. Such ventures are known to be an important source of community resilience after destruction. Formal emergency response institutions are often slow to activate and fraught with bureaucracy where government is involved (R. Davis, 2020b; Hamann, 2020; Linnenluecke & McKnight, 2017; Shepherd & Williams, 2014). Entrepreneurs and spontaneous ventures are capable of being adaptive and responding quickly to the unique situation (Aldrich & Meyer, 2015; Shepherd & Williams, 2014). Disasters create resource gaps, and compassionate responses work to fill these gaps through the provision of information, knowledge, financial support, and external networks (Aldrich & Meyer, 2015; Grube & Storr, 2018; Linnenluecke & McKnight, 2017; Makate et al., 2019). *However, what remains to be explored is the potential role of such spontaneous ventures to act as supply chain intermediaries to support small-scale farmers in a crisis.*

How my research addresses these gaps

My research addresses these gaps in the literature by illustrating how spontaneous ventures act as intermediaries to create alternative supply chains. When the crisis began and small-scale farmers suddenly had no market to sell their produce, farmers were distraught and unsure what to do. They immediately turned to locally embedded intermediaries for help. In the cases of Abalimi, Umgibe, and Sigidi, the intermediaries were pre-existing enterprises that entrepreneurially transformed their business practise to support the urgent needs of the farmers. FoodFlow was a new venture created as a compassionate response to the crisis. Such emergent responses are similar in nature to what scholars describe as disaster entrepreneurs (Grube & Storr, 2018; Linnenluecke & McKnight, 2017) or spontaneous ventures (Shepherd & Williams, 2014).

The spontaneous nature of these intermediaries meant that they could be responsive, flexible and innovative in their approach to solutions (Grube & Storr, 2018; Linnenluecke & McKnight, 2017; Shepherd & Williams, 2014). The intermediaries partnered to provide an alternative supply chain when the original supply chain collapsed. The intermediaries used a creative approach to procure and distribute food. They improvised to find novel ways of sourcing financial resources to purchase produce from the farmers using what I have termed, 'consumer donors'. Consumer donors allow the pooling of 'crowd-sourced' low-value online donations

made by anonymous people through a concept where the donors are ‘purchasing’ a ‘harvest bag’. The purchased product is not delivered to the buyer; it is the Rand value attached to a box of fresh vegetables that can be sourced from small-scale farmers and delivered to feeding schemes.

My research shows that recovery from adversity is not just derived from improved physical functioning and preparedness of small-scale farmers, but from social connections such as those with and between disaster entrepreneurs who act as intermediaries. The social mechanisms of these organisations, such as their behaviours, decisions, and actions (Linnenluecke & McKnight, 2017, p. 180), led to the formation of an alternative supply chain, and aligns with the resilience definition by Morton (2020) positioning resilience as the responses during a disruption to aid faster recovery. Without the intermediaries, the farmers would have been in a potentially hopeless situation. The above discussion extends the existing literature by discovering these resilience enhancing contributions of intermediaries in a crisis.

Second contribution: Identification of two kinds of intermediation – bridging and bonding

When looking at social capital as, “a set of actions that facilitate collective action and form part of a social structure”(Acquaah et al., 2014, p. 11), this study highlights an association between intermediaries and their use of social capital to facilitate this collective action during a time of crisis. Most researchers in the area of social capital agree on three categories of social capital, bonding, bridging, and linking (a subset of bridging social capital) (Acquaah et al., 2014; Adler & Kwon, 2002; Aldrich & Meyer, 2015; Putnam, 2000). In recent research on natural disasters and community responses, scholars have noted that the social capital available to a community aids recovery and that different types of social capital complement each other in expediting recovery (Aldrich & Meyer, 2015; Grube & Storr, 2018; Linnenluecke & McKnight, 2017; Shepherd & Williams, 2014). *However, researchers have yet to explore the study of how intermediaries use social capital to help small-scale farmers in a crisis.*

How my research addresses these gaps

1) How bonding intermediaries use social capital

Bonding social capital, which exists within close ties among homogeneous actors, is the most commonly available form of social network in a crisis (Aldrich & Meyer, 2015). Disaster

entrepreneurs with bonding social capital ties to the affected community are the quickest to respond and are therefore important in meeting immediate disaster needs (Aldrich & Meyer, 2015; Grube & Storr, 2018). In this study, bonding intermediaries displayed key attributes of having bonding social capital. The intermediaries Abalimi, Umgibe, and Sigidi were in close geographic proximity to the small-scale farmers, with frequent interactions and a high density of interconnected relationships in the community. They were from the same culture as the small-scale farmers, which as described in the literature, provides a shared sense of trust (Aldrich & Meyer, 2015), a strong sense of place attachment (Grube & Storr, 2018) and knowledge of the cultural nuances of the small-scale farmers (Acquaah et al., 2014; Aldrich & Meyer, 2015).

Bonding intermediaries were simultaneously disaster focussed (aware of the crisis and government restrictions due to the national state of emergency) and inward looking to the needs of small-scale farmers (Grube & Storr, 2018). Grube & Storr (2018) note that when disasters present a new variety of challenges, affected groups can share their unique situation and vital information with locally embedded entrepreneurs who have an immersed experience of the effects of disasters, which helps shape adapted purpose-driven interventions (Aldrich & Meyer, 2015). As observed in the Findings chapter, the social connections, social mechanisms (how the bonding intermediaries engaged with small-scale farmers), and social status (positions of responsibility) of the bonding intermediaries fostered trust from the farmers (Lyon, 2000) and increased dependence (Aldrich & Meyer, 2015).

Bonding intermediaries advocated on behalf of small-scale farmers by being a voice, articulating their needs through social media posts or engaging with other actors in the agricultural sector through agriculture forums. When the opportunity arose for bonding intermediaries to partner with bridging intermediaries, bonding intermediaries responded on behalf of small-scale farmers and buffered the complexities and diversity of small-scale farmers, representing them to bridging intermediaries as a single homogeneous group.

2) How bridging intermediaries use social capital

As discussed in the literature, during a time of crisis, bridging social capital creates the link between the community and external resources from heterogeneous actors with loose ties (Aldrich & Meyer, 2015; Grube & Storr, 2018). Intermediaries with bridging ties to the

community are able to extend access to novel information, critical physical resources such as food, equipment, transport, and access to financial relief (Aldrich & Meyer, 2015; Grube & Storr, 2018). Bridging intermediaries in this study rapidly came into existence as a compassionate response to the impact of the crisis on small-scale farmers and food security. The bridging intermediaries purposefully aligned with pre-existing relationships with formal institutions, which afforded them a “social licence to operate” (Aldrich & Meyer, 2015, p. 5). This was especially important for FoodFlow as a newly formed entity with neither historical reputation nor formal status (Lyon, 2000), such as being a registered NGO with audited bank accounts and transparency mechanisms. The bridging intermediaries played a particularly important connecting role by traversing social strata (Luiz & Guchu, 2022), such as between race or class that typically divides society (Claridge, 2018). They extended access to external social capital, aggregated resources, and channelled financial support. The bridging intermediaries mediated relationships and facilitated cooperation among actors with contrasting social identities who held a shared goal: an alternative supply chain in the face of the collapse of the existing one to rescue farmers from imminent downfall, thereby providing nutritional relief to impoverished people.

As a result of these correlations, I created the terms ‘bonding intermediaries,’ and ‘bridging intermediaries’ and defined them as follows: ‘Bonding intermediaries’ are actors who have and make use of bonding social capital with farmers; they have close ties with the farmers, are situated in close geographical proximity, and have similar socio-economic and demographic characteristics. ‘Bridging intermediaries’ bring bridging ties to support farmers. These are intermediaries with loose ties to external networks that are able to provide information and resources that are not otherwise available at the local level. They provide a link between heterogeneous actors or between formal and informal institutions.

Third contribution: The complementarity between kinds of intermediation

My study reports that these kinds of intermediation arise because it is very difficult to play both kinds of roles at the same time. It notes that it is unlikely or even impossible for intermediaries to simultaneously traverse both formal and informal structures and even more so when action requires urgency. FoodFlow had neither the relationships nor the knowledge of the

cultural boundaries required to have business engagements with small-scale farmers. The review of the literature on social capital supports this notion by indicating that actors are unlikely to have both types of social capital in significant supply (Aldrich & Meyer, 2015; Claridge, 2018). This inability for a single actor to have both types of social capital and perform both kinds of intermediation creates a need for complementary intermediaries to work together, which is the third contribution I make. The findings demonstrate how the need for complementarity is driven by three key reasons, time, trust, and access to knowledge and resources. This refers to the time in which the bridging and bonding intermediaries had to act, the trust required from actors in the supply chain and the access to knowledge and resources not otherwise available.

What we know from the current literature is that a combination of bridging and bonding social capital alters the recovery trajectory of communities in a disaster and scholars observed that communities lacking access to both bridging and bonding social ties had reduced resilience (Aldrich & Meyer, 2015; Linnenluecke & McKnight, 2017). Researchers found that bridging social capital provides communities with connections to institutions and individuals that may not be accessible through bonding social capital (Aldrich & Meyer, 2015). Entrepreneurs with bonding social capital offer a nuanced understanding of the local needs and provide communities with a sense of trust and fairness (Aldrich & Meyer, 2015; Shepherd & Williams, 2014) that is absent in 'weak' bridging ties. It is evident from disaster literature that incorporating both bonding and bridging social capital helps entrepreneurs adeptly navigate uncertain environments (Grube & Storr, 2018). *However, the existing literature on intermediaries and small-scale farmer resilience does not show the complementarity of different kinds of intermediaries.*

How my research addresses these gaps

1) How bridging intermediaries are complemented by bonding intermediaries

An analysis of the dependence of the bridging intermediaries on the bonded intermediaries demonstrates that the rapid formation of the bridging intermediary and its creation of an alternative supply chain required collaboration with a bonding intermediary. Coordinating the receiving and distribution of funds and the purchase and delivery of food meant that the bridging intermediary needed another intermediary that was geographically close to the farmers with pre-existing relationships and produce aggregation mechanisms. FoodFlow

partnered with bonding intermediaries Abalimi, Umgibe, and Sigidi, to link them to clusters of small-scale farmers within geographic proximity of each other.

At the start of the crisis, there was an exponential growth in donations made towards the purchase of Harvest Bags to be delivered to community organisations. This placed time pressure on FoodFlow to meet this demand. FoodFlow needed to procure from a larger number of small-scale farmers than initially anticipated at the start of the venture. By engaging with bonding intermediaries with existing relationships to the small-scale farmers, the bridging intermediary can quickly gain access to a far greater number of farmers.

These clusters of bonding intermediaries and farmers were situated in different regions across the country, and the bonding intermediaries presented a single point of communication to the bridging intermediary instead of an overwhelming multitude of small-scale farmers spread across a wide geography (some clusters in this study were situated over 1200 km apart). This simplified the procurement process, which, given the urgency, was crucial. With their local level of attention, the bonding intermediaries buffered the administrative complexity (Luiz & Guchu, 2022) of the small-scale farmers described in chapter 4, by managing the logistics of fulfilling orders, communicating the orders to the farmers, navigating bad roads to collect the produce and delivering it to the respective allocated feeding schemes.

According to the theories of bonding social capital, the bonding intermediaries understood the cultural nuances of conducting business interactions with farmers and performed this role where the bridging intermediary, based in a different part of South Africa and managed by people of a different culture, could not traverse these social divides of race and class (Acquaah et al., 2014; Claridge, 2018). For example, in some regions, business discussions with groups of farmers could not begin before conducting a welcoming ceremony or when meeting individual farmers, intermediaries abided by the correct greeting protocol before beginning an official conversation.

Prior experiences have left small-scale farmers with a deep-seated distrust of actors offering to take their produce to the market. Trust was therefore a crucial requirement for which the bridging intermediary with no prior relationships did not possess this vital social asset. To conduct business transactions, there was thus the need for a trusted intermediary with close

social ties, direct personal experience, intimate knowledge of the day-to-day lives of small-scale farmers, and understanding of the local cultural environment (Kwon, Heflin, & Ruef, 2013; Lyon, 2000). Without a working relationship with such social capital, small-scale farmers are unwilling to engage in business (Lyon, 2000). It is unlikely that the bridging intermediaries would have been able to demonstrate these characteristics at the local level with their lack of embeddedness. The findings illustrate how the rapid pace with which intermediaries needed to respond to the crisis made this difficult.

2) How bonding intermediaries are complemented by bridging intermediaries

In this study, the bridging intermediary became the catalyst of an alternative supply chain. FoodFlow stimulated the demand for produce by advocating the cause among their networks and then coordinated response efforts (Anderson & Park, 2007) to link demand with supply. The bridging intermediary performed a resource acquisition function, created a demand-driven model with anonymous consumer donors, and established mechanisms for the distribution of produce and funds. The bonding intermediaries had limited capacity to facilitate all these elements of a supply chain from demand through to supply. The bonding intermediaries, Abalimi, Umgibe, and Sigidi, were equipped with neither the know-how nor the key relationships that were paramount to achieving this on their own, yet the bridging intermediaries had the knowledge, resources, and networks required to activate such an alternative supply chain yet. Bonding intermediaries had some access to bridging social capital but not to the extent where they could use this social capital to create a new alternative supply chain, especially given the speed with which it needed to be accomplished. The bridging intermediary overcame these limitations by tapping into resources where the bonded intermediaries could not (Anderson & Park, 2007).

By linking between heterogeneous groups of social strata where power, social status, and wealth were contrasting, bridging intermediaries transcended social ties. Claridge (2018) describes these as vertical associations. This traversing role worked as a social leverage (Claridge, 2018) for small-scale farmers and bonding intermediaries by helping them access actors of differing social status to engage with one another and reciprocate access to resources, information, innovation, and ideas. It affirms that the bonded intermediaries required the

bridging intermediary to access external resources to complement their own access to local actors.

Bridging intermediaries understood the critical trust factor that is crucial for vertical actors of unlike groups to work together (Claridge, 2018; Lyon, 2000). In bridging social capital relationships, the literature describes how gaining trust requires time and is earned through service delivery (Claridge, 2018). In the haste to create an alternative supply chain, the bridging intermediaries collaborated with actors who have power of authority and held existing trust reputations (Lyon, 2000), which awarded the bonding intermediaries the necessary linkages to the newly established supply chain demand.

Scholars agree that in a crisis, a combination of these types of social capital improves community resilience and the recovery trajectory after a crisis (Aldrich & Meyer, 2015; Grube & Storr, 2018; Linnenluecke & McKnight, 2017; Shepherd & Williams, 2014). My work extends this theory by showing that there are complementary intermediaries, 'bridging' and 'bonding' based on the types of social capital they rely upon. However, the study shows that it is very difficult for the same actor to have both kinds of social capital. This then gives rise to two distinct kinds of intermediaries. Thus, I argue that to enable disaster recovery, both kinds of intermediary are required to collaborate.

Limitations and future research

The *first limitation* is the limited number of cases that I could access. There is an opportunity to do further studies, either in similar or in contrasting contexts, to help validate or extend my findings. Covid-19 was a crisis that affected both the supply and demand for food. In this study, it was identified that intermediaries with bridging social capital stimulated the demand for food during the crisis and intermediaries with bonding social capital secured supply.

Future research could further elaborate these concepts of social capital and kinds of intermediary, their association with either supply or demand, and the need for more than one intermediary, and then substantiate them as recurring phenomena in other crises. There is also scope for future research to generalise the contributions beyond the literature on crisis and small-scale farmers and investigate whether, in all cases of supply chain intermediation, more than one kind of intermediary is required to fulfil all the needs.

The *second limitation* is the boundaries of the nested case sample method. The scope of the sampling focussed on 'the good', meaning, the primary case which I selected was a case that illustrated a successful intervention and the selected clusters of bonding intermediaries and small-scale farmers within the case were clusters that worked effectively. This meant that all small-scale farmers in the study showed similar resilience during the crisis and the experience of the compassionate responses of the intermediaries was positive. Other cases may have discovered a negative relationship or interaction with the bridging and bonding intermediaries which could possibly have caused a different, less successful outcome, one that did not promote resilience of small-scale farmers.

It should be noted that not all intermediaries and crisis responses are positive and beneficial. Some scholars have pointed to 'adverse incorporation' of small-scale farmers into supply chains, as well as negative relationships with self-serving exploitative intermediaries that think only of their own rewards and financial gain with no accountability (Oguoma et al., 2011; Schramski & Keys, 2013; Xhoxhi et al., 2018). Some disaster responses have unintended consequences which enhance negative social injustices or temporarily solve a problem but create other problems once the supply chain has been restored. My study demonstrates a positive potential outcome, but that does not mean that there is not also a negative potential outcome. Further research is needed to explain the boundaries between positive and negative intermediation and why or how such different kinds of intermediation can arise.

Practical implications: Building resilience through intermediary complementarity

To build resilience in small-scale farmers, decision makers tend to invest in physical assets, improving preparedness, reducing vulnerabilities, and implementing resilience-enhancing upgrades (Aldrich & Meyer, 2015; Makate et al., 2019; Nwafor, 2020; Schramski & Keys, 2013; Speranza, 2013; Vroegindewey & Hodbod, 2018). We know that the role of an intermediary is important for a small-scale farmer under regular conditions, but what my discussion has revealed is that they can be crucial to small-scale farmers during a time of crisis. Though the intermediaries were themselves impacted by the daily uncertainty of Covid-19, amidst a world in chaos, they bravely stepped forward to respond to the critical needs of the farmers. In all the practical implications listed in this section, the golden thread of each is the hope that the

important value of an intermediary-driven crisis response is recognised and that the intermediary functions are supported in some way.

My discussion suggests that if *government or emergency response organisations* want to respond to a food supply chain disaster, most especially one that affects both supply and demand, they need to know that intermediaries are unable to fulfil all the needs of a crisis response on their own. The study highlights how intermediaries cannot have both bridging and bonding social capital available to them. An effective response requires two kinds of intermediaries working in tandem with each other to ensure supply and demand can be re-established. Integration efforts of these two complementary actors during a time of crisis need to be prioritised.

It is important for large corporations, government, and international development organisations working to support small-scale farmer preparedness to crises to know the relevance of complementary intermediaries and that growing one kind of intermediary is not sufficient. Large corporations with supply chain sustainability strategies must understand that these kinds of intermediary need to be connected. They could look to unlock funds to invest in the promotion of resilience-building inter-intermediary partnership developments. These actors should also recognise the limitations described above of possible negative tensions that can exist between intermediaries or between small-scale farmers and intermediaries. This is often in cases where power imbalances occur between these actors, especially when intermediaries, “exercise power over farmer’s margins” (Xhoxhi et al., 2018, p. 1). Imposing buyer-driven governance systems can be more costly and restrictive to small-scale farmers, which can also lead to relational tensions (Ajwang, 2020). Some intermediations can be corrupt and exploitative while others have unintended negative consequences such as reducing farmer and environmental resilience through promoting single crop production. By understanding these potentialities, accountability measures or policies can be implemented to ensure that intermediation achieves positive results for small-scale farmers.

Where policy makers are concerned, the potential role of intermediaries should be given more attention. Policy makers need to better understand the roles of intermediaries and how they are instrumental in not just facilitating trade but also the resilience of small-scale farmers.

Understanding what promotes the participation of intermediaries will facilitate better provision of resources. This can help policy makers foster an enabling environment for intermediaries to leverage their potential for resilience building.

The *intermediaries* themselves should work to improve their connectivity with complementary intermediaries. As demonstrated by the data, bonding intermediaries must look to partner with bridging intermediaries to access external resources and secure a demand for produce. Bridging intermediaries must recognise the value of embedded partners with local networks, trust, and cultural knowledge which allows them to access remote farmers and secure a reliable supply of produce. Promoting and maintaining both bridging and bonding intermediary-to-intermediary exchanges could prove helpful in two ways. One, a 'prepared resilience' approach where complementary intermediary relationships are implemented prior to a disaster, thus helping farmers be more resilient ahead of a crisis, and two, during a crisis by helping with disaster recovery actions.

Chapter 6: Conclusion

South Africa's romantic hope in small-scale farmer development as the knight in shining armour coming to rescue the nation from the ruins of apartheid has floundered. The knight is more an unqualified squire, and the white steed is nothing more than a hobbled mule. Biases toward large-scale actors became grossly evident during Covid-19 through regulations that crippled the informal sector. As a result, the rich potential that agriculture has to offer the poor, and to economic growth lies fallow. This is not a phenomenon exclusive to South Africa; rather, it is a global concern that needs to be addressed. How this can be achieved continues to be debated.

The aim of this study was to provide empirical evidence on the role of intermediaries in supporting small-scale farmers in a crisis. Firstly, I add a nuance to the literature on small-scale farmers and intermediaries by recognising the important role of intermediaries during a crisis. Intermediaries can either emerge as spontaneous ventures in response to the crisis, or existing intermediaries entrepreneurially adapt to support the niche crisis needs of the farmers. A key initiative of the intermediaries in this study is the creation of an alternative supply chain to ensure the flow of food continues.

My second contribution identifies that there are two kinds of intermediaries which were labelled 'bridging' and 'bonding' based on the types of social capital they relied upon. These roles are especially important in countries with dual economies, such as South Africa, where institutional voids exist between incongruent formal and informal actors. The third contribution maintains that these kinds of intermediaries complement each other, and both are required to fulfil the needs for creating an alternative supply chain. One actor cannot perform both kinds of intermediary roles alone, and therefore two kinds of intermediaries with these complementary competencies and relationships are required.

Informed by a better understanding of the role of intermediaries, development organisations can complement their focus on farmer interventions by improving the capabilities of intermediaries and by promoting collaboration between the two kinds of intermediary. Such relationships will benefit both farmers and intermediaries. This is important for disaster managers, corporations, and international development organisations focussed on developing

small-scale farmer resilience, especially in abrupt crises but also for more gradual disruptions, such as climate change. However, theoretical contributions can extend beyond crises and disruptions and perhaps even beyond agriculture. This provides an opportunity for future research. It is important to me that theory translates into improved practise. I hope that through this research, future research, and my own personal quests, the benefit is felt by those for whom it is intended.

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Appendix

Appendix A: Interview Protocols

Note: all face-to-face interviews began with appropriate Covid-19 protocol.

Do you have a fever or a cough or any flu like symptoms now or in the last 2 weeks?

Have you been in contact with anyone who has Covid-19?

Intermediaries

First interview protocol

Units for analysis – bridging and bonding intermediaries

Sample

This interview protocol is for interviewing the intermediaries.

Interviewees:

Basic Interview Guide

The interview guide is casual but structured. The interview has two components. The first component of the interview is open-ended and depending on the detail of the answers there may or may not be a need to go into further questioning. It invites the respondent to tell her / his story around her / his role in establishing and implementing the response. The second component looks at the nature of the response in more detail.

Intro: Thank you for being willing to meet with me. Just to offer some context, I am doing a masters at the University of Cape Town. I'm looking into the impact that Covid-19 has on small-scale farmers and how intermediaries, such as yourselves, have been responding.

Background

- Tell us about your experience of how your initiative or organisation got started. Did it exist prior to Covid-19 and in what capacity?

The following questions probe specific issues, as far as the narrative response above didn't address them... to be used organically and bearing in mind flow and timeframe of conversation.

Covid-19 response

- What unmet needs occurred for farmers due to the Covid-19 crisis and lockdown? And how did you identify the problem?
- What did you do to respond to the problem?
- If we can focus on you personally for a moment, what was it about your background that motivated you to do this?
- How did your background give you skills or resources to do this?
- Did you have relationships within or beyond your community that helped you in this process? How did you make use of these relationship?
- Did you build new relationships in this process? If so, how did you identify people or groups that you wanted to connect with, and how did you go about making these connections?
- How did you interact with government? How did government regulation or representatives support or hinder your work?
- What have been the key challenges of this process?
- What are you most impressed by, or proud of?
- What has surprised you about this process?

Small-scale farmers

First interview protocol

Units for analysis - small-scale farmer

Sample

This interview protocol is for interviewing the key small-scale farmers.

Interviewees:

Basic Interview Guide

The interview guide has two components: It starts with the background using an open-ended question inviting the respondent to tell her / his story around her / his journey of becoming a farmer. The second component is around Covid-19 (C-19) and again starts with a broad question followed by more detailed questions should the information not come naturally out of the first. The interview then goes back to the first component and asks a more sensitive question that is better situated after rapport and trust has been established during the interview.

A comprehensive implementation of this protocol assumes that we may speak to respondents more than once.

Intro: Thank you for being willing to meet with me. Just to offer some context, I am doing a masters at the University of Cape Town. I'm looking into the impact that Covid-19 has on small-scale farmers and how farmers have been responding.

Background – part 1: Farming context

- Tell us more about yourself, where you came from?

The following questions probe specific details regarding the farm, to be used organically and bearing in mind flow and timeframe of conversation. This information can be gathered at a later stage. These questions will form the warm-up questions which help the interviewee feel confident in talking by starting with seemingly easier questions to answer.

- How long have you been in the farming sector?
- How many people work on the farm?
- Where is your farm based?
- What size is your land?
- What does your farm produce?
- What motivated you to start farming?

Background – part 2: Social capital context

- As a farmer do you work together with the other farmers in your community?
- Are you part of a co-operative?
- Do you have someone or an organisation that takes your produce to the market for you?
- How has it benefited you?
- How has it benefited your community?

Covid-19 – part 1: Pre C-19 operations

- Who did you supply to before the C-19 shutdown?

Covid-19 – part 2: Current C-19 operations

- How has C-19 and lockdown affected your business and livelihoods?
- What support have you received and from whom?
- How has the support helped?
- What challenges or difficulties still remain?

Covid-19 – part 3: Looking into the role of intermediaries

- How did you get linked up to (insert organisation)
- How has (x) helped you?
- What are some of the challenges in working with (x)?
- Were those challenges resolved? How?
- Or do they still exist?
- What could still be done better to support you and your farm?

Covid-19 – part 4: Post Covid-19

- With regards to your own farm, how do you think things will have changed for you and your farm since Covid crisis and lockdown?

Background – part 2: Sensitive information

- How much does your farm produce a year/season?
- What is the Rand value of this - roughly? Gross income. Before expenses.

If the interviewee seems uncomfortable sharing this information, try get them to pick an income category.

Appendix B: Participant Data

DATE	GROUP	WEEK	PHASE	CODE	PERSON/GROUP	LOCATION	PLATFORM	LENGTH
2020-06-03	Abalimi	Week 10	Crisis relief	GS1	Grace		Zoom interview	60 mins
2020-07-07	Abalimi	Week 15	Crisis relief	GS1	Grace		Zoom interview	35 mins
2020-10-02	Abalimi		Post crisis	AL	Alakhe	Cape Town	In field	30 mins
2020-10-02	Abalimi		Post crisis	AB F1 - F10	Farmer x 10	Cape Town	In field	60 mins
2020-10-02	Abalimi		Post crisis	AB F1 - F10 F1 - F10	Farmer x 3	Cape Town	In field	20 mins
2020-10-02	Abalimi		Post crisis	AB F1 - F10	Farmer x 3	Cape Town	In field	20 mins
2020-11-02	Abalimi		Post crisis	AB F1 - F10	Farmer x 3		In field	20 mins
2020-11-02	Abalimi		Post crisis	AB F1 - F10	Farmer x 3		In field	20 mins
2020-11-02	Abalimi		Post crisis	AL	Alakhe		In field	40 mins
2020-10-02	Abalimi		Stability	AB F1 - F10	Farmer x 3	Cape Town	In field	20 mins
2022-02-20	Abalimi		Post crisis	GS2	Grace		Zoom meeting	60 mins
2020-04-16	FF	Week 3	Spontaneous ventures	AN1	Ashley		Zoom interview	60 mins
2020-05-04	FF	Week 6	Crisis relief	AN2	Ashley		Zoom interview	60 mins
2020-05-19	FF	Week 8	Crisis relief	AN2	Ashley		Zoom interview	90 mins
2020-05-26	FF	Week 9	Stability	AN2	Ashley		Zoom group discussion	180 mins
2020-07-02	FF	Week 14	Stability	AN3	Ashley		Zoom interview	60 mins
2020-07-23	FF	Week 17 Stability	Stability	AN3	Ashley		Zoom interview	60 mins

2020-04-20	Sigidi	Week 4	Spontaneous ventures	VD1	Malombo		Whatsapp Voice Notes	40 mins
2020-05-10	Sigidi	Week 7	Crisis relief	VD2	Malombo		Whatsapp Voice Notes	27 mins
2020-05-15	Sigidi	Week 8	Crisis relief	VD2	Malombo		Whatsapp Voice Notes	20 mins
2020-05-20	Sigidi	Week 8	Crisis relief	VD2	Malombo		Whatsapp Voice Notes	5 mins
2020-08-31	Sigidi	Week 22	Stability	SD F1-F10	Farmer x 10	Sigidi	In field	40 mins
2020-08-31	Sigidi	Week 22	Stability	SD F1-F10	Lonwabo	Sigidi	In field	20 mins
2020-09-01	Sigidi	Week 22	Stability	SZ	Sinegugu	Sigidi	In field	30 mins
2020-10-02	Sigidi	Week 22	Stability	VD3	Malombo	Sigidi	Whatsapp Voice Notes	40 mins
2022-02-26	Sigidi		Post crisis	VD3	Malombo		Whatsapp Voice Notes	30 mins
2022-03-30	Sigidi		Post crisis	AB	Andrew		Linkedin Chat	15 mins
2020-04-16	Umgibe	Week 3	Spontaneous ventures	NJ1	Nonhlanhla		Whatsapp Voice Notes	15 mins
2020-05-05	Umgibe	Week 6	Crisis relief	NJ2	Nonhlanhla		Whatsapp Voice Notes	5 mins
2020-05-18	Umgibe	Week 8	Crisis relief	NJ2	Nonhlanhla		Whatsapp Voice Notes	20 mins
2022-05-26	Umgibe	Week 9	Crisis relief	NJ2	Malombo		Whatsapp Voice Notes	15 mins
2020-05-26	Umgibe	Week 9	Crisis relief	NJ3	Nonhlanhla		Whatsapp Voice Notes	25 mins
2020-06-15	Umgibe	Week 12	Crisis relief	NJ3	Nonhlanhla		Whatsapp Voice Notes	5 mins
2020-07-08	Umgibe	Week 15	Crisis relief	NJ3	Nonhlanhla		Whatsapp Voice Notes	20 mins
2020-08-28	Umgibe	Week 22	Stability	NJ3	Nonhlanhla	Durban	In field	120 mins
2020-08-28	Umgibe	Week 22	Stability	UF Dududu Group	Farmer x 46	Dududu	In field	45 mins

2020-08-28	Umgebung	Week 22	Stability	ZD	Zithulele	Durban	In field	45 mins
2020-08-31	Umgebung	Week 22	Stability	UF F 1 - F10	Farmer x 3	Durban	In field	20 mins
2020-08-31	Umgebung	Week 22	Stability	UF F 1 - F10	Farmer x 1	Durban	In field	35 mins
2021-03-15	Umgebung	Post	Post crisis	NJ3	Nonhlanhla		Whatsapp Voice Notes	10 mins
2022-03-29	Umgebung	Post	Post crisis	BK	Brittany		Linkedin Chat	10 mins

Appendix C: Initial framework to assist in proving validity and rigor

Proving validity and rigor	
Credibility – ‘Truth value’	
1. Prolonged Engagement	Having several field visits will help counter biases and also show patterns even in different seasons.
2. Persistent Observations	Looking at interpretations in different ways, i.e. going into the field as a researcher, as well as having interviews with the intermediaries and comparing that to findings from other research bodies, will help provide objective and accurate observations.
3. Triangulation	The above approach supports triangulation. Other data collection sources such as Covid-19 impact studies that have been done by other researchers can be used.
4. Referential adequacy	Using voice recordings is a subtle and unobtrusive way of documenting the findings. If possible, video can be used, but this might not be necessary for the purposes. Photographs may suffice in this case.
5. Peer debriefing	The formation of the small study group called (Awesome People Together) who are all currently doing the same Mphil are the perfect candidates for peer debriefing. They will interrogate the study and ask probing questions.
6. Member Checks	Once the data has been captured, transcribed, processed and understood, the interviewees or sources will be engaged with to verify the accuracy and comfort in the interpretation.
Transferability – applicability	
1. Thick description	Detailed data will be collected, and transcriptions of interviews will be made. Every effort will be made to provide the necessary detail for the reader to be able to formulate judgements on the interpretation.
2. Purposive Sampling	Information-rich cases will be strategically selected to illuminate the enquiry questions being investigated.
Dependability – consistency, replicability	
1. Don’t Need to Do It	The steps taken above should be sufficient to verify the reliability of the study.
2. Overlap	This can be done through triangulation.
3. Stepwise Replication	Not sure this is possible, and the research is done in isolation. Having subject matter experts review the findings may help.
4. Inquiry Audit	The advisor will play this role by reviewing the findings.

Confirmability – objectivity, neutrality, without bias

1. Raw Data	
2. Data Reduction and Analysis Products	To provide an 'audit' trail, all raw data will be kept on file. This includes audio recordings, webinar recordings, filed notes, and photos.
3. Data Reconstruction and Synthesis Products	Field note writings, summaries of interviews and webinars, and any other working notes will be kept for the 'audit' trail.
4. Process Notes	Detailed notes, findings, process notes, methodology notes and any other notes that are made will be kept for the 'audit' trail. This is also important in case I need to review my logic in the findings.
5. Material Relating to Intentions and Dispositions	Same as above
6. Instrumental Development Information	Same as above