Conceptualising and evaluating hegemonic agri-food supply chain sustainability practices: a UK dairy industry perspective

Timothy James Thomas Else

A thesis submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy

September 2021

The University of Sheffield

Faculty of Social Sciences

Management School

Acknowledgements

The stoic attitude, insightful guidance and plentiful experience readily offered by Andrea and Sonal has shaped me, both as a researcher and a person. Our conversations were always full of thought-provoking ideas, and I hope my thesis reflects this sentiment.

Aunam, Georgia and Permala shared all my PhD highs and lows, and I experienced theirs with them. We have grown together, and will continue to do so. I want to thank them for their remarkable support.

This thesis is dedicated to Tom, Katie and my mum.

They will always mean the world to me.

Abstract

Food supply chains exist in a volatile world, and are facing an increasing global pressure to behave in a responsible and sustainable manner, whilst providing adequate nourishment for a growing population: the dairy industry in the United Kingdom is no exception to this responsibility. An imbalance of power amongst stakeholders in the dairy supply chain appears to facilitate sustainable behaviours for some, at the expense of other actors' livelihoods. From the perspectives of the multiple stakeholders that are impacted by the activities of the dairy supply chain, this research aims to identify the different ways sustainability is defined within the industry, and what evaluative factors affects the perception of sustainability. Power is focused on to investigate the mechanisms that underpin powerful players' abilities to influence and legitimise certain sustainable practices,

A multi-method, qualitative, inductive approach is assumed by this research, drawing on the previously utilised frameworks of stakeholder theory and resource dependence theory, as well as the novel introduction of a cultural hegemony lens in the sustainable supply chain field. The latter concept influenced the use of critical discourse analysis as a method, which represents a further novelty of this research. Contemporary grey literature on sustainability in the UK dairy industry was analysed from multiple stakeholder perspectives to identify sustainable storylines in the texts and understand how power is transmitted through discourse. Both a dominant storyline, with foundations in an economic growth paradigm, and an alternative storyline, with focus on an equitable sustainable future, emerged. Through recognising a duality of stakeholder identity, a self-perpetuating cycle of legitimacy was observed.

26 semi-structured interviews then took place with different stakeholders of the UK dairy industry, from which 12 distinct factors are associated with the evaluation of sustainable practices in the UK dairy industry. The need to move away from perceiving sustainability as a static checkbox requirement is stressed, with a multifaceted and dynamic approach towards measuring sustainable performance being suggested. The importance of the relationship between consumer and retailer is highlighted, as well as a mechanism that links together components that can influence sustainable practices, referred to as the loop of power. By blending both

the findings and theoretical lenses in this research, the concept of hegemonic resource value is proposed. Finally, the tension between the paradigms of the dominant and alternative approach are contrasted, illustrating the profound difference that exists between members of the UK dairy industry. Practical implications of this research include the suggestion of an independent trade association with statutory power in the dairy industry that spans all stakeholders, as well as suggestions of areas of focus for such an organisation.

Keywords and Phrases

sustainable supply chain management; power; critical discourse analysis; cultural hegemony; dairy sector

Table of Contents

Table of Appendices

List of Tables

List of Figures

List of Abbreviations and Acronyms

AHDB	Agriculture and Horticulture Development Board
AW	Animal Welfare Group
CAP	Common Agricultural Policy
CDA	Critical Discourse Analysis
CH	Cultural Hegemony
DEFRA	Department for Environment, Food and Rural Affairs
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
HRV	Hegemonic Resource Value
LCA	Life Cycle Assessment
LG	Industrial Lobby Group
MDG	Millennium Development Goals
NFU	National Farmers Union
NGO	Non-Government Organisation
P1	Larger National processor
P2	Smaller Local processor
PPL	Pence Per Litre
RDT	Resource Dependence Theory
S1	Premium Supermarket
S2	Mid-range Supermarket
SDG	Sustainable Development Goals
SME	Small and Medium Sized Enterprises
SSCM	Sustainable Supply Chain Management
ST	Stakeholder Theory
TA1	National Trade association
TA2	International Trade association
TBL	Triple Bottom Line
UK	United Kingdom
UN	United Nations
VCOP	Voluntary Code of Practice

1

The need for change

1.1 Background

1.1.1 Sustainability and the UK dairy industry

Sustainability is more than just a jargonistic buzzword scattered throughout organisational discourse; it is a pressing issue at the heart of society's collective conscience. But, how is such a significant concept understood and processed by multiple actors (Egan, 2019), and who is behind the shaping of its understanding? On a global level, the need for sustainable food systems that have the ability to support the world's ever-increasing population is critical (Govindan, 2018). As the Food and Agriculture Organisation of the United Nation's (2014) report on sustainable agriculture emphasises, sustainability is an important and complex issue: greenhouse gas emissions, lower productivity, food safety concerns and transport issues are a sample of challenges identified in supply chains (Sharma *et al*, 2019). Food supply chains around the world are key to ensuring sufficient nourishment can reach a population safely and securely, without compromising quality of life (Dong *et a*l, 2014; Koufteros & Lu, 2017). Contemporary research continues to facilitate action on sustainable issues, such as demonstrating the use of technology to combat food waste issues (Ciccullo *et al*, 2021). However, creating intrinsically sustainable supply chains remains rather difficult, given differing organisational perspectives, structures and approaches that can be found in different players (Ha-Brookshire, 2017). As sustainable supply chain management advances in a meaningful direction, it appears fundamental to ensure understanding of sustainability as a concept.

Consider the UK dairy industry, where a low farmgate price received by producers has subsequently led to a continuous decline in the number of dairy farms (Glover,

1

2020; Anderson & Curry, 2016). The majority of these dairy farms are small and medium-sized enterprises (SMEs) (Great Britain. DEFRA, 2020a; 2019), and it is these smaller sized businesses that are struggling to continue operating (Glover & Reay, 2015). Indeed, pricing of milk contracts has historically been an important issue to suppliers and buyers (Bates & Pattisson, 1997), and farm income remains topical with recent uncertainty around Brexit (van Berkum *et al*, 2016). Subsequently, new policies are being introduced, such as the Agricultural Act in the UK (Coe & Finley, 2020) and the Unfair Trading Practices directive in the EU (European Commission, 2021). The effectiveness of these fledgling regulations is yet to be seen.

Tied with their economic success is the producers' ability to invest in environmentally sustainable schemes on farm (Rodriguez *et al*, 2009), as well as in their local communities and their work-life balance, with life quality and societal impact being important social goals (Janker & Mann, 2020). These additional aspects typify the triple bottom line perspective to sustainability (Elkington, 1997), capturing a broader social and environmental view of sustainability, rather than just considering economic issues in isolation. This low farmgate price and decline in producer numbers may appear unsustainable, but this notion is influenced by fundamental assumptions made by an individual when perceiving sustainability. For instance, **Figure 1.1** shows the number of cows in the UK and average milk yield per cow, shown in the red and blue lines respectively. It appears that the number of cows, and hence the total emissions from livestock, has slightly decreased whilst yield, thus productivity, has increased. Therefore, this relationship suggests that milk appears to have less emissions per pint than in the past, and could point to the decline of SMEs through vertical integration in the supply chain, as is discussed in **Chapter 6**. The economic pressure put on producers has resulted in what appears to be an environmentally sustainable improvement. However, such a framing does not acknowledge all the economic, social and environmental aspects of Elkington's (1997) triple bottom line. Indeed, such issues facing the dairy industry can lead to its condemnation, such as pollution (Food and Agriculture Organisation of the United Nations, 2006) and animal welfare (Arnott *et al*, 2017). Even within the narrow context of the dairy industry, it appears there is more than one way to view
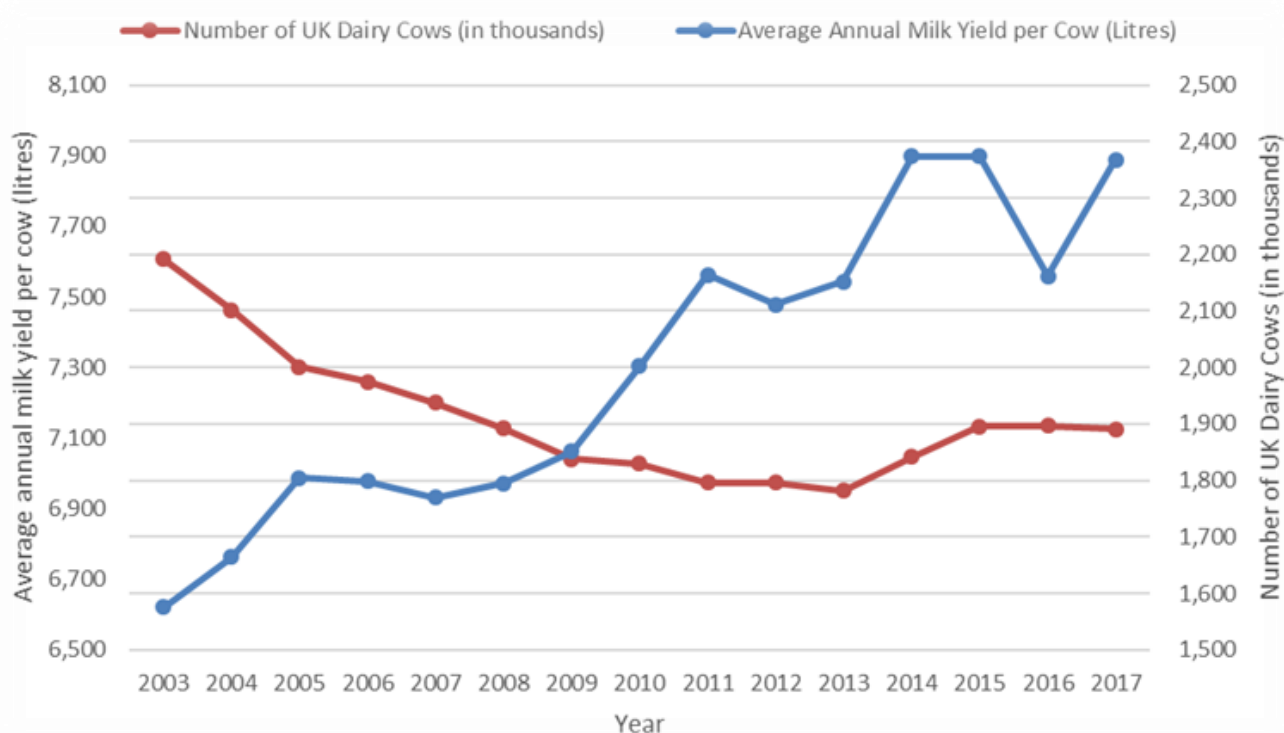
Figure 1.1: A graph showing the number of UK dairy cows and average annual milk yield per cow. (AHDB Dairy, 2021a; AHDB Dairy, 2021b)

sustainable practices. So, why do certain sustainable practices appear to establish themselves with greater legitimacy than others? Power appears to be the answer.

1.1.2 Power and the UK dairy industry

In his theory, the philosopher Michel Foucault posited that power is present in all social interactions, and it remains unescapable on both a macro and micro-level (Lynch, 2014). The relationship between organisations in a supply chain is no exception to this, where the importance of power cannot be understated; even if an effective collaboration has been established, the sharing of any subsequent benefits and outcomes remains influenced by the division of power between actors (Reimann & Ketchen, 2017). In this context, such a split might not be seen in a favourable light by all actors, alluding to another maxim of Foucault's theory of power:

"Where there is power, there is resistance" (Foucault, 1990).

The UK dairy industry offers an example of how power can be wielded to the benefit of some, but at the expense of others. Economic uncertainty is evidenced through the volatile fluctuations of the farm-gate price received over the past few decades by

dairy producers, whose numbers have decreased by over two thirds in the past 25 years (Uberoi, 2020). In the UK dairy supply chain, the power held by milk buyers is greater than that held by Small and Medium Size Enterprises (SMEs) upstream in the supply chain, such as farmers (Glover, 2020). Glover (2020) goes on to emphasise that this asymmetry facilitates retailer control over what sustainable supply chain management (SSCM) practices are imposed on suppliers, leading to division within communities and increased levels of stress felt by the SMEs.

The importance of behaving in a sustainable manner has been acknowledged by wider dairy industry, as evidenced through collaborative initiatives such as The UK Dairy Roadmap (Dairy UK *et al*, 2018) and The Dairy Sustainability Framework (2015). Food retailers themselves also have their own sustainable initiatives and reporting mechanisms (Caritte *et al*, 2015), and the power held by these actors can be wielded beneficially by encouraging the implementation of SSCM practices, as well as facilitating effective monitoring and compliance activities (Touboulic *et al*, 2014). However, by taking the different perspective of those on whom such measures are imposed, alignment with the SSCM activities of large corporations can result in an increased financial and environmental burden on the least powerful in the supply chain (Glover & Touboulic, 2020). When considering an industry where such actors are already facing uncertainty and hardship, such as the dairy sector, increasing costs seems inherently unsustainable from an economic perspective.

Although such issues are faced to differing degrees by all actors in supply chains, the pressure from different stakeholder groups nevertheless increases awareness and adoption of SSCM practices (Meixell & Luoma, 2015). In 2018, the agricultural sector was responsible for 10% of total greenhouse gas emissions in the UK, with emissions of methane from cattle being a notable source (Great Britain. Department for Business, Energy & Industrial Strategy, 2020). Coupling such environmental considerations with the volatile economic situation faced by the dairy industry, and the importance of ensuring an equitable sustainable future in this context becomes apparent. So, with unfair and unsustainable practices appearing to take place across the dairy industry to weaker stakeholders, how do powerful actors ensure their worldview remains dominant and successful? This research intends to expose this mechanism, representing a key contribution to knowledge to emerge from this project.

1.1.3 Research project motivations

The previous two sections represent the main practical motivation that drives the need for this research, specifically the unequal power balance and unfair treatment of players in the dairy industry, which creates sustainability problems that span economic, social and environmental concerns. A detailed quantitative example of the bleak economic situation faced by a typical dairy farmer can be seen in **Table 2.2**. Whilst this practical issue is sufficient in demonstrating the importance of this research problem, further academic and personal motivations also exist for undertaking this project. **Chapter 2** explores the unique challenges that agri-food supply chains encounter, with detail explicitly given on the dairy industry in **Section 2.6**. Considering the research design, the output from **Chapter 3** highlights the lack of theoretical lenses used in sustainable supply chain management. This encouraged the use of theory explored in **Chapter 4**, with cultural hegemony being chosen to clearly address the power imbalance from the perspective of the weaker actor, which is shown in **section 3.5** to be seldom found in existing research. Indeed, the use of theories informed the motivation behind methodological decision making, which is discussed further in **section 5.10**. Finally, the researcher has his own personal motivations for undertaking the research, whose rural upbringing and past experiences are explored in **section 5.12**.

1.2 Research aim, questions and contributions

Building on the work of Else (2015), who considered the UK dairy farmer's perspective on supply chain sustainability, this research will consider sustainable practices from the perspective of multiple stakeholders in the UK dairy industry. As is explained in further detail in both **Sections 2.6.3** and **5.8**, these stakeholders are direct members of the dairy supply chain, as well as those who have major influence over the actions of the dairy industry. The aim of this research project is to investigate sustainable practices within the dairy supply chain from multiple stakeholder perspectives. This will be achieved through identifying how sustainability is conceptualised, how it is evaluated and how those in powerful positions are able to manipulate the dominant narrative whilst suppressing the weaker stakeholders. Conceptualisation refers to how entities in the dairy industry actualise the abstract

notion of sustainability, with key entities emerging when appraising which supply chain player has the power to influence sustainable narratives. Similarly, sustainability performance evaluation relates to how stakeholders judge and appraise success and failure of sustainability within the dairy sector. Three research questions to meet this aim are formed throughout the literature review in **Chapter 2**, where they are shown to be emerging from gaps in existing literature. They are:

1. How are sustainable narratives conceptualised from a multi-stakeholder perspective in the UK dairy supply chain?
2. How is sustainability performance evaluated from a multi-stakeholder perspective in UK dairy supply chains?
3. How does power held by multiple stakeholders influence sustainable narratives created within the UK dairy supply chain?

There are four ways in which this research aims to contribute to existing knowledge on sustainable supply chain management:

1. Empirical findings: By answering the research questions, this research will uncover the sustainable narratives that exist in the dairy industry, and the power mechanisms that reinforce selected practices as dominant. Evaluative factors will also be identified to present distinct areas of focus for the future.
2. Theory: The use of cultural hegemony in sustainable supply chain management is novel in the field. The application of the theory aids in understanding how powerful stakeholders control the dominant sustainable supply chain narrative, whilst weaker stakeholders are suppressed. Resource dependence theory is also employed as a lens to analyse the structure of power in the dairy supply chain. Both cultural hegemony and resource dependence theory inform the conceptual development of the hegemonic resource value model developed in **Chapter 8.**
3. Methodology**:** Critical discourse analysis is employed to compliment cultural hegemony in uncovering sustainable narratives and their associated mechanisms, demonstrating the usefulness of the method when considering power within a sustainable supply chain context
4. Practice: The findings that emerge from this research are not merely abstract: a motivation behind the research was to provide evidence to spark a new

discussion in the UK dairy industry. Building on this evidence, practical recommendations are given for the dairy industry, including the creation of an independent trade association and suggestions of areas of focus.

A deeper explanation into the contributions and practical implications can be found in **Chapter 9**, along with limitations of the research.

1.3 Thesis Structure

Including this introductory chapter, there are 9 chapters in this thesis, through which the reader will be guided through the research process. The aim of **Chapter 1** is to provide an initial rationale for focusing on sustainability and power in the UK dairy industry supply chain context. Clarity is also provided through explicitly stating the aim and research questions, as well as the contributions of this research and key terminology definitions.

Chapter 2 takes the form of a narrative literature review, where focus begins with broad consideration of sustainable development and supply chains, and ends up highlighting the gaps from which the research questions are formed. Sustainability is initially looked at from its origins, after which the triple bottom line is explicitly defined and critiqued. Narratives within sustainability are then explored, offering insights into previous research undertaken on the topic. Sustainable supply chain management is considered generally at first, then focus is afforded to an agri-food context. This leads onto a discussion on the UK dairy industry, considering issues around Brexit, sustainability and the different stakeholders that make up the dairy supply chain. Finally, attention is turned to power in a supply chain context, followed by power in sustainable supply chain management.

Deriving from Chapter 2 and the need to comprehensively understanding power issues in existing research, **Chapter 3** provides a systematic review into power in a sustainable agri-food supply chain context. There are many reasons for the inclusion of this chapter in the thesis; it captures emerging contemporary research; it deepens understanding on the topic of interest in this research and the suggested areas of future research provide further rationale for undertaking this project. An explanation of how the systematic review was undertaken is initially given, followed by a rich bibliographic data and summary statistics section. The findings of this review are

structured around the intersection of relative power held by actor, covering powerful and weaker stakeholders, and the associated author perception of sustainable supply chain management practices, both fair and unfair. After these findings, a future research agenda for the sustainable supply chain management field is given.

Chapter 2 and **3** together form a review of the relevant literature, whose relationship is illustrated in **Figure 1.2.** Given the broad and emerging nature of dairy supply chain sustainability, an initial need for making sense of the existing research landscape and relevant grey literature was key in exploring where the knowledge gaps are situated, hence the narrative review of **Chapter 2**. As the importance of power in relation to agri-food sustainability emerged as critical to this project, a rigorous systematic review on this topic was subsequently undertaken to provide greater understanding and rationale for exploring power in this research, as well as shaping the research design of the study, such as theoretical lens use. Key outputs from the literature reviews are summarised in **Table 3.4.**

The theoretical framework of this research project is afforded its own chapter in **Chapter 4**. There are three lenses drawn on in this research: stakeholder theory, resource dependence theory and cultural hegemony. Each are considered in their own section, followed by an explanation of the relationship between the theoretical lenses themselves, as well as how they relate to the research questions. **Chapter 5** offers a comprehensive insight into the methodology that underpins this project. This is the only chapter written in the first-person perspective, which was used to facilitate

Broader scope

Sustainability
Sustainable supply chains
Dairy supply chains
Power in supply chains
Power in sustainable agri-food supply chains

Beginning of Narrative Review

End of Narrative Review

Systematic Review

Narrower scope

Robust research questions and research design rationale
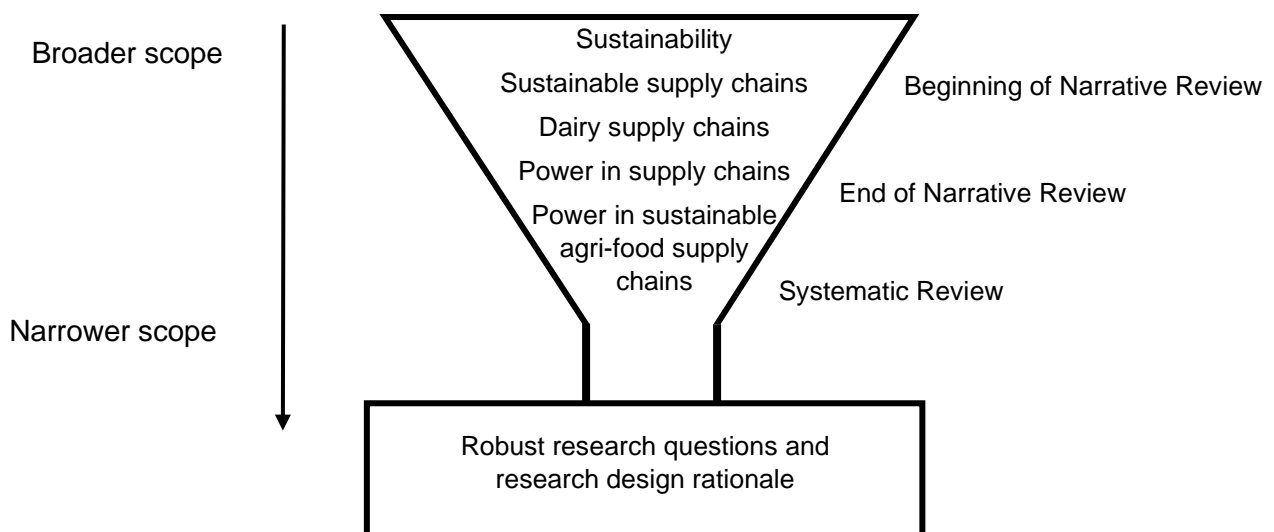
Figure 1.2: The relationship between Chapters 2 and 3

a transparent account of the choices and issues made in this research. The research questions are rewritten in an objective format to begin with, followed by a consideration of research philosophy, strategy and design. The two methods used in this project, critical discourse analysis (CDA) and interviews, are each given two sections. Given its novelty in sustainable supply chain management, both a general overview and detailed look at the analytic process of CDA are given. The interview sections relate to data collection and data analysis issues. The relationship between the theoretical lenses and methodological choices in this project is then explored, followed by ethical considerations. Finally, a reflection is offered on the researcher background and issues found when undertaking the research.

Chapter 6 is the first of the results chapters, reporting out the output of the CDA. Detail is given on the selection of documents used in the discourse analysis, and the discourse coalition concept is introduced as a useful method of operationalising the cultural hegemony lens in the CDA. Context around the documents is then given, which feeds into sections on the approach taken to sustainability and stakeholder identity that emerged in the findings. It is here that the dominant and alternative storylines are introduced, as well as the cycle of legitimacy. A discussion then takes place by drawing on concepts of cultural hegemony and discourse coalitions, after which emerging future recommendations for the dairy industry are stated.

The findings from the interview phase of the research are reported in **Chapter 7**, which are structured around the research questions. Approaches taken to sustainability are considered first, followed by the factors affecting sustainability perception in the UK dairy industry and the importance of power in influencing sustainable practices. The factors affecting perception make up the largest section of this chapter, with each of the 12 identified factors being given their own subsection, with evidence being provided through supporting quotations. The section on the importance of power is split between an examination of the relationship between consumers and retailers, and the identification of a mechanism on the influencing of sustainable practices, referred to as the loop of power.

Chapter 8 is the discussion chapter of this thesis, providing further analysis on the findings. The chapter begins by relating the output from the interviews to each of the theoretical lenses in turn, culminating in the proposition of the hegemonic resource

value concept, which blends the theoretical lenses together with each other and the findings. The results from the CDA and the interview phases of the research are then compared and contrasted against each other, focusing on each research question in turn. Finally, a more fundamental outlook is assumed as the differing sustainable growth paradigms of the dominant and alternative approach to sustainability are highlighted, as well as the tension brought about by the difference.

The conclusion of this thesis is delivered in **Chapter 9.** Each research question is directly responded to in order, with a summary of the empirical findings in this project forming the answer. Additional contributions from this research are then explained in detail, spanning methodological and theoretical implications. Practical recommendations for the UK dairy industry to implement in the future are suggested, with explicit links being made to associated research findings. Limitations associated with this research are then addressed, with the thesis ending on some concluding remarks.

To ensure this thesis can be navigated and comprehended as clearly as possible, all chapters include an introductory and concluding section to guide the reader through the content. Furthermore, a table that summarises the key points raised in each section can be found at the very end of each chapter, aiding the reader in recognising and recalling significant ideas as they progress through the research.

1.4 Key terminology definitions

Several key concepts are introduced and repeatedly drawn on throughout this research. They are defined as they become the focus of attention in the natural flow of the thesis structure. The purpose of this section is not to substitute this approach but complement it by bringing together the definitions of important concepts that are frequently mentioned throughout the research, Displayed in **Table 1.1**, stating these definitions ensures clear comprehension of the research from the beginning, and acts as a reference point if a reminder is required as the thesis is explored. Note that the ambiguous concept of sustainability is explored in **Section 2.2**, with approaches in the dairy industry defined from the findings in **Section 6.5**

Table 1.1: Key terminology definitions

Concept	Definition
Discourse	The context and set of practices around a specific group of texts and utterances (Hajer, 2005; Mills, 2004)
Power	One party's ability to enforce its will on another party. (Reimann & Ketchen, 2017; Emerson, 1962)
Storyline	A condensed account of facts related to a complex topic, helping the narrator to interpret and make sense of the subject. Multiple individual storylines can exist for the same topic (Hajer, 2005)
Sustainable Supply Chain Management	"The management of material, information and capital flows as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development, i.e., economic, environmental and social, into account which are derived from customer and stakeholder requirements. (p.1700)" (Seuring & Muller, 2008)
Value	A trade-off between perceived benefits and sacrifices, with benefits relating to aspects of quality and high-level abstractions held by individual consumer, and sacrifices relating to monetary and other costs (Zeithaml, 1988)

1.5 Chapter 1 Conclusion

Although this research project was initially proposed in 2016, the unsustainable treatment of farmers remains topical in 2021, with the EU declaring their intention to halt the decline of small farms (Harvey, 2021a) and high-profile figures such as Prince Charles linking smaller scale farms to future sustainability (Harvey, 2021b). When looking at the UK figures, this decline in farms is tangible: the 9,559 producers of England and Wales in 2016 have declined in number to 8,040 as of April 2021 (AHDB Dairy, 2021c). Their decline might be due to economic issues, but as was highlighted in **Section 1.1**, this is also linked to the ability to address environmental concerns (Rodriguez et al, 2009). As time progresses, sustainable issues in the UK

dairy industry appear to be becoming more acute, and so too does the urgency to introduce an intervention, or indeed a revolution: a need for change. This research intends to begin addressing that need by issuing a call for change in **Chapter 9**, based on the evidence and arguments presented throughout the thesis.

This chapter intended to introduce the rationale behind undertaking this research by giving background information on sustainability and power in the UK dairy supply chain. The subsequent sections are then dedicated to ensuring clarity in both the research itself and the thesis. The research questions are initially stated, with their emergence from the literature being demonstrated in **Chapter 2**. The contributions of this study are also highlighted, with further detail being found in **Chapter 9**. Detail is given on the thesis structure to navigate the reader around the text as necessary, breaking down the key content offered in each chapter. Finally, key terminology definitions are collated from across the thesis and emphasised to improve understanding.

Summary of key points

- o Economic, social and environmental sustainability is a pressing, contemporary issue facing the UK dairy supply chain, where powerful players have the ability to influence sustainable practices.
- o This research aims to investigate sustainable practices in the UK dairy industry by understanding how sustainability is conceptualised and evaluated by different stakeholders, as well as considering how powerful stakeholders can influence the dominant, industry-wide approach to sustainability.
- o The contributions of this research come from the empirical findings, the theoretical lenses, the methodological choices and the practical implications for the dairy industry
- o Structure and key definitions are outlined in this chapter to enhance reader clarity and comprehension.

2

Sustainability in Supply Chain Management

2.1 Structure

To contextualise the research questions within the literature from which they emerge, this chapter assumes the form of a narrative literature review. Jesson *et al* (2011) discuss the importance of the critical aspect of such a review, with particular emphasis on the difficult process of challenging expert opinion with informed argument; this critical stance has been consciously considered throughout. The layout of this literature review follows guidance from Jesson & Lacey (2006), who suggested the inclusion of a search term report to let the reader evaluate the writer's literature searching techniques; the report for this chapter is shown in **Appendix A**. Academic journals are primarily drawn on, with complementary grey literature used to support points in the absence of other sources. Given their landmark definition in sustainability literature, nothing prior to the Brundtland commission in 1983 is drawn on in this review, with many sources being as contemporary as possible .

To begin with, background is given on the origins and approaches to sustainable development on a conceptual level, as well as a discussion on the formation of sustainable narratives. An overview of sustainable supply chain management practices is then given, after which focus will be afforded to UK food supply chains, The UK dairy supply chain will be explored in depth, concentrating on the economic situation and sustainable policies found in the industry. Two sections are dedicated to exploring the concept of power in relation to supply chain management. Finally, a summary will be given, drawing out the key points from this chapter.

2.2 The multifaceted meaning of sustainable development

2.2.1 Sustainable development origins

As society advanced and technological progress was made, the United Nations recognised the importance and necessity for such progression to develop in a sustainable manner, resulting in the formation of the Brundtland Commission in 1983 (Valiante, 1989). Sustainable development is an ambiguous, and arguably contradictory, concept for which many definitions exist, although one landmark definition commonly stands out: that of the Brundtland Commission (White, 2013). This intergenerational interpretation, that calls for humans to ensure the needs of the present and the future are met (World Commission on Environment and Development, 1987), has been instrumental in shaping subsequent definitions of the sustainable development concept (Glavič & Lukman, 2007). It was from this report that the term sustainable development became more widely used: a term which aspires to uphold social and environmental considerations alongside economic issues (Bärlund, 2004). Of course, society has changed profoundly over time since 1987, and as Fergus & Rowney (2005) point out, so too will the meaning of sustainable development change over time. In particular, how the definition is interpreted will depend on the lens created by the main paradigm at that epoch, of which today's is currently based in economic rationality (Fergus & Rowney, 2005). Essentially, as sustainable development is an intrinsically broad concept, it could be argued that humanity should accept the definition will continually need amending and refreshing (Thompson, 2007).

Regardless of its ever-changing nature, countless, and sometimes conflicting, definitions of sustainable development still exist. Starting with simple dictionary definitions, Wilcox (1992) denotes how the term development is not synonymous with growth, as the former implies an increase in quality without requiring any growth, which is simply an increase in quantity. Daly (1993) would emphasise the importance of this qualitative trait, as he argues growth in a quantitative economic sense is unsustainable, further emphasising the semantic distinction between sustainable development and sustainable growth. Even within a specific supply chain context, being sustainable can be defined differently depending on where the focus of the author lies, as is demonstrated in **Section 2.3** on supply chain sustainability.

Some academics have considered commonalities between different definitions of sustainability and sustainable development when comparing them in their work. For instance, White (2013) uses a tag cloud to visually demonstrate the most common words found in over 100 sustainable definitions. Jabareen (2008) goes beyond consideration of vocabulary choices and looks at several key concepts found in sustainable development definitions to build a theoretical framework. Examples of key concepts discussed include the ethical paradox and natural capital, the former of which relates to the mediating role that sustainable development assumes between the conflicting concepts of environmental sustainability and economic development. Natural capital can be seen as distinct from human-made capital; it is something naturally occurring that value can come from (Costanza & Daly, 1992). Aiming to maintain the same amount of natural capital going forward into the future can be referred to as strong sustainability (Jabareen, 2008), whereas weak sustainability allows for human-made capital to substitute natural capital (Hopwood *et al*, 2005).

Strong versus weak is not the only way to classify approaches to sustainability, as Rees (1995) discusses the difference between an expansionist and ecologist paradigm regarding sustainability. In an expansionist paradigm, the economy is independent from the environment, whereas in an ecologist paradigm, the economy is totally dependent on the environment. Rees (1995) is an advocate of moving to an ecologist paradigm and suggests that social and environmental benefits of making this transition should be focused on, rather than the negative economic issues. Hopwood *et al* (2005) also consider the different approaches to sustainable development and frame it around three different tiers: status quo, reformation and transformation. Hopwood *et al* (2005) finish by calling for something beyond simply the status quo, but acknowledge that this is at odds with the managerial approach taken to sustainability development, corroborating with the calls of other academics for a paradigm shift, such as Rees (1995).

This desire to move toward an eco-centric approach to sustainable development is emphasised by Imran *et al* (2014), who criticise the Brundtland Commission's sustainable development definition as too anthropocentric. Imran *et al* (2014) explain that embracing ecological sustainability goes beyond the environmental pillar of the triple bottom line and places nature on the same level as human considerations. In practice, this increasing emphasis on environmental considerations is noticeable

15

through the development of frameworks. Between 2000 and 2015, the United Nations aimed to tackle poverty on a global scale through 8 goals, known as the Millennium Development Goals (MDGs). Out of the 8 MDGs, only 1 explicitly focused on environmental sustainability (United Nations, 2015a). The MDGs were superseded by the Sustainable Development Goals (SDGs), which form part of the UN's Agenda 2030 (United Nations, 2015b). In these 17 SDGs, environmental sustainability appears intertwined with social and economic sustainability, with examples including combining ending hunger with the promotion of sustainable agriculture, and linking access to water with sustainable water management (United Nations, 2015b). The UN is not the only organisation producing sustainable frameworks that interweave social and environmental concerns, with Oxfam producing the UK doughnut model, which interprets sustainable development as the area between a solid social foundation and the boundary of the environmental ceiling (Sayers & Trebeck, 2015)

So far, vocabulary used in definitions, commonalities between definitions and sustainability classifications have all been discussed, as well as an exploration of the paradigms these definitions are contextualised in. This examination needed conducting as the ambiguity around sustainable development is central to this project in two main ways. Firstly, it demonstrates there is an awareness that stakeholders may be operating with different ideas of what sustainable development means. This difference of approach is fundamental to research question one, which is concerned with different approaches to sustainability. The second way this ambiguity impacts this project is the researcher needs to clarify his own working definition of sustainability, both to help the reader understand his point of view and for the researcher to behave reflexively and suppress his own opinion when collecting data. As such, the researcher will declare his own working definition of sustainability, which is contextualised and shown in **Section 2.3**.

2.2.2 The Triple Bottom Line

The economic, social and environmental aspects of sustainable development became the three tenets of the triple bottom line (TBL): a concept which was defined by John Elkington in his book *Cannibals with Forks* (Elkington, 1997). Through the TBL, Elkington directly applied sustainable development to businesses, emphasising

the urgency to develop sustainable business practices and providing the foundations for how sustainability can be achieved (Jeurissen, 2000). The TBL concept encourages organisations to measure their economic, social and environmental impacts, placing equal importance on all three concepts (Milne and Gray, 2013). Elkington's (1997) TBL approach to sustainability is drawn on in this study to make sense of sustainability in relation to supply chain management practices. A benefit of the TBL is the broad nature of the concept, which has the potential to encourage a range of sustainable behaviours (Longoni & Cagliano, 2018). However, this desired holistic overview is not always reflected in reality, with the economic, social and environmental pillars receiving differing levels of attention in research and practice (Huq & Stevenson, 2020), further echoed in calls throughout research for greater interconnectedness of the TBL dimensions when considering sustainable supply chain management (Morali & Searcy, 2013; Gopalakrishnan *et al*, 2012; Vurro *et al*, 2009). When considering a circular economy approach through a TBL framing, economic factors seem to be paramount in implementation, which is driven by the associated environmental benefits, with associated social impacts being incidental (Geissdoerfer *et al*, 2017).

Although voluntary in its application, the TBL has the ability to create a competitive advantage for those who embrace the concept (Hussain *et al*, 2018), as well as fostering transparency of sustainable processes and collaborations with others (Glavas & Mish, 2015). The TBL concept is not without criticism, such as its inwardly facing approach to and oversimplification of sustainable issues (Milne & Grey, 2013). Rather than the current TBL approach of equally acknowledging each pillar respectively, calls have been made to move to an ecologically dominant approach when addressing sustainability, where environmental and social needs are met before economic considerations (Montabon *et al*, 2016). Whilst the TBL does not explore the interrelationships between the pillars, Milne & Grey (2013) do concede that the concept is a good introduction to managing sustainable issues, but warn about the lack the depth to foster significant change. As the instrumental interpretation of the TBL, where social and environment aspects are treated in isolation with the view of benefitting the supply chain, remains used widely (Montabon *et al*, 2016), and given the TBL framing given to sustainability in the literature discussed and analysed in this study, it will also be drawn on when interpreting findings.

2.3 Narratives of sustainability

Those who lack power can find that narratives on all levels of society, from local to international, seem to be dictated to them, with any meaningful lasting change to narratives appearing to be the result of collective action (Rappaport, 1995). This resistance can take many forms, be it challenging dominant narratives of traditional media outlets through the use of alternative social media (Barros, 2014), or the formation of multi-stakeholder initiatives to prevent the domination of a particular actor, ensuring a range of interests are considered (Tallontire *et a*l, 2005).

Superficially, it appears that certain collective actions amend narratives, creating a check and balance for any undesirable elements of a narrative. In reality, the power dynamics behind narratives are not so straightforward. Consider the previous initiative formation solution; such schemes can actually seek to manipulate an issue and move boundaries rather than directly addressing the core issue (McCarthy *et al*, 2018). Seemingly positive corporate social responsibility practices might actually be unconsciously legitimised and rooted in historical power inequalities, such as the compartmentalisation of women's empowerment programmes as business opportunities; detracting from the integration of gender equality measures across an entire organisation (McCarthy, 2017).

Narratives appear to be important to the perceived image of an organisation, with some using discursive techniques to manipulate narratives and exculpate their actions (Vaara & Tienari, 2008), which can be valuable when analysis of narratives can highlight social issues (Barrientos *et al*, 2003). Therefore, it logically follows that narratives may be important to the perceived image of, and manipulation of issues within, a supply chain context. Sense-making, the process of making sense of a particular instance (Weick, 1995), has been shown to take several forms between individuals in an organisational setting (Maitlis, 2005). If there is a sensemaking gap, a sense giver could then intervene, guiding others on a certain issue (Maitlis & Lawrence, 2007). This does not seem too removed from organisations making sense of an issue within a supply chain context, where the most powerful actor could behave as a sense giver and control the issue.

An example of such an issue where sense needs to be made in a supply chain context is sustainability. Acting as a sense giver, powerful stakeholders could intervene and

control the narrative of sustainability within that context, and indeed then manipulate the perception of external stakeholders (McCarthy *et a*l, 2018). Of course, powerful organisations are themselves constrained by wider societal narratives and developments relating to sustainability. This can lead to questioning the world view and assumptions on which sustainability narratives are formulated, and considering the effects of alternative paradigmatic foundations, such as societal attitude to economic growth (Harangozo *et al*, 2018). Levy & Spicer (2013) consider how climate change can be framed in different ways, but it is ultimately influenced by the prevailing societal, economic and technological situation. Even then, this does not mean a narrative is accurate; farmers can be seen as having an underdeveloped livelihood, when the agency afforded to them in their job can facilitate flexibility and resilience (Kietäväinen, 2013).

Exploring alternative sustainable narratives can aid in understanding what future sustainable practices may look like; Bauwens *et al* (2020) undertake such an exploration within the context of the circular economy concept, demonstrating the potential for multiple narratives and providing direction for future practical applications. As shown in **Section 2.4.1**, sustainable supply chain management can be framed in many ways in academia, within which differing narratives will likely exist. Yet, if an equitable future is sought for power-imbalanced supply chains, such as the dairy industry, exploring sustainable narratives may be helpful in capturing multiple stakeholder perceptions. In this research, the formation and conceptualisation of sustainable narratives in a supply chain facing a power-imbalance will be explored, highlighting the control held by the few, and the imposition on the many. Power in a supply chain context is explored more deeply in **Section 2.7** and **2.8**.

2.4 Sustainable supply chain management

2.4.1 One concept, many approaches

This study has assumed the definition of supply chain management as

"*The strategic management of all the traditional business functions that are involved in any flows, upstream or downstream, across any aspect of the supply chain system*" (Mentzer, 2004).

Even though supply chains have become more globalised, and hence production more decentralised, organisations still face direct accountability for their actions (Kim & Davis, 2016). As such, organisations are expected to consider the sustainable performance of their entire supply chain, unless they wish to be subjected to pressure from stakeholders and bad publicity (Wolf, 2014; Seuring & Müller, 2008). Frameworks began to develop for managing sustainable supply chains, such as the work of Carter & Rogers (2008), who wished to create a common understanding of sustainable supply chain management theories amongst practitioners. This lack of unified understanding also appears to extend to academics, with Ahi & Searcy (2013) evaluating the numerous definitions offered by their peers of both sustainable and green supply chain management.

Seuring and Müller (2008) provide a general overview of how sustainable supply chain management is discussed as a concept in academic literature. They mention that when literature explores sustainability, alongside discussions on cooperation between firms, a broad section of the supply chain is considered from a triple bottom line perspective, even though this is normally reduced to just environmental considerations. (Seuring and Müller, 2008). Drawing from the discussion in the **Section 2.2.1**, the approach captured by this paper seems to be largely anthropocentric and expansionist, fitting in with the prevailing utilitarian paradigm in sustainable supply chain management as identified by Matthews *et al* (2015). Indeed, drawing from the different paradigms suggested by Matthews *et al* (2015), this study appears to fit well in the constructionist paradigm, which is identified as an unrepresented approach in the sustainable supply chain literature.

Supply chain literature may well acknowledge that sustainability is an important issue that needs considering, but it certainly doesn't agree on how to tackle the issue

(Matthews *et al*, 2015). Given that sustainability can be seen as an interdisciplinary issue (Linton *et al*, 2007), this lack of consensus is hardly surprising. There is even indecision on how to define sustainability in the field, as demonstrated in the comparison tables given by Ahi & Searcy (2013). For instance, van Marrewijk's (2003) definition focuses on a triple bottom line approach to sustainability, whereas Bansal's (2010) approach goes beyond this and links the notion of resilience to the topic. Furthermore, Carter & Rogers (2008) posit on a conceptual level that the four tenants of transparency, risk management, strategy and culture are all key parts of implementing sustainable supply chain practices.

In a supply chain context, sustainability can be linked with risk management as a way of framing solutions to sustainable challenges (Giannakis & Papadopoulos, 2016). Indeed, as Gouda & Saranga (2018) point out, implementing sustainable practices can tangibly reduce the level of risk experienced by supply chains. Risk management is not the only way sustainable supply chain management is framed in the literature, with practices relating to resilience (Govindan *et al*, 2014), innovation, relationship management and collaboration also being linked to the concept (Beske & Seuring, 2014). Lean supply chain management practices can also improve sustainability in a supply chain context, but not equally across the triple bottom line. Whilst research on the environmental and economic benefits of lean supply chain management is present, there is a noticeable gap on linking social sustainability with lean supply chain management (Martinez-Jurado & Moyano-Fuentes, 2014). Although it is starting to gain more recognition, the social aspect of supply chains has historically been neglected in studies (Yawar & Seuring, 2017). Rajeev *et al* (2017) echo the need for more focus to be given to the social pillar of sustainability in a supply chain context, highlighting the low number of studies that actually consider sustainability from a triple bottom line perspective.

It is the triple bottom line approach that fundamentally differentiates sustainable supply chain management from green supply chain management, which specifically focuses on the environmental pillar of the triple bottom line (Ahi & Searcy, 2013). Another key part of effective sustainable supply chain management is the collaboration that is required between different players (Font *et al*, 2008). Coupling these two key considerations together, and understanding the importance of clarifying the researcher's position, the working definition for sustainability adopted in

this study is contextualised in the supply chain and given by Seuring and Müller (2008):

"The management of material, information and capital flows as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development, i.e., economic, environmental and social, into account which are derived from customer and stakeholder requirements."

(p.1700)

The researcher believes this definition can accommodate concepts such as natural capital and fits in with the constructionist paradigm being assumed as the influence of different stakeholder perspectives is acknowledged. A potential criticism of this definition is that it is anthropocentric instead of eco-centric, as sustainable development is said to have arrived from customer and stakeholder requirements. However, there is flexibility in assuming whether the stakeholders identified are all human beings, or whether animals, plants and the wider environment are also included.

A broader criticism of how sustainability is addressed in a supply chain context is the technocratic approach assumed in shaping an agenda, favouring those in existing positions of economic power (Genovese & Pansera, 2020). This is not to say a technocratic approach is without value; it can be useful for monitoring and compliance activities (Hatanaka, 2020). However, a broader stakeholder approach to sustainable supply chain management can be taken, where understanding of the norms and values held by different supply chain members is sought (Blok, 2018). From this latter approach, a more responsible approach to sustainability can be achieved, where a shared ownership and knowledge in the supply chain is fostered (Hatanaka, 2020; Blok, 2018). This project aims to address the drawbacks of the technocratic approach by seeking and critically evaluating the perspectives of multiple stakeholders in the UK dairy industry.

2.4.2 Operationalisation of sustainable supply chain management

Although there may be some confusion over conceptual definitions, this has not stopped use of, and innovation in, sustainable supply chain practices. For instance,

Life Cycle Assessment (LCA), which has been of interest to academics since the 1990s (Guinee *et al*, 2011), can provide a useful method for environmental sustainability analysis in its existing form (Del Borghi *et al*, 2014). However, the LCA methodology has been developed and can be adapted into Life Cycle Sustainability Analysis, which covers all three aspects of the TBL (Guinee *et al*, 2011). Moreover, the *grave* in LCA's cradle-to-grave approach can be seen as obsolete with the rise of the circular economy concept, which challenges organisations to remove the waste element from their processes (Ellen MacArthur Foundation, 2012). These two examples demonstrate a lack of complacency in supply chain sustainability concepts, which can lead to positive practical outcomes. For instance, when compared to the linear supply chain considered by traditional LCA, circular supply chains have demonstrated the potential for facilitating a decrease in carbon emissions (Nasir *et al*, 2017).

As well as reducing emissions, taking a circular economy approach to SSCM has been shown to also aid in waste reduction (Genovese *et al*, 2017). Indeed, there are many motivations for implementing SSCM practices, both internal and external to the firm (Chen & Kitsis, 2017; Wolf, 2014). Relationships with other firms and ethical principles can both be drivers for SSCM, with players possessing higher levels of moral concern outperforming those lacking such motivations (Paulraj *et al*, 2017); having a morally responsible mindset has been identified as a prerequisite for achieving true sustainability across all areas of a firm (Ha-Brookshire, 2017).

A key focus of SSCM research appears to be collaborative practices along the supply chain, suggesting it can strengthen and improve SSCM performance (Yawar & Seuring, 2017; Gimenez & Sierra, 2013; Drake & Schlachter, 2008). Building such practices on a foundation of trust and respect can further enhance collaboration through improved information flow and shared understanding (Alghababsheh & Gallear, 2020), with the effort put into trust in the precontractual phase being an efficient opportunity to establish and strengthen SSCM (Bird & Soundararajan, 2020). When considering what motivates firms to adhere to SSCM practices, pressures can come from the buyer, the competition and through both education and training (Huq & Stevenson, 2020), which can be respectively referred to as coercive, mimetic and normative pressures, forming the basis of Institutional theory (DiMaggio & Powell, 1983). However, the obligation expected in a coercive approach can send

out negative signals to other firms (Marshall *et al*, 2019). Such institutional pressures are also reflected in the context of the implementation of sustainable practices inspired by a circular economy paradigm (Ranta *et al*, 2018; Fischer & Pascucci, 2017). The underlying message from this area of research appears to be that the relationships within and between stakeholders are a complex and an important consideration of successful SSCM adoption, development and adherence.

Both internal and external dimensions of SSCM can extend beyond relational factors, including shared responsibility and support from leaders inside a firm, as well as risk management (Wolf, 2011) and projection of an authentic sustainable image (Amos *et al*, 2019). Framing and measurement of SSCM practices is another area of research interest, particularly given the importance placed on performance in SSCM (Wu *et al*, 2017). Whilst effective measurements can highlight areas that need improvement (Isaksson *et al*, 2010), superficial and inconsistent measurements on performance can complicate SSCM progress (Morali & Searcy, 2013). The wide scope of concepts found in the SSCM literature is such that it can be applied to a variety of research contextualised in the developing world, where focus primarily remains on economic factors, addressing issues of poverty (Khalid & Seuring, 2019). Indeed, as mentioned in **Section 2.4.1**, studies on social sustainability appear to be scarcer in SSCM research than their economic and environmental counterparts (Rajeev *et al*, 2017; Yawar & Seuring, 2017). Rather than placing other dimensions second to economic issues, firms should instead focus on each pillar of sustainability objectively and equally (Yun *et al*, 2019), echoed by the previously discussed TBL SSCM research on interconnectedness.

As was established in **Section 2.4.1**, there are many different ways to approach SSCM. Therefore, it is important to establish the differing conceptualisations of sustainability, as the framing can impact outcomes, such as the social reform that could be borne from the circular economy concept (Genovese & Pansera, 2020). This leaves questions regarding from which stakeholders the dominant conceptualisation of sustainability originates from, and who has the ability to influence it? The answer may lie with the influential players within an industry, who can use their power to encourage certain sustainable practices (Touboulic *et al*, 2014).

2.4.3 Contextualisation of sustainability in UK supply chain research

The journal articles listed in **Table 2.1** are a sample of studies that explore the sustainable practices of UK supply chains. When considering the TBL, most of the studies listed focus on the environmental aspect of sustainability, which is representative of the results returned in the initial searching stage of this literature review. Interesting findings to come out of these studies include the importance of sharing information with suppliers (Ramanathan *et al*, 2014) and a comprehensive list of drivers and barriers when implementing environmentally sustainable supply chain practices (Walker *et al*, 2008). Social sustainability in supply chains was the scarcest element of the TBL in the literature, remaining in line with previous observations (Rajeev *et al*, 2017; Yawar & Seuring, 2017; Boström, 2012). However, Hoejmose *et al* (2012) did discuss social sustainability in a supply chain context, linking business strategies with engagement in socially responsible practices

To ensure the continued operations of an organisation, economic sustainability remains a vital aspect of the TBL. Although economic supply chain sustainability did not feature in the search results as frequently as its environmental counterpart, those studies that were found reflected on the importance of sustainable economic practices. For example, Emmanuel-Ebikake *et al* (2014) emphasised that economically sustainable suppliers were vital to ensuring projects are delivered on time, without the need for extra costs incurred by delays.

Table 2.1 was created by employing the search strategy in **Appendix A** on the University of Sheffield's *StarPlus* literary search system, and taking the top results after ordering by popularity. As sustainable supply chains are such a broad area of research, the purpose of showing the studies in **Table 2.1** is to exemplify the depth that studies in sustainable supply chain management go into when undertaking their research, notably in terms of context. As well as being based in the UK, examples in **Table 2.1** alone include the automotive industry (Azevedo & Barros, 2017), the plasterboard supply chain (Dadhich *et al*, 2015) and the defence industry (Emmanuel-Ebikake *et al*, 2014). As such, the UK food sector, specifically the dairy industry, has been chosen for this research to facilitate a more detailed insight into application of theories and findings by offering explanations through real-world problems and scenarios.

Table 2.1: A selection of UK based sustainable supply chain studies

Authors	Aims of the study	Context	Key Findings	Triple Bottom Line elements discussed
Hoejmose, Brammer & Millington (2012)	Importance of business strategy on socially responsible supply chains	Industry mix mirroring the UK economy	Business strategy has an impact on socially responsible supply chains (for example, sophistication)	Social
Ramanathan, Bentley & Pang (2014)	Effect of collaboration across the supply chain on emissions	Recyclable bag and food industries	Collaboration enhances the green supply chain, such as information sharing	Environmental / Economic
Walker, Di Sisto & McBain (2008)	Identify the factors that affect green supply chain practices	UK Public versus private organisations	Many drivers and barriers identified, both internal and external to an organisation	Environmental
Azevedo & Barros (2017)	Sustainability assessment of an industry through a TBL perspective	UK automotive industry	Framework applied to measure TBL performance. Sustainable practices have improved over the past decade	Economic / Social / Environmental
Dadhich, Genovese, Kumar & Acquaye (2015)	Identification of emission hotspots through Life Cycle Analysis in a plasterboard supply chain	UK construction industry	As emission calculation is difficult, information sharing and collaboration are beneficial	Environmental
Emmanuel-Ebikake, Roy & Shehab (2014)	Assessing the sustainability of potential suppliers	UK defence industry	The importance of economic sustainability was emphasised, alongside a successfully performed supplier assessment	Economic

2.5 Sustainable agri-food supply chain management

2.5.1 Stakeholders in the agri-food supply chain

The United Nations (2017) predicts that by 2050, there will be 9.8 billion people in the world. Couple this with increasing resource scarcity (FAO, 2014), and it becomes clear that feeding this population is going to be a major challenge for future generations (Dani, 2015; FAO, 2009). This challenge justifies the need to study food supply chains, with a view to make them as sustainable as possible. From a monetary viewpoint, the UK agri-food sector significantly contributes to the UK economy (Bourlakis & Weightman, 2004). For instance, in 2018, the sector added £120.2 billion to the UK economy, as well as providing jobs for 4.05 million people in the UK (DEFRA, 2020c).

In order to illustrate the composition of a generic agri-food supply chain, the list of key players and stakeholders given by Dani (2015) has been adapted into a diagram, shown in **Figure 2.1**. Note that the relationships between the main players in the food supply chain, denoted by the rectangular boxes, are not just a straightforward linear chain, but more of an interconnected network (Dani, 2015). To provide a detailed overview of the food industry, the key stakeholders in the food
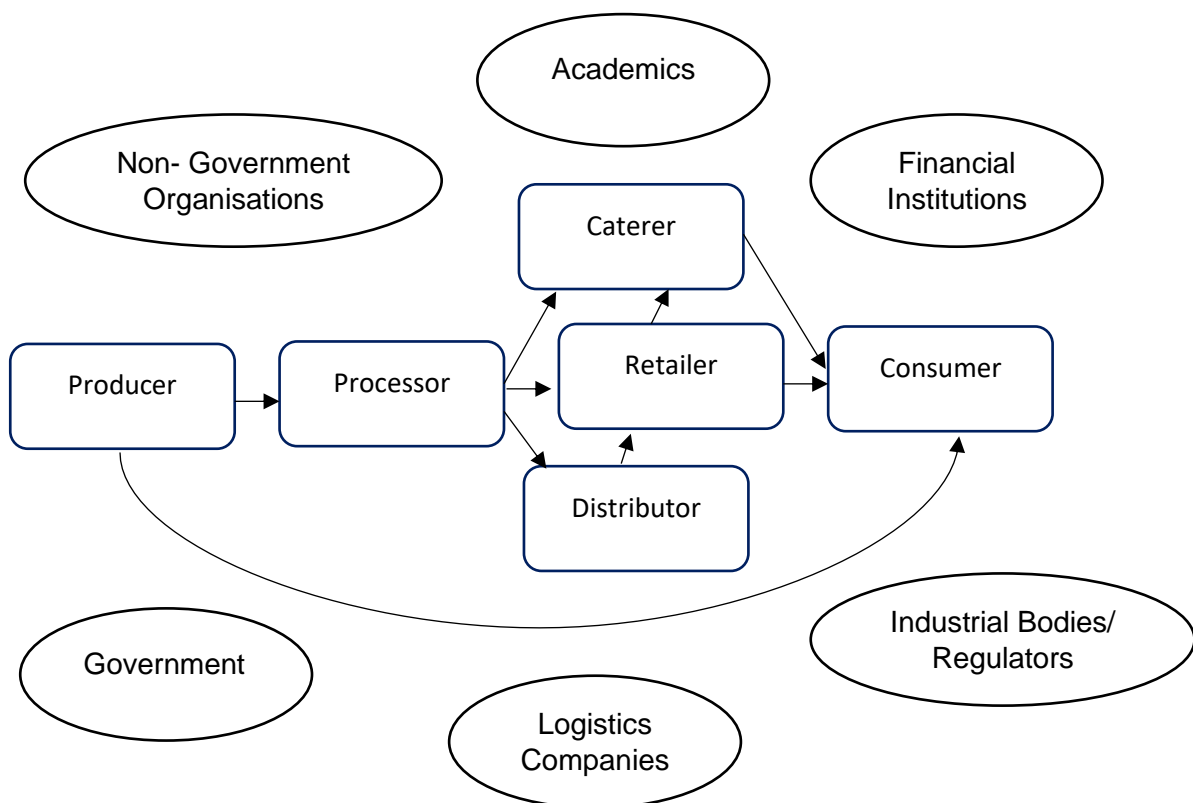
Figure 2.1: A stakeholder map of a generic agri-food supply chain

27

supply chain identified by Dani (2015), shown in the oval shapes, have also been included in the diagram. The international scale of a food supply network can further add to the complexity of the supply structure (Ringsberg, 2014). This overall complexity can have adverse effects on the management of a food supply network, such as problems with the traceability of produce (Skilton & Robinson, 2009).

When considering sustainability, government and non-government organisations (NGOs) can influence and create policies and frameworks for the supply chain to follow (Dani, 2015). Economic sustainability usually draws the most attention in a food supply chain context, but social and environmental sustainability should not be forgotten about (Li *et al*, 2014). This economic bias suggests a slightly different ranking to the environmental preference identified earlier in **Table 2.1**, but both identify social sustainability as receiving the least attention.

Murphy & Adair (2013) highlight that it is not unusual for the media and the public to take an interest in the sustainability of an agri-food supply chain. Nor is it even new, with protests over slave-produced goods taking place back in the 18th century (Murphy & Adair, 2013). A contemporary example of the media's interest in sustainable food supply chains can be found with Nestlé, who faced criticism over claims that their palm oil was sourced through illegal deforestation (Tabacek, 2010). In response to this, Nestlé committed to a zero-deforestation goal in all products by 2020 (Nestlé, 2017). The pressure that Nestlé faced to adopt these measures is just one of the drivers of sustainable food supply chain practices identified by Murphy & Adair (2013), along with policy, certification schemes and strategic differentiation.

2.5.2 Challenges facing sustainable agri-food supply chains

Stakeholders within a supply chain, along with government, consumers and other industrial bodies all face their own sustainability drivers and barriers (Govindan, 2018): production efficiency, consumption habits and governance could all be seen as hurdles to sustainable food supply chains (Garnett, 2013). Size of stakeholder can also create challenges, with the expense of information sharing activities and traceability technologies making it difficult for smaller food supply chain players to participate in sustainable supply chain practices (Wognum *et al*, 2011). A rationale for considering the sustainable actions of other stakeholders is given by Krause *et al* (2009), who posits that an organisation is no more sustainable than its suppliers. Put

differently, a supply chain is only as strong as its weakest component (Mamillo, 2014); a broad observation which nevertheless is pertinent to food supply chains due to the importance of information flow for food safety quality assurance standards (Trienekens *et al*, 2012), the perishability of the produce (Grunow & van der Vorst, 2010) and ensuring delivery of a product that is safe to consume (Wajszczuk, 2016). Indeed, larger firms are recognising their power to go beyond first-tier suppliers and share vital resources with SMEs in the supply chain (Ağan *et al*, 2018).

Sustainability is an important element of contemporary research in food supply chain management, exploring issues such as the digital brokerage of food waste (Ciulli *et al*, 2020), as well as the setting of superficial and seemingly contradictory standards (Devin & Richards, 2018). When considering the circular economy approach to sustainability, challenges faced by food supply chains include issues of infrastructure, packaging and traceability (Sharma *et al*, 2019). Although existing as independent entities, stakeholders that work together and collaborate can implement sustainable supply chain changes in an effective manner (Chen *et al*, 2017). Thus, documents between stakeholders, such as corporate reports, are a means for different parties to communicate their sustainability approach to each other (Tate *et al*, 2010). Gaining an insight into the main approaches taken towards sustainability across different stakeholders through their discourse could therefore provide a means of access to uncover conflicting worldviews, paradigms and assumptions related to sustainability practices.

Identification of storylines in the sustainable supply chain management field can facilitate the understanding of specific supply chain archetypes, such as the topic of circular economy (Batista *et al*, 2018). Gamboa *et al* (2016) contextualise sustainability storylines in a food supply chain setting, demonstrating how differing levels of supply chain complexity, from local to global, have multiple storylines, which results in differing appraisals of sustainable practices based on their own idiosyncratic framing, and conflicting perceptions of success between stakeholders. It leaves a wandering of what storylines, if any, are neglected or suppressed by stakeholders as a collective, potentially preventing a comprehensive account of sustainable performance of a supply chain. Although undertaking a discursive approach is apt for identifying different storylines, there remains a scarcity of material that utilises this approach in SSCM literature (McCarthy *et al*, 2018). By coupling

such scarcity with the call for further research into challenges and drivers for sustainable practices in agri-food supply chains (Govindan, 2018), a motivation behind the rationale and structure of this project is formed.

2.5.3 Issues in UK-based agri-food supply chains

The UK's withdrawal from the European Union, termed Brexit, caused uncertainty over the future economic sustainability of the agricultural sector (Robertson, 2017; Dairy UK, 2016c). Now, as a post-Brexit UK introduces its Sustainable Farming Incentive scheme into a landscape of multiple similar sustainable schemes and polices (DEFRA, 2020d), the UK makes an interesting country to consider in detail. Indeed, although incentive schemes and policies are being actioned, economic uncertainty might stagnate other aspects of the TBL, as tighter competition may encourage less sustainable cost-saving measures (UK Government, 2016a). Wajszczuk (2016), who explores the role of logistics in agri-food supply chains, mentions that the agri-food industry now has to consider environmental and social aspects of their operations, due to pressure from many different stakeholder groups. Although Wajszczuk (2016) writes about the general state of agri-food supply chains across the world, the recent prevalence of UK agri-food sustainability topics in both academic and grey literature suggests sustainability is definitely on the agenda of UK agri-food supply chains.

Cox *et al* (2007) use the UK pig supply chain as a basis to apply the concept of lean thinking, which involves companies working together across the supply chain to create efficient logistic processes to manufacture products just-in-time for their consumers. In their study, Cox *et al* (2007) posited that the UK pig supply chain would not benefit from lean thinking, as a power imbalance held by the retailer was identified. This UK pig supply chain power imbalance is also acknowledged by Bowman *et al* (2013), who emphasise the consequent threat to supplier sustainability. They go on to suggest that a solution to this disparity could lie with enforced policy (Bowman *et al*, 2013).

Kalfagianni and Kuik (2017) discuss how policy also has the power to improve the environmental sustainability of agri-food supply chains. However, the UK Government need to involve themselves more with agri-food supply chain policy, as well as taking a wider approach to the application of any voluntary guidelines

(Kalfagianni and Kuik, 2017). It should be remembered that some organisations have other motivations than policy to encourage sustainable supply chain practices, with Paulraj et al (2017) finding that relational and moral motivations can significantly contribute to sustainable supply chain management. An example of this in the agri-food industry can be found in Waitrose. They consider upstream in their agri-food supply chain, such as hosting supplier conferences, (Waitrose, 2017a), as well as any downstream issues, such as tacking food waste through clearer labelling and revised vegetable cosmetic guidelines (Waitrose, 2017b). These upstream and downstream practices respectively provide examples of potential relational and moral motivation. However, Waitrose's list of environmental initiatives is not comprehensive, which corroborates Kalfagianni and Kuik's (2017) claim that retailer schemes can be limited and should not be a substitute for strong external policy.

Yakovleva (2007) successfully demonstrated how measurable sets of indicators can be used to assess and compare sustainable agri-food supply chain practices, using the UK chicken and potato supply chains as illustrations for her discussions. However, a limitation of her study was the difficulty of obtaining statistics from private companies (Yakovleva, 2007), demonstrating a lack of transparency in some organisations. If there is a similar lack of transparency inside the supply chain, this could be detrimental to a firm's sustainable practices, as supply chain transparency fosters a positive effect on sustainable management of agri-food supply chains (Bastian and Zentes, 2013).

Collaboration with suppliers can facilitate sustainable practices in the UK agri-food supply chain, although it is usually driven by economic incentives (Leat *et al*, 2011a). Following this assertion, Leat *et al* (2011a) explained that environmental and social practices that have an associated economic benefit are given preference, alongside reiterating the need for policy in the UK. An example of an industry where the role of policy is passionately debated is the UK dairy industry, as will be explained in the following section.

2.6 The UK dairy industry

2.6.1 A global outlook

Sustainability is a global concern, with frameworks such as the Global Reporting Initiative existing to standardise measurement of sustainability metrics in reports around the world (Global Reporting Initiative, 2017). As mentioned in **Section 2.2.1**, the UN have also set a series of Sustainable Development Goals (SDGs) for its member countries to work towards (United Nations, 2015b). Indeed, as the milk market is global (AHDB Dairy, 2012), it cannot afford to ignore sustainable issues.

The impact of livestock on the environment prompted the launch of the Global Dairy Agenda for Action (Dairy Sustainability Framework, 2017a), which formed the Dairy Sustainability Framework (2017b) to align and connect dairy sustainable practices across the globe. The governing board of the Dairy Sustainability Framework is made up of representatives of further governing boards, who in turn are formed of a mix of stakeholders, notably representing producer and retailer stakeholders (Dairy Sustainability Framework, 2021). The framework puts forward 11 sustainable criteria for members to implement in their organisations (Dairy Sustainability Framework, 2015). These criteria are very broad, such as recycling waste and contributing to economic viability of farmers, however this could be due to the complex global scope of the framework. This research project is contextualised in the UK, and attention will now be turned to an issue playing out on a global stage will be explored: Brexit.

2.6.2 Brexit

The term 'Brexit' refers to the withdrawal of the UK from the European Union (UK Government, 2017). Approximately half of all trade from the UK is with the EU (Dhingra *et al*, 2016), and the uncertainty that accompanies Brexit was predicted to have severe repercussions for many UK industries and their supply chains, examples including potential cuts in the manufacturing sector (Roberts & Allen, 2017) and a significant drop in investment for the UK car industry (Campbell, 2017). Indeed, years after the referendum, uncertainty around the nature of the new trade relationship between the UK and EU remains (Thissen *et al*, 2020); the agricultural sector is no exception to such vagueness. A report published by the European Union Committee (2017) in the House of Lords highlighted key issues for the post-Brexit

UK agricultural industry: a funding replacement for the Common Agricultural Policy (CAP), trade considerations, loss of skilled labour and the need for an effective transitional period for UK farmers to adjust to any changes.

The CAP is a payment made to EU farmers to subsidise their income and contribute to the economic sustainable development of agriculture (European Commission, 2017a). The European Union Committee (2017) acknowledge the importance of CAP and agricultural funding, but are not afraid to mention CAP's criticisms, such as the policy's bureaucratic approach. Alim (2016) offers his perceived drawbacks of CAP, including CAP's outdated approach and unequal distribution of EU resources, and emphasises the opportunity for reform that Brexit brings. In 2020, the Agriculture Act was legislated in the UK, superseding the CAP in offering farmers financial support (Coe & Finlay, 2020).

Exporting issues, such as trade agreements and tariffs, are of particular importance to the UK dairy industry, as Dairy UK (2016c) emphasise in their post-Brexit report. Of particular significance is the trade relationship with the Republic of Ireland, who received 67% of UK dairy exports in 2015 in terms of quantity (AHDB Dairy, 2016a); a number which had risen to 68% in 2020 (AHDB Dairy, 2021d). AHDB Dairy (2016a) stress the importance of maintaining trade with Ireland, as well as the need to consider the foreign nature of the largest dairy companies.

2.6.3 Structure of a dairy supply chain

By drawing from **Figure 2.1** and adapting a diagram by Dani (2015), **Figure 2.2** shows an overview of the UK dairy supply chain, including a selection of external stakeholders. The farmers milk the cows, usually two times a day, and send off the milk for processing (This is Dairy Farming, 2017). The processors then treat the milk and create a range of produce, such as cheese, butter and yoghurt (Dani, 2015). An optional player in the UK dairy supply chain could be a dairy co-operative, which is an organisation that is run by their farmer members to take advantage of the benefits of shared business ownership, such as increased engagement, innovation and productivity (Co-operatives UK, 2016). However, these advantages can weaken in large dairy co-operatives, as fair representation and good management can become difficult (European Milk Board, 2012). Finally, the produce is transferred to the

retailer, who sells it to the consumer. Retailers are not the only way to sell to the consumer, with some dairy farms undertaking milk doorstep delivery (Dani, 2015).
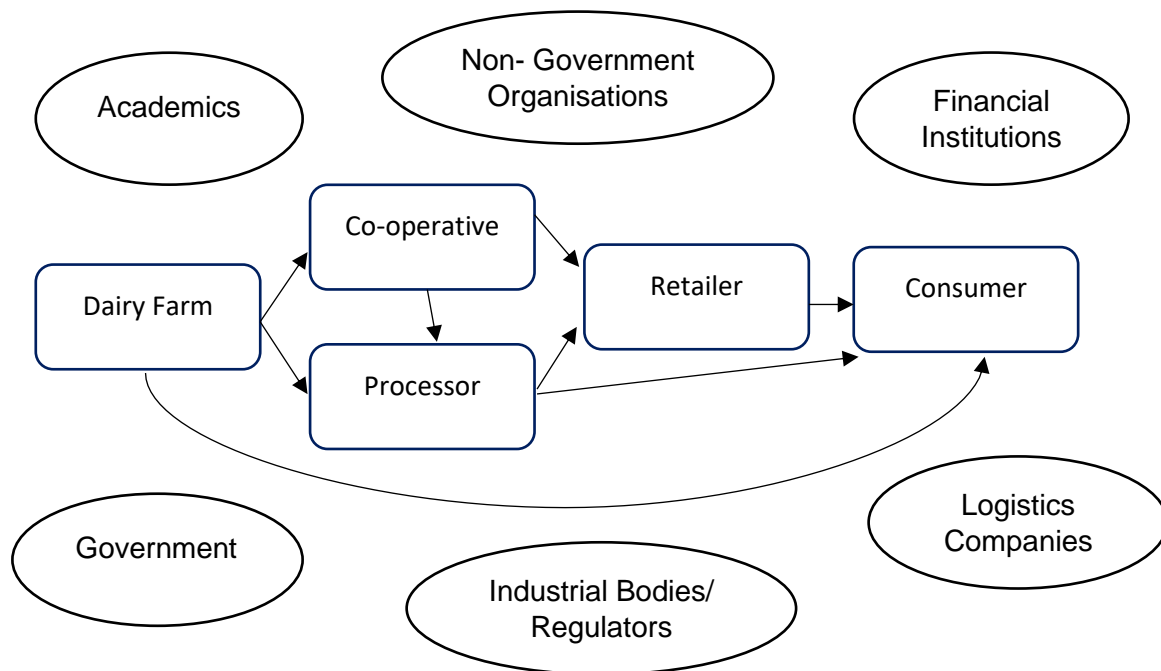
Figure 2.2: A stakeholder map of the UK dairy supply chain

The above description of the UK dairy supply chain structure is a simplification, as many different models and configurations exist in the dairy industry across the UK. For instance, milk can be sent off to processors for treatment, or could be processed on farm. If a farmer chooses to sell to a processor, then the size of processor can impact the complexity of supply chain configuration. Whilst a smaller processor might only process their products in one location, a larger processor might have several locations and distribution channels, adding to the complexity of their supply chain structure. Therefore, logic dictates that greater complexity in supply chains could lead to great complexity when ensuring sustainable practices. For illustration, a selection of additional UK dairy supply chain configurations are discussed in **Appendix B**.

2.6.4 UK dairy economic context

10 years ago, Mintel (2011) noted that dairy farmers in the UK were facing financial pressure, making reference to supermarket price wars, unfair farmer remuneration, commoditisation and lack of value-adding opportunities. Since this report was published in 2011, the number of dairy farmers in England and Wales has dropped

by 23% (AHDB Dairy, 2021c), highlighting the current unsustainable nature of the UK dairy supply chain. Whilst the price dairy farmers are paid for their milk, known as the farmgate price, promisingly rose from a low of 25.73 pence per litre (ppl) in 2011 to a high of 34.49ppl in 2013, it has since declined again to an average of 29.85 ppl as of 2021 (AHDB Dairy, 2021e). Consider that the average cost of milk production for a dairy farm with average productivity was 30ppl in 2020 (AHDB Dairy, 2021f) and the tight margins of dairy production become apparent. To provide an example of the large difference that small changes in price margins can create, **Table 2.2** presents the information required to calculate the average loss on a UK dairy farm in 2018, as well as offering additional analysis when decreasing the farmgate price for milk. As **Table 2.2** shows, a relatively small 0.5ppl decrease in average farmgate price in 2018 would have resulted in a 28.4% greater loss to an average UK dairy farm.

Table 2.2: Annual Loss of an average UK dairy farm

(Note that as of 2021, the latest figures available to perform these calculations come from 2018. As such, all figures are from 2018 to ensure consistency)

Average yield per cow per annum (litres)[1]	7,960
Average herd size[2]	148
Average Farmgate price (ppl)[3]	29.34
Income from milk	**£345,648.67**
Average cost of production (ppl)[4]	31.1
Cost of Production	**£366,382.88**
Annual Loss	**-£20,734.21**
Decreasing the farmgate price by 0.5ppl	
Revised Annual Loss	**-£26,624.61 (-28.4%)**

[1](AHDB Dairy, 2021b)
[2](AHDB Dairy, 2021a)
[3](AHDB Dairy ,2021c)
[4](AHDB Dairy, 2020)

To understand the economic behaviour exhibited by the UK dairy supply chain, events in the past decade that have had an impact on supply chain practices will be explored. Aside from Brexit, as discussed in **Section 2.5.2**, another UK-based event is the 2015 supermarket payment protests, exacerbated through media attention about the unsustainable farmgate price paid to dairy farmers by supermarkets (Butler & Brignall, 2015). In some protests, farmers would buy all available milk and give it away to customers, whilst explaining about low farmgate prices (BBC, 2015a). Some supermarkets responded to these protests by increasing payments to dairy farmers, as well as launching products that give more money directly to the farmers (Neville, 2015). In addition to the level of payment, the timing of payments has also caused controversy. For instance, First Milk, a dairy co-operative, delayed milk payments to their farmers at the start of 2015, which not only sent out a negative signal to the wider market (BBC, 2015b), but also put their farmers under even greater financial pressure (BBC, 2015c).

Reimann and Ketchen (2017) emphasise the importance of considering power in a supply chain context. They draw on Emerson's (1962) definition of power, who links influence over other parties with dependence of said parties on the focal player. Whilst it superficially appears those with power in the supply chain are to blame for the UK dairy industry's unsustainability, conclusions should not be drawn based on solely Anglocentric events. The dairy industry is international, with a global oversupply of milk being held responsible for the falling farmgate prices around the world (AHDB Dairy, 2016b). Individual countries can also have an impact on the UK's dairy industry, such as China and Russia. In China, there has been a surge in demand for dairy produce (Fuller *et al*, 2006). Although this might seem favourable for British dairy exports, China is striving for self-sufficiency in dairy, which means demand drops outside of China for dairy produce, having a negative impact on the UK dairy industry (Downing, 2016). Furthermore, given the lack of dairy experience in China, coupled with the sheer buying power of the population, worries have been expressed over how environmentally sustainable these new Chinese farms will be (Balch, 2014).

In addition to the Chinese demand shift, the Russian import embargo, established in 2014, also negatively affected the UK dairy export market. In retaliation to sanctions that were placed on the Russian Government after the annexation of Crimea, they

imposed a ban on certain produce imports from the EU, including dairy (The Economist, 2016). Before the embargo, the EU exported a significant amount of their cheese and butter output to Russia, but as other non-EU countries adapt to supply Russia, the level of dairy required by Russia from the EU might never fully recover when the embargo ends (Taverner, 2016). Given that AHDB Dairy (2012) identified cheese and butter exports to Russia as an area of economic opportunity for the UK in 2012, it is unsurprising that the embargo has since had a negative effect on the UK dairy industry.

In 2015, EU milk quotas were abolished, which were introduced in the 1980s to negate surplus supply and cap the amount of milk that could be produced (European Commission, 2015). The European Commission (2015) discussed the opportunities that removing milk quotas would bring, such as the chance to meet the rising dairy demand in developing countries. Indeed, some farmers praised the move, seeing the economic potential of an uncapped market, even if it could bring increased volatility (Dairy UK, 2015a). However, others expressed worries that after lifting the quotas, the resulting competitive environment would ultimately reduce milk price margins even further (Marshall, 2015). Contemporary research on multiple European countries found that prices have indeed become more volatile since the milk quota abolishment, emphasising the need for effective resilience and risk management strategies in the dairy industry (Thorsøe *et al*, 2020).

The Covid-19 pandemic also created a large economic impact on the UK dairy sector; whilst there was an initial boost in retail sales through stockpiling, the market structure altered drastically with the closure of hospitality venues, and the pandemic ultimately triggered a recession (Mintel, 2020). Coupling this altered market structure with processor staff shortages, farmers had to start throwing milk away (Farming UK, 2020). The farmgate price for milk also fell, which led to the UK government introducing a hardship fund for farmers affected by the decrease (Great Britain. Environment, Food and Rural Affairs Committee, 2020). Reduction in both farmgate prices and available workforce did not just impact the UK, and has affected the dairy industry on a global scale (Wang *et al*, 2020), with the existing US market structure of a few dominant processors being highlighted as contributing to the lack of dairy supply chain resilience (Appelbaum & Gaby-Biegle, 2020). In the face of such disruption, economic sustainability of the dairy sector remains as important as ever.

2.6.5 UK dairy social and environmental context

Table 2.3 shows a selection of sustainability-based guidelines and reports issued by various different organisations over the past decade, as well as highlighting what aspects of the TBL are addressed. It should be emphasised here that a lack of academic literature on UK dairy supply chain social and environmental sustainability means grey literature is relied upon, without validation from academic sources. The word sustainability appears to take on different meanings in different reports, which is an ambiguity directly addressed by the Dairy All-Party Parliamentary Group (2015). For example, the dairy roadmap (Dairy UK, 2015b) only addresses sustainability in environmental terms. Whilst this is still an element of sustainability, exposure to such literature could contribute towards the neglect of social sustainability in framework development (Boström, 2012).

The social aspect of sustainability is clearly addressed in the guidelines by Dairy UK (2014) and Forum for the Future (2012), but to varying degrees of depth. Whilst Forum for the Future (2012) set broad aims for the industry, such as evaluating the needs of people in the dairy supply chain, Dairy UK (2014) provide a detailed list of tangible actions that can be taken, such as communicating health benefits to consumers. Another distinction between all the guidelines is the intended audience, as they do not necessarily follow the industry-wide view taken by Dairy UK (2014) and Forum for the Future (2012). For example, the VCoP focuses on the fair contracts between milk producers and buyers (Dairy UK *et al*, 2012). Bogetoft and Olesen (2002) stipulate effective contracts are transparent, long term and foster cooperation: all of which are benefits that the VCoP aims to bring to the UK dairy industry's contracts (Dairy UK, 2013).

Some of the guidelines offer contradictory information to other reports and news articles, which undermines their credibility and may confuse their audience, thus reducing their effectiveness. For example, the Leading the Way report discusses the *bright* economic future for the dairy industry, build on *fantastic* resources and *world-class* production capacities (Dairy UK, 2014). Using such positive language might lead the reader into feeling a sense of security, but when compared to contemporaneous news articles that discuss *price wars* in a dairy *crisis* (Bulman,

2015) and the *fear* of *market volatility* (Marshall, 2015), it is not clear which source should be believed and trusted.

The challenges, aims and performance metrics found within these sustainability guidelines are key to getting sustainability issues into business strategies, corporate reports and the minds of management (Sroufe and Melnyk, 2013). Indeed, the collaborative approach to supply chain management championed by all the guidelines in **Table 2.3** is acknowledged by Chen *et al* (2017) as a way to effectively implement sustainable changes across the supply chain. However, the guideline-issuing bodies need to be careful that a broad, supply chain mindset does not translate into vague goals. For example, challenging the dairy supply chain to optimise their water efficiency (Dairy UK, 2014) does not exhibit the specific or measurable aspects of the SMART doctrine of effective goal setting (Williams, 2013). Furthermore, Leat *et al* (2011a) would commend the existence of the guidelines in **Table 2.3**, but would ultimately lobby for regulator enforcement through policy, as all these guidelines remain voluntary. Yet, regardless of their optional nature, many organisations have embraced the ethos of these recommendations and exhibit sustainable practices, some of which are explored in the following sections.

Table 2.3: Contemporary sustainability guidelines from the UK dairy industry

Author(s)	Name of report/guideline	Brief Document Outline	Primary supply chain audience	Primary Triple Bottom Line elements discussed
Dairy UK (2016b)	United Kingdom: Exporting Dairy to the World	Explains actions that need to be taken to strengthen UK dairy export position	Government/ Industrial bodies	Economic
Dairy UK (2015b)	Dairy Roadmap	Involves the setting, measurement and reviewing of environmental indicators across the entire supply chain	Farmers, co-operatives, processors and retailers	Environmental
Dairy All-Party Parliamentary Group (2015)	The Sustainable Competitiveness of the UK Dairy Industry	Recommendations to Government on how they can support sustainable dairy supply chain practices	Government	Primarily Economic (Social and Environmental discussed)
Dairy UK (2014)	Leading the Way	Through industry-wide collaboration, a general list of sustainable actions has been created.	All supply chain members and stakeholders of the UK dairy industry	Economic, Social and Environmental
National Farmers Union (2013)	Compete to Grow	Personalised recommendations for individual supply chain members and stakeholders	All supply chain members, as well as Government and industrial bodies	Primarily Economic (Social and Environmental discussed)
Forum for the Future (2012)	Dairy 2020	Deliberately broad challenges and aims set for the entire UK dairy industry	Entire UK dairy industry	Economic, Social and Environmental
Dairy UK, National Farmers Union and National Farmers Union Scotland (2012)	Dairy industry code of best practice on contractual relationships (Voluntary Code of Practice)	Detailed guidance given on how to create fair purchasing contracts	Dairy farmers and milk buyers	Economic

2.6.6 Responsibility of different stakeholders towards dairy supply chain sustainability

As is shown in **Section 2.6.5**, all aspects of the TBL are considered in the dairy industry, but economic issues certainly appear to take precedence. Given the 23% decrease in English and Welsh dairy farmers in the past decade (AHDB Dairy, 2021c), this ranking is perhaps understandable. Whilst the importance of ensuring sustainability in the UK dairy supply chain is apparent, which stakeholder or member of the supply chain should take responsibility for promoting sustainable practices is less so.

As mentioned in **Section 2.6.4**, supermarkets and retailers have been portrayed in the media as the perpetrators of economic unsustainable practices. This imbalance of power in the supply chain means that less powerful members, such as dairy farmers, can be treated unfairly (Glover, 2011). The power that large retailers possess in the supply chain could derive from their buying power and large market share (Free, 2008). Historically, some retailers have been known to use milk as a loss leader, as well as increasing their share of what little margin is available on milk (Gray, 2012). This, in turn, would put pressure on processors to secure their own margins whilst remaining competitive (Gray, 2012), leaving dairy farmers to absorb the final reduction in margin (NFU, 2015a).

The Voluntary Code of Practice (VCoP), which was mentioned in **Section 2.6.5**, singles out processors as the supply chain member who should engage with dairy farmers and produce sustainable, fair contracts (Welsh Affairs Committee, 2013). The sustainable practices of some processors go beyond merely following voluntary codes, such as embracing the concept of the circular economy when dealing with milk-related waste (Magnin, 2016). However, given the previously mentioned pressure supermarkets can place on processors, it might not be fair to exclusively blame dairy processors. Indeed, the existence of the VCoP, which was drawn up by Dairy UK and the National Farmers Union, both of which are industry associations (Dairy UK *et al,* 2012), suggests external stakeholders have an important role in ensuring the sustainability of UK dairy supply chains. This claim is backed up by the presence of reports and discussions undertaken by the UK Government (2016b), which explore their role within the dairy industry.

Another member of the supply chain that could drive sustainable practices is the consumer. As awareness of the unsustainable practices in the UK dairy supply chain increases in consumers (NFU, 2015b), they have the ultimate power to shop elsewhere, pressuring supermarkets into submission (Butler and Brignall, 2015). Else (2015) suggests that the consumers can be educated by the dairy farmers themselves, who could collaborate and work out an effective dairy marketing strategy. Interestingly, Glover *et al* (2014) point out in their findings that even though supermarkets are identified as the most powerful member of the dairy supply chain, dairy farmers still prioritise cost reduction over other sustainable practices. Bulman (2015) also highlights how farmer members of dairy co-operatives could use their collective power to influence other supply chain members.

Ultimately, this section has demonstrated that several members of the UK dairy supply chain have responsibility for ensuring sustainable practices, as well as external stakeholders. Whilst the supply chain member held most accountable seems to vary from different perspectives, maybe supply chain members should consider their own actions alongside the actions of others. A deeper exploration into these different stakeholder perspectives is given in the next section.

2.6.7 Towards a multi-stakeholder perspective on UK dairy sustainable practices

Sustainable practices can occur due to different members along the UK dairy supply chain, from farmers to supermarkets. Beginning with farmers, business diversification can be undertaken to offset the uncertain outlook of the farming industry (Toulmin, 2014). However, diversification is not the only way farmers can encourage economic sustainability, with projects such as The Prince's Dairy Initiative facilitating discussions between farmers, where ideas can be exchanged and support can be given (Business in the Community, 2017). If strong connections were built, farmers could potentially achieve tangible economic benefits through collaboration, such as sharing machinery (Andersson *et al*, 2005).

Supermarkets also have sustainable practices in place, such as the Tesco Sustainable Dairy Group, in which UK dairy farmers are guaranteed to receive a fair price for their milk (Tesco, 2016). Another example is Morrisons, who released a premium *For Farmers* product range in response to media pressure, where the extra money paid is given directly to the farmers (Morrisons Farming, 2021). However, the

Morrisons *For Farmers* range initially proved controversial, as it became apparent that the majority of the extra money received was sent abroad, instead of to UK dairy farmers (Mendick, 2015). When considering fair price schemes, the motivation behind their inception may not be altruistic; Glover *et al* (2014) point out that large organisations in the dairy supply chain are likely to promote sustainable practices for superficial image purposes.

Touboulic *et al* (2014) claim that the power imbalance between supply chain members can be used to encourage sustainable behaviour across the supply chain. An example of this in practice can be seen by Nestlé, who incentivise their farmer suppliers with a monetary bonus if they undertake sustainable actions (Clarke, 2016), providing a clear example of how supplier governance can foster sustainable behaviour (Gimenez and Sierra, 2013). Although complying with such governance can result in a financial burden on less powerful supply chain members (Gimenez and Sierra, 2013), the money offered by Nestlé appears to resolve this concern.

In addition to economic activities, environmental actions are also taking place across the UK dairy supply chain. The Dairy Roadmap 2015 provides a range of case studies discussing environmental practices, such as farmers pursuing anaerobic digestion and water recovery treatment, as well as processors installing renewable energy solutions and hosting supplier workshops on environmental issues (Dairy UK, 2015b). Interestingly, most of the case studies cite the economic savings that can be achieved through adopting environmental measures. This corroborates with Leat *et al*'s (2011a) claim that organisations are more likely to pursue sustainable practices that bring economic benefits. It should be remembered that the case studies shown in the Dairy Roadmap 2015 are not necessarily representative of all organisations, as there are no detailed explanations given on any unsustainable organisations, whose existence is corroborated by media outlets (Farming UK, 2016; Siegle, 2009). Inclusion of unsustainable cases in the document could have provided an opportunity to illustrate how the dairy roadmap could be applied to facilitate improvement.

Throughout **Section 2.6**, the uncertain and turbulent UK dairy industry has been explored: an industry that is not only affected by events that happen in the UK, but on a global scale. A justification for several supply chain members to take

responsibility for sustainable practices in the UK dairy industry has been put forward, but a final decision on the most responsible member was not reached. Indeed, not all supply chain members have even been discussed, with changes in demand for sustainably priced milk from consumers (Chandler, 2014) and efficiency in the logistics of milk transporters (First Milk, 2012) also potentially being fundamental in ensuring supply chain sustainability. Many guidelines exist to encourage sustainable behaviour, but it is not clear if they are an effective substitute for enforced policy. Whilst the existence of the sustainable practices discussed in this literature review are promising, they still do not meet the multitude of sustainable goals set throughout the guidelines given in **Table 2.3**. Alongside this, several stakeholders have been clearly identified as having an important role in ensuring sustainability across the entire dairy supply chain. How these stakeholders synthesise and evaluate sustainable performance is less clear, yet remains equally important if wanting to improve the sustainable performance of UK dairy supply chains. Indeed, a comparison between UK dairy stakeholders will aid in understanding if they are united in their sustainable vision, or if sustainable focus is diverse and divided. Blending together the ambiguous and multifaceted nature of sustainability with a range of stakeholder views and perspectives results in the first research question:

Research Question 1: How are sustainable narratives conceptualised from a multi-stakeholder perspective in the UK dairy supply chain?

A sample of sustainable practices in the dairy industry, as well as some drivers and barriers for sustainable behaviour, have been discussed so far. Alongside this, several stakeholders have been clearly identified as having an important role in ensuring sustainability across the entire dairy supply chain. How these stakeholders evaluate sustainable performance in the industry is less clear, yet remains an important factor to consider if wanting to improve the sustainable performance of UK dairy supply chains within the context of the dominant narrative. Indeed, a comparison between UK dairy stakeholders may provide further evidence and understanding of if they are united in their sustainable vision, or if sustainable focus is diverse and divided. This leads to the second research question:

Research Question 2: How is sustainability performance evaluated from a multi-stakeholder perspective in UK dairy supply chains?

2.7 Power in Supply Chain Management

Throughout the exploration of the dairy industry in **Section 2.6**, an issue that featured repeatedly was the imbalance in supply chain power. Whilst power imbalances can foster sustainable practices in a supply chain (Touboulic *et al*, 2014), large retailers are identified as taking advantage of their power though unsustainable practices in the dairy industry (Glover, 2020; Glover *et al*, 2014). The annual loss of the average UK dairy farmer calculated in **Table 2.2** represents a symptom of the unsustainable economic practices found in the supply chain. Whilst a general overview of power in supply chain management is given in **Chapter 2**, the emergence of its prominence as key in understanding sustainable supply chain practices in the dairy industry signified that in depth understanding was required on the topic, providing strong foundations for this project. As such, a systematic literature review on power in sustainable agrifood supply chains has been undertaken, which can be found in **Chapter 3**.

Emerson (1962) defines power as when an entity has the ability to exert influence over another, with the latter being dependent on the initial entity in question. This interpretation can be easily transposed to a supply chain context, where consideration of power remains an important issue (Reimann and Ketchen, 2017). Power in a supply chain context is complex, and is certainly worthy of research, given the influence other stakeholders can have on both an organisations internal direction and external practices (Park-Poaps & Rees, 2010). Indeed, power between organisations can affect information sharing (Zaheer & Trkman, 2017; Li & Lin, 2006), compliance with guidance (Delbufalo & Bastl, 2017) and financial performance (Elking et al, 2017). Power can also be misused in the supply chain, as dominant organisations can behave unethically and hypocritically, passing burdens onto stakeholders with less power (Glover & Touboulic, 2020). Ultimately, the power held in a supply chain can influence the framing of sustainability, where narratives can be imposed on less powerful actors. This is apparent in the emerging circular economy discourse and the structuring of closed-loop supply chains (Genovese & Pansera, 2020). The relation between sustainable supply chain management and power is further discussed in **Section 2.8.**

Power within the supply chain can be broken into different types, each with their own impacts and ability to influence one another, affecting the management of supplier relationships (Chae *et al*, 2017). For instance, when dealing with first-tier suppliers,

coercive power appears effective at encouraging engagement with the sustainable agenda of a focal organisation. Conversely, second tier suppliers and beyond appear to respond better to non-coercive power (Meqdadi *et al*, 2017). Whilst some studies agree that mediated power, such as coercive power, can be effective in supply chain management (Mokhtar *et a*l, 2019), others suggest non-mediated power, spanning knowledge sharing and admiration of exemplar organisations, is more effective (Marshall *et al*, 2019). Contrasting results like this indicates research on power in supply chain management is continuing to develop and evolve.

Theoretical lenses can be drawn on to examine power in supply chain management, such as resource dependence theory (Huo *et al*, 2017). When considering dyadic relationships, resource dependence theory can be drawn on to explain asymmetry in power distribution (Crook *et al*, 2017), which in turn can lead to complexity in collaborative practices (Brito & Miguel, 2017). Farmers in the dairy industry are familiar with the repercussions of such power asymmetries (Glover, 2011), the identification of which is important as those in powerful positions can use their status to encourage sustainable behaviours across the supply chain (Touboulic *et al*, 2014). However, less powerful supply chain members implementing these changes, such as SMEs, might have to take on a financial burden (Gimenez & Sierra, 2013), counterproductively creating an unsustainable economic situation. Farmers are not the only stakeholder to face such power asymmetries, with smaller processors also facing tighter margins when dealing with larger supermarkets, which in turn can lead to financial uncertainty being felt, preventing any meaningful capital investments being made (Bowman *et al*, 2019). This backward flow of sustainable expectations in the supply chain in relation to power imbalances is illustrated in **Figure 2.3**. Indeed, even major retailers can be in the weaker position of a pair when faced with a key single supplier, which can lead to reputational damage, as evidenced through the European horsemeat scandal (Madichie & Yamoah, 2017). Whilst research on power in supply chains considers dyadic relationships, where two parties are considered, there are calls to go beyond this when researching the complexity of power across the supply chain (Brito & Miguel, 2017; Reimann & Ketchen, 2017), such as within the dairy industry, which is what this paper sets out to do.
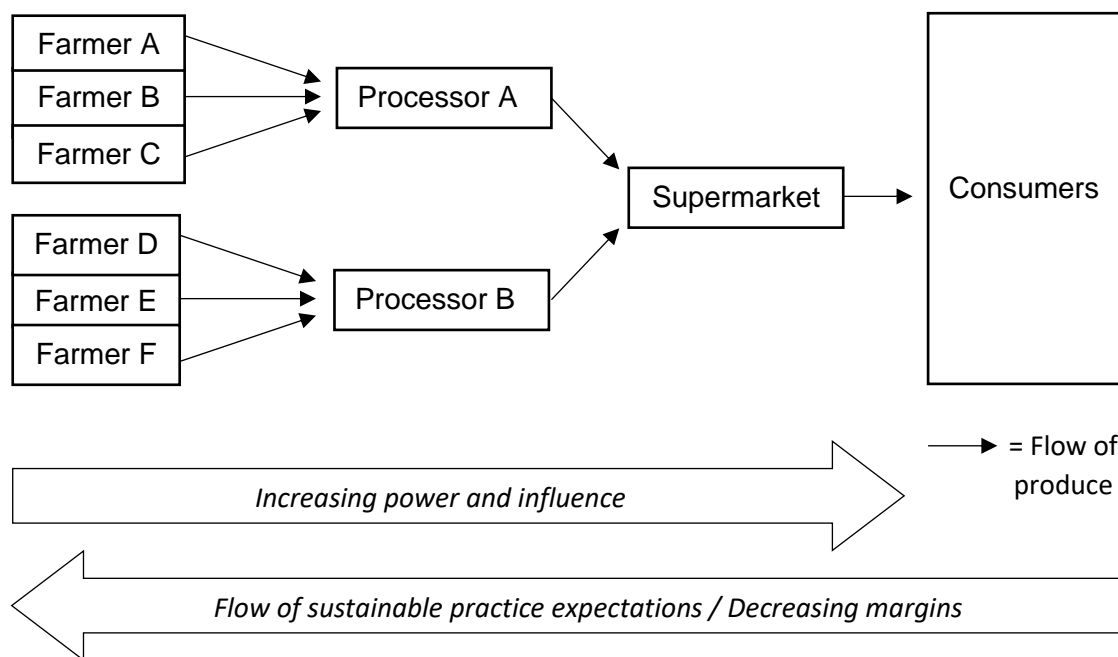
Figure 2.3: The flow of expectations, influence and margins a supply chain with power asymmetries

2.8 Power in Sustainable Supply Chain Management

Based on the definition given in **Section 2.4** by Seuring & Müller (2008), SSCM refers to the integration of economic, social and environmental considerations with the management of materials, information and capital flows internal and external to an organisation. Drawing the concepts of power and SSCM together, actors can wield their power to influence the SSCM practices of others, and it is the perceptions of these SSCM practices held by different stakeholders that forms the focus of this study. Take knowledge acquisition along the supply chain; from a sustainability context, it can encourage stakeholders to share best practice amongst themselves (Beske *et al*, 2014). When considering the role power plays in such practices, using restraint when exercising any power can mean knowledge acquisition is more likely to take place between members of a supply chain (He *et al*, 2013).

The relationship with the supplier in regards to SSCM has been explored in supply chain literature, with both supplier collaboration and assessment being shown to have an effect on performance (Gimenez & Sierra, 2013). While the use of coercive power can encourage sustainable initiatives to spread to immediate suppliers, non-coercive power, such as offering rewards or possessing specialist knowledge, can

facilitate sustainable initiatives to spread into the wider supply network (Meqdadi *et al*, 2019). This corroborates with Paulraj *et al* (2017)'s finding that relational factors positively affect SSCM practices, who also found a similar output comes from strong moral motivations held by an organisation

As power shifts downstream in the supply chain, final product sustainability has been shown to increase, but so too does the final retail price (Li *et al*, 2018). Indeed, power asymmetry in a supply chain can cause opportunistic behaviour and the claiming of greater value in a relationship (Nyaga *et al*, 2013). This darker side of power asymmetry is highlighted when the powerful player behaves unethically, which can lead to wide-ranging adverse consequences felt by many actors across the supply chain, as was evidenced in the European horsemeat scandal (Madichie & Yamoah, 2017).Conversely, Li *et al* (2018) appears to align with Hoejmose *et al* (2013), who posit that relationships with power asymmetry can be a driver of SSCM, due to the ability to foster collaborative and adaptive practices along a supply chain. However, whilst power can be seen as a precursor for encouraging unethical practices, maintaining a good relationship remains beneficial, as this can reduce conflict and increase effectiveness of transactions within the relationship (Nyaga *et al*, 2013).

The wielding of power appears to have many impacts across the supply chain, possessing the potential to be used for both moral and amoral purposes. Power has been shown to influence both the practices and framing of sustainability across a supply chain context. Yet, we have acknowledged that the perception and outcomes of power can differ depending on the position of stakeholders. Alongside the calls for supply chain research to go beyond consideration of dyadic relationships (Brito & Miguel, 2017; Reimann & Ketchen, 2017), the third research question seeks a supply chain perspective;

Research Question 3: How does power held by different stakeholders influence sustainable narratives created within the UK dairy supply chain?

2.9 Chapter 2 conclusion

To ensure we do not jeopardise the needs of future generations, sustainable development needs to be on the agenda today. A shift in responsibility from considering one's own sustainable behaviours to that of their entire supply chain has taken place over time, resulting in the variety of research that aims to measure, facilitate and improve sustainable practices in organisations. The growth in population predicted by the United Nations (2017) inspires exploration into the agri-food industry, as all these extra mouths will need feeding. The challenges faced by the agri-food industry stretch along the entire supply chain, from raw material input (Shepherd *et al*, 2017) to waste disposal (Mena *et al*, 2014). **Chapter 3** considers sustainability of agri-food supply chains in greater detail, facilitating deeper consideration on issues relating to research question 3. Furthermore, the key gaps in the literature identified in this chapter, and their relevance to the research questions, are reiterated and summarised in **Table 3.4**.

By taking the dairy industry as a case study, both theoretical and practical contributions from this research will aim to help address sustainability issues felt by UK agri-food supply chains in the modern era. Theoretical contributions will include evaluation of sustainable narratives from multiple stakeholder perspectives, as well as the relationship between power and the formation of such conceptualisations. This research will also draw on stakeholder theory, RDT and cultural hegemony in a sustainable agri-food context, as seen in **Chapter 4.**

From a practical perspective, the research will aim to create a positive impact in the UK dairy industry through informing the future direction of sustainable policy. Enhanced by the comparison of different perspectives, this research should provide tangible ways in which to improve the sustainability of the UK dairy industry. Ultimately, building on the aims of Else (2015) to help the dwindling number of UK dairy farmers in the UK, this PhD hopes to contribute towards a more informed and sustainable industry for all supply chain members.

The research questions that emerged from this literature review are:

1. How are sustainable narratives conceptualised from a multi-stakeholder perspective in the UK dairy supply chain?

2. How is sustainability performance evaluated from a multi-stakeholder perspective in UK dairy supply chains?

3. How does power held by different stakeholders influence sustainable narratives created within the UK dairy supply chain?

Summary of key points

- o Sustainable development is a broad, ambiguous concept, for which many definitions and classifications exists, both in academic and grey literature.
- o The triple bottom line concept is used in supply chain management to encourage consideration of economic, social and environmental sustainability.
- o Different narratives of sustainability can exist, linked with stakeholder power.
- o In a similar fashion to sustainable development, sustainable supply chain management is complex to define. Equally, it is an important matter for organisations to consider, who are held to account by stakeholders
- o There are benefits to adopting sustainable supply chain management practices, where the relationship between stakeholders can affect development and adherence.
- o Agri-food supply chains can face unique sustainable challenges, where multiple stakeholders can influence practice and policy.
- o The UK dairy industry provides a unique context to explore conceptualisation of sustainability, where different stakeholders face a multitude of sustainable challenges.
- o The wielding of power can have both positive and negative effects on supply chain activities, depending on the stakeholder perspective.

3

Power in agri-food sustainable supply chains

3.1 Introduction

In **Chapter 2**, the concept of power is suggested as an important consideration when understanding sustainability in the dairy supply chain. However, no previous research collates and contrasts existing knowledge of power in sustainable food supply chains. In order to comprehensively capture the current research landscape of how power is explored in relation to sustainability in an agri-food supply chain context, this chapter takes the form a systematic review. The motivation of this review is to collate current knowledge, which in turn will explicitly highlight research gaps that further strengthen research design choices, as is summarised in **Table 3.4**. The objectives of this review to achieve this aim are:

- Identify key trends in the literature, drawing from bibliometric information

- Consider how power and sustainability are conceptualised by researchers

- Analyse how power is wielded by actors regarding sustainable supply chain practices

The following methodology section outlines the steps that were taken in finding and analysing the literature for this review. Then, a section will be given on the key bibliometric trends found in the selected articles, after which the findings relating to power and sustainability will be considered. A section will be dedicated to exploring the future of research in this topic by identifying gaps in the literature, followed by some concluding remarks.

3.2 Systematic review methodology

This systematic review into literature was designed following a framework that has previously been successfully employed in the operations management and supply chain field (Maestrini *et* al, 2017; Spina *et al*, 2013), comprising of four ordered steps: source identification, source selection, source evaluation and data analysis. **Figure 3.1** provides important details on how the steps were operationalised. This systematic review was not only undertaken to gain a comprehensive understanding of the research landscape, but also to critically evaluate current knowledge, and identify potential streams of future research. It is the employment of this critical perspective through the researcher's interpretation that aligns with the interpretivist philosophical foundations of this PhD, discussed further in **Section 5.3**.

3.2.1   Source Identification

The documents under consideration in this review cover both journal articles and reviews published in peer-reviewed academic journals. To increase the rigorousness of the review (Mokhtar *et al*, 2019; Shashi *et al*, 2018), two databases were utilised
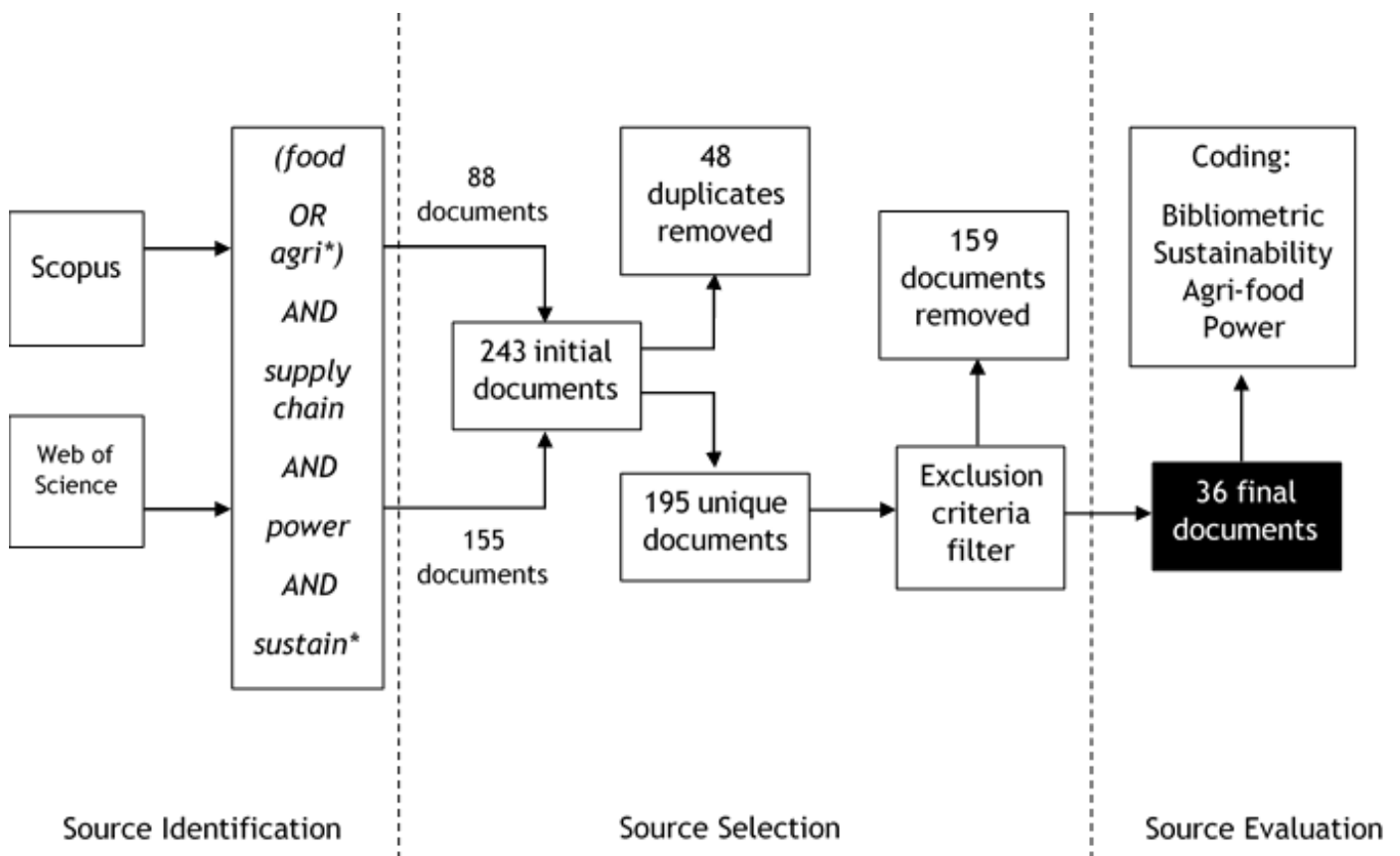
Figure 3.1: Flowchart showing an overview of the systematic literature review

in this search: Scopus and Web of Science. These databases were used to conduct the search due to the large number of document entries (Santagata *et al*, 2021) and their previous effective use in systematic reviews in supply chain literature (Mokhtar *et al*, 2019). The key words entered into both of these databases were:

(food OR agri*) AND supply chain AND power AND (sustain*)

The inclusion of both food and agri as keywords was to ensure all papers relating to agri-food supply chains were captured, even if they only referred exclusively to either *food* or *agricultural* supply chains. The inclusion of *agro* in the key words added no relevant results, so is not included in the final search string. The asterisk was employed in the keywords to broaden the search and ensure all derivatives of certain words were captured, such as sustaining, sustainable, sustainability for sustain*. Only papers in the English language were considered and, to ensure only relevant materials were returned, documents were filtered according to their topic, namely business, social sciences, decision sciences, arts and humanities, and economics. Considering the rigour of this search, keywords and filters were discussed and selected by both members of the research team. The search took place in January 2021, with 88 and 155 results initially returned by Scopus and Web of Science respectively. As this literature review aims to provide an overview of all existing relevant research, no date restrictions were specified when searching.

3.2.2 Source Selection

Of the initial 243 database results, 48 duplicate documents were removed from the search, leaving 195 documents as potential sources. From this sample, selection criteria were applied to the title and abstract of each document, ensuring only relevant sources remain. The scope of this review is to consider how sustainable supply chain management practices are influenced by power in agri-food supply chains. As such, when deciding which papers to include, it is important to define the concepts under investigation for the sake of rigour and clarity. **Table 3.1** illustrates the concept definitions assumed in this systematic review.

Based on the scope of this review, the definitions given for key concepts and an assessment of the documents, exclusion criteria formed for the following reasons:

- Power was explored in relation to sustainable supply chain management issues, but not based in an agri-food context (e.g., Meqdadi *et al*, 2017).

- Power was explored in an agri-food context, but not in relation to sustainable supply chain management issues (e.g., Chicksand, 2015). For the purposes of this study, at least one of economic, environmental or social sustainability was expected to be given explicit attention in the article.

- The incorrect form of power is explored in relation to sustainability in agri-food supply chains, such as *power generated from renewable energy* (Ludin *et al*, 2014) and biomass (Ko *et al*, 2018).

- Sustainable supply chain management issues were explored in an agri-food context, but not with a focus on power (e.g., Gokarn & Kuthambalayan, 2017). Rather than just considering the benefits of stakeholder involvement (Hsu *et al*, 2019; Roy *et al*, 2018), this review expects explicit attention given to control and enforcement between parties.

- Alternative food networks, where natural produce is locally distributed through a non-conventional network structure, were not considered synonymous with agri-food sustainable supply chain management; whilst such networks may exhibit sustainable traits (Forssell & Lankoski, 2015), this was not assumed.

Table 3.1: Definitions of Sustainable Supply Chain Management and Power

Concept	Definition	Sources
Sustainable supply chain management	*""The management of material, information and capital flows as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development, i.e., economic, environmental and social, into account which are derived from customer and stakeholder requirements."*	Seuring & Müller (2008)
Power	*"One party's ability to enforce its will on another party"*	Reimann & Ketchen (2017) Emerson (1962)

Once the exclusion criteria had been applied, 36 documents remained for evaluation and analysis. Over 75% of these have been published in the last 5 years, since 2016, illustrating the emerging contemporary nature of the subject. The first article identified was published by Smit *et al* (2008), who posited that targeting powerful stakeholders was key in converting the Dutch potato supply chain towards a more sustainable method of production.

3.2.3 Source Evaluation

As Maestrini *et al* (2017) instruct, this third stage of the systematic review involves the classification of the remaining papers, with the aim of preparing them for the data analysis phase. The initial search provided key bibliometric data for each document, including the date published and the associated academic journal. Extra detail added in at this stage included methodology, analysis and theoretical lens employed, if any.

To assess the type of sustainability primarily discussed in each document, a triple bottom line classification system was established, based on Elkington's (1997) categorisations of economic, environmental and social sustainability. To establish the different contexts explored in the area of food and agriculture, the specific industry drawn on in the document was also noted. When considering how power is conceptualised and analysed in each source, the structure used is based on the research agenda proposed by Reimann & Ketchen (2017). This means asking the following questions: what type of power is discussed, who is affected by such power, where, why and when is the power wielded, and how is the power applied in relation to sustainability? This final question explicitly makes reference to the influence of power of sustainable practices, linking back to the initial scope of this review. **Table 3.2** shows the list of codes used when evaluating the documents, organised in relation to the scope of this review. To strengthen coding reliability, two researchers separately evaluated the sources using the given codes. If there was any disagreement relating to the labelling of a specific code or paper, a discussion would take place between the researchers until a joint agreement was reached.

Table 3.2: List of Codes used in Source Evaluation

Topic	Associated codes
Bibliometric data	Date of Publication, Academic Journal, Methodology, Theoretical Lens
Sustainability	Economic, Environmental, Social
Agri-food context	Specific Industry
Power	What power; Who wielded; Where used; Why used; When used; How used

3.2.4 Data Analysis

Data analysis initially involved calculating bibliometric data, relying on quantitative analyses. As such, Microsoft Excel was used to perform these calculations, and generating any subsequent graphs. When recording the information collected in the source evaluation stages, columns were created in the spreadsheet to organise and store the data. Descriptive findings and themes that emerged from this analysis can be found in the next two sections respectively.

3.**3 Bibliometric Data and Summary Statistics**

3.3.1 Time Series

The number of papers published relating to power and sustainability in an agri-food supply chain context per year are shown in **Figure 3.2**. 2008 was when the first article was published, authored by Smit *et al* (2008). Then, besides a paper by Leat *et al* in 2011b, there is an absence of relevant publications until 2013, after which the general annual trend shows an increase in publications to the present day. Indeed, given the contemporary significance of sustainability (Rajeev *et al*, 2017; Seuring & Müller, 2008) and power (Reimann & Ketchen, 2017) in supply chain management, as well as the small amount of existing research that considers an agri-food context, it is expected that the general trend will continue to increase in the future.
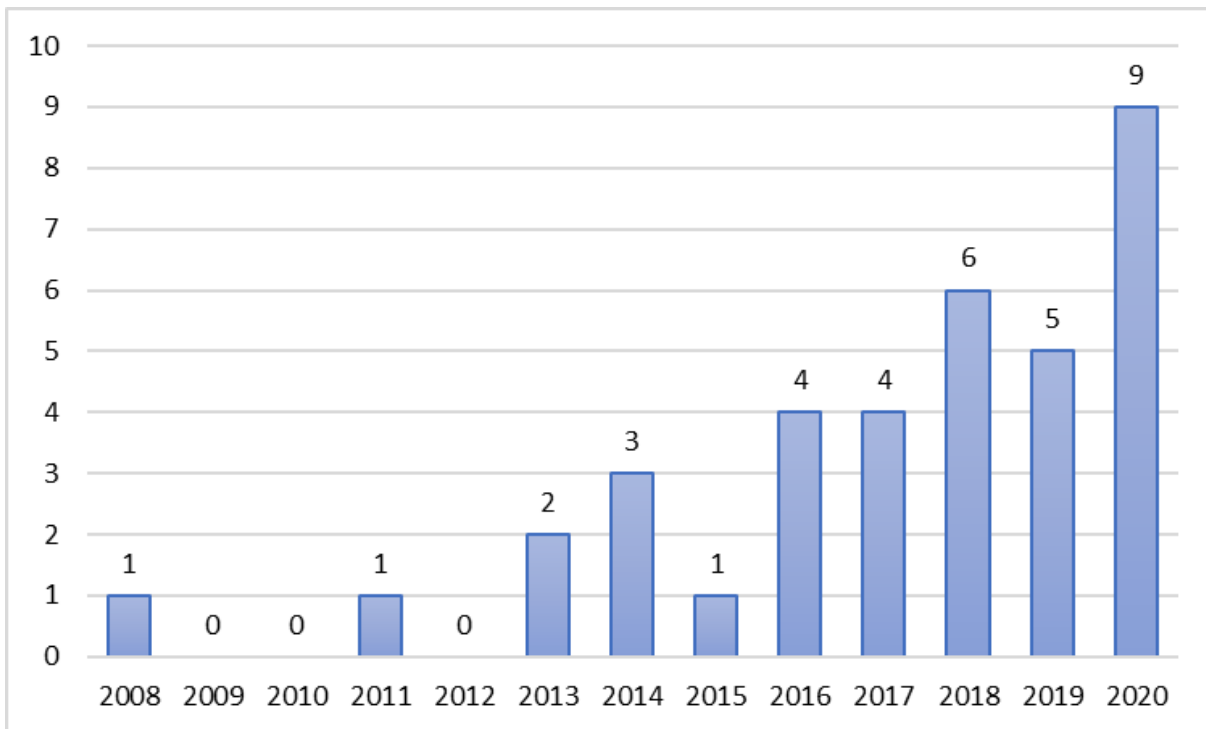
Figure 3.2: Frequency of relevant publications per year

3.3.2 Academic Journal

A wide and disparate range of academic journals have published relevant publications, with 22 sources originating from an academic journal that only appears once in list of publications selected for review, equating to 61%. The remaining 39% come from three journals, with Sustainability being the most frequently featured journal, publishing 8 papers. The remaining 6 are split equally from both the Journal of Cleaner Production and Business Strategy and the Environment, which published 3 relevant papers each. This distribution is captured in **Figure 3.3**. Sustainability is a broad journal in its scope, publishing from a range of different disciplines on topics related to economic, social and environmental sustainability. The Journal of Cleaner Production has a greater focus on environmental issues, but remains broad in the disciplines it attracts. Business Strategy and the Environment again places emphasis on environmental issues, but is specifically interested in a business context. Notably absent from this list of multiple publication journals are those particularly concerned in supply chain management, where expert knowledge in the field could be more readily applied to issues around power and sustainability.
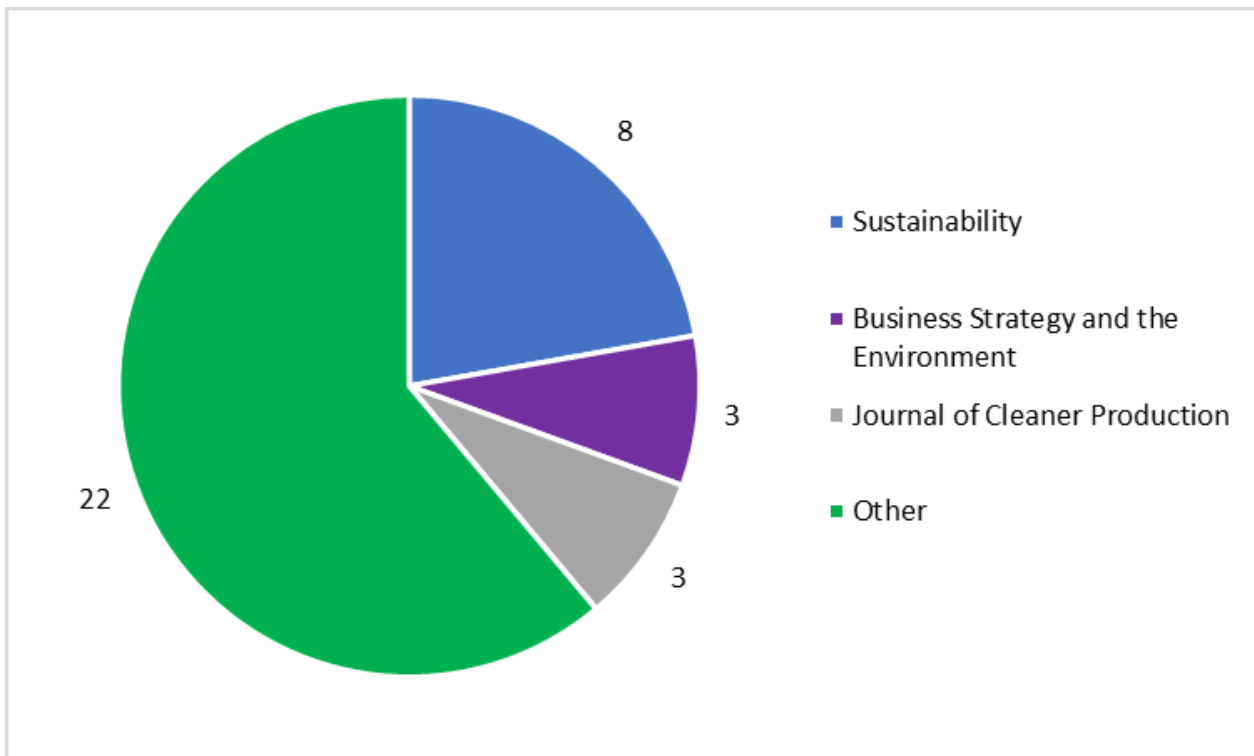
Figure 3.3: Number of Publications per academic journal

3.3.3 Food Industry Context

Out of the 36 papers under consideration, 12 papers did not focus on a specific food industry. The industry contexts of the remaining 24 papers are illustrated in **Figure 3.4**. Some papers focused on multiple industries (Grabs & Carodenuto, 2021; Wilhelm *et al*, 2016); where this is the case, the industries have been split and counted separately for the purposes of this analysis. The fruit and vegetable industry features in 7 papers, and is consequently the most researched agri-food sector, covering foods such as berries (Segovia-Villarrea *et al*, 2019; Grivins *et al*, 2016) and potatoes (Smit *et al*, 2008). Then, 4 publications focus each on palm oil, meat and dairy; a range of items, such as sheep cheese (Filipović, 2019), and livestock, such as pigs (Bowman *et al*, 2013) and cattle (Hooks *et al*, 2017), feature in these papers. Both soy (Guerrero *et al*, 2021; Jacobi & Llanque, 2018) and spice are the focus of 2 papers each, with vanilla (Neimark *et al*, 2019) and paprika (Repar *et al*, 2017) being the specific spices under consideration. The 'Other' category features 6 sectors that all appear once: eggs (Phillipov & Gale, 2020), seafood (Packer *et al*, 2019), tea (Wilhelm *et al*, 2016), grain (Quiédeville et al, 2018), coffee and cocoa (Grabs & Carodenuto, 2021).

When considering why certain sectors have been afforded attention in previous research, it is important to recognise the unique issues relating to sustainability in each sector. Fruit and vegetable industries deal with perishable produce being shipped globally (Gardas *et al*, 2018), whereas the meat industry has animal welfare considerations (Leat and Revoredo-Giha. 2013). The dairy industry has power asymmetries that has damaging economic consequences on weaker actors (Glover, 2020) and the palm oil industry has been condemned on actions relating to deforestation, emissions and human rights abuses (Dauvergne, 2018). Given the extra pressures felt by some these industries, which could lead to actors needing to influence others to meet sustainability targets, as well as previously recorded abuses of power, it seems logical that they have been chosen for contexts in which to study power relations.
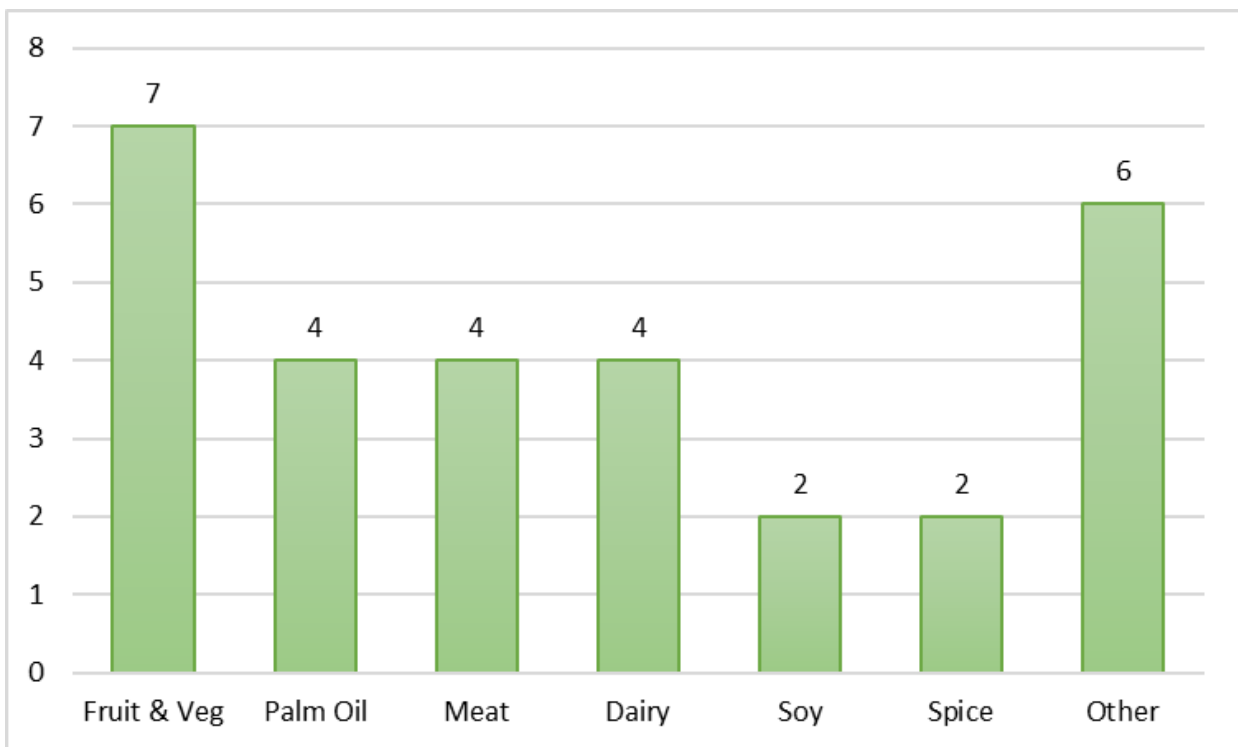
Figure 3.4: Food Industry Contexts explored in the publications

3.3.4 Sustainability Framing

Figure 3.5 shows the different ways sustainability is framed across the papers following the triple bottom line of economic, social and environmental factors. The data have been presented in a Venn diagram in order to illustrate the different combinations of triple bottom line factors found across the papers. The most frequent

framing of sustainability covers all 3 aspects of the triple bottom line, which features in 42% of papers, followed by consideration of economic sustainability only in 22% of papers. When considering the frequency of each pillar in the literature, the split is fairly equal, with the economic and social pillars appearing in 24 papers, and the environmental pillar featuring in 22 papers.

For illustration, Neimark *et al* (2019), in their investigation contextualised in the vanilla industry, offer a detailed consideration of changes in smallerholder power across economic, social and environmental dimensions. Contrast this with Bowman *et al* (2013), who consider challenging the market norms when it comes to trading in the UK pig meat industry, or Grivins *et al* (2016) comparing attributes and indicators relating to the social dimension of global versus local berry supply chains; all studies are addressing pertinent and substantial research problems, they just vary in their scope regarding sustainability. Indeed, social sustainability is historically the lesser explored dimension in sustainable supply chain management studies (Morias & Silvestre, 2018). However, given that power relations are inherently a social construct and are of specific interest in this review, the prevalence of the social dimension in sustainability framings is understandable.
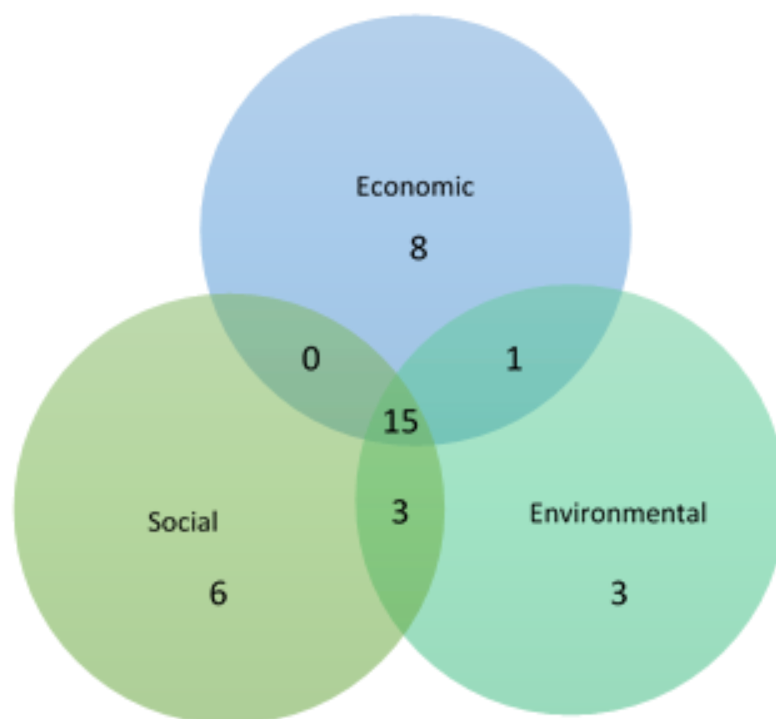
Figure 3.5: The framing of sustainability when considering power in the agri-food supply chain

3.3.5 Theoretical Lens

The theoretical lens used by a paper was counted if it was drawn on and utilised in the research design or analysis phases. As such, passing references to the existence of certain theories were not included in this analysis. **Figure 3.6** is a tree-map illustrating the frequency of theoretical lenses used in the literature. Two-thirds of the papers in this review do not use any theoretical lens when making sense of their findings, highlighting a research gap and the future need for papers with theoretical applications in this field. Indeed, this has provided the motivation for ensuring this project has strong theoretical foundations, which are covered in greater detail in **Chapter 4**.

When considering the remaining third, the most frequently utilised theory was resource dependence theory (RDT), featuring in 4 papers. RDT was applied in relation to bargaining between supply chain members (Filipović, 2019), compliance (Grimm *et al*, 2016), unequal distribution of costs and rewards (Touboulic *et al*, 2014), collaborative practices and alliances (Dania *et a*l, 2018). Critical theory, institutional theory and power dependency theory were all drawn on twice in the literature. Critical theory is drawn on to critique the use of power in the supply chain (Glover, 2020), as well as highlighting hypocritical practices by powerful actors (Glover & Touboulic, 2020). Institutional Theory is utilised to view how external pressures can influence the sustainable practices of those beyond immediate suppliers in the supply chain (Grimm *et a*l, 2016; Wilhelm *et a*l, 2016). Exploiting others though power relations (Madichie & Yamoah, 2017) and the choosing of a sustainable purchasing relationship (Chkanikova, 2016) were both explored in
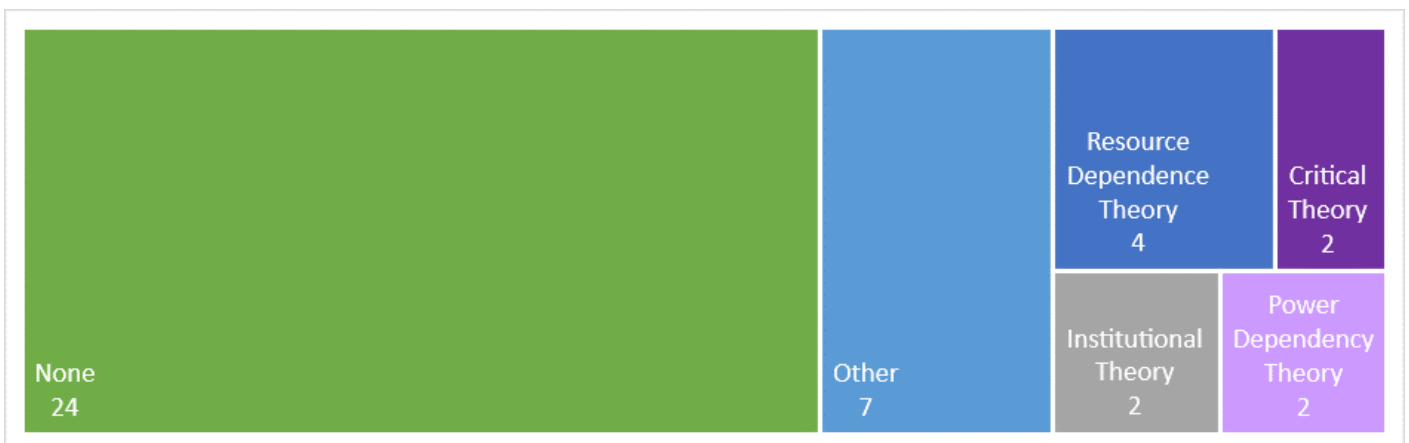
Figure 3.6: Theoretical lenses employed in the publications

relation to power dependency theory. 7 other theoretical lenses employed are stakeholder theory (Packer *et a*l, 2019), social exchange theory (Madichie & Yamoah, 2017), agency theory (Wilhelm *et al*, 2016), transaction cost theory (Chkanikova, 2016), business network approach (Bayne *et al*, 2019) and signalling theory (Filipović, 2019). When papers drew on more than one theoretical lens, these were both counted separately.

The level of interaction with the theory also varies between the papers. Based on the classifications suggested by Zorzini *et al* (2015), 70% of the papers displayed a 'theory matching' approach, where an existing theory is aligned with results for validation. An example can be found in Dania *et a*l (2018), who use resource dependence theory to frame the identified collaboration factors. The remaining 30% of papers assumed a 'theory suggesting and explanation' structure, where the theory is embedded from the beginning of the research and informs the development of the paper (Zorzini *et al*, 2015). Wilhelm *et al* (2016) exemplify this by having agency theory guide their research design and subsequent conceptual framework development. Following Zorzini *et al'*s (2015) categorisations, no papers were identified as 'theory expansion' studies.

3.3.6 Methodology

As **Figure 3.7** shows, qualitative approaches to research are taken by the majority of studies in this review, with only 9% of papers drawing on quantitative techniques. Interviewing is the most commonly employed method in the literature, featuring in 56% of the 36 papers. Then, 28% of studies used documents as secondary data in their analysis, such as corporate literature (Bayne *et al*, 2019; Packer *et al*, 2019; Grimm *et a*l, 2016) and contacts between stakeholders (Repar *et al*, 2017). 8 papers were identified as reviews on issues relating to the sustainability of the agri-food sector, such as collaboration (Dania *et al*, 2018), data collection for sustainable metrics (Freidberg, 2017) and the use of private standards (Rossignoli & Moruzzo, 2014). Observations were mentioned in 6 studies, and videos were used in a single study, the latter of which being analysed using discourse analysis (McCarthy *et al*, 2018). Out of the 4 quantitative occurrences, 3 papers used surveys as a method of data collection (Fu *et al*, 20020; Testa *et al*, 2014; Leat *et a*l, 2011b) and 1 drew on economic data from secondary sources (Grivins *et al*, 2016). Note that in cases
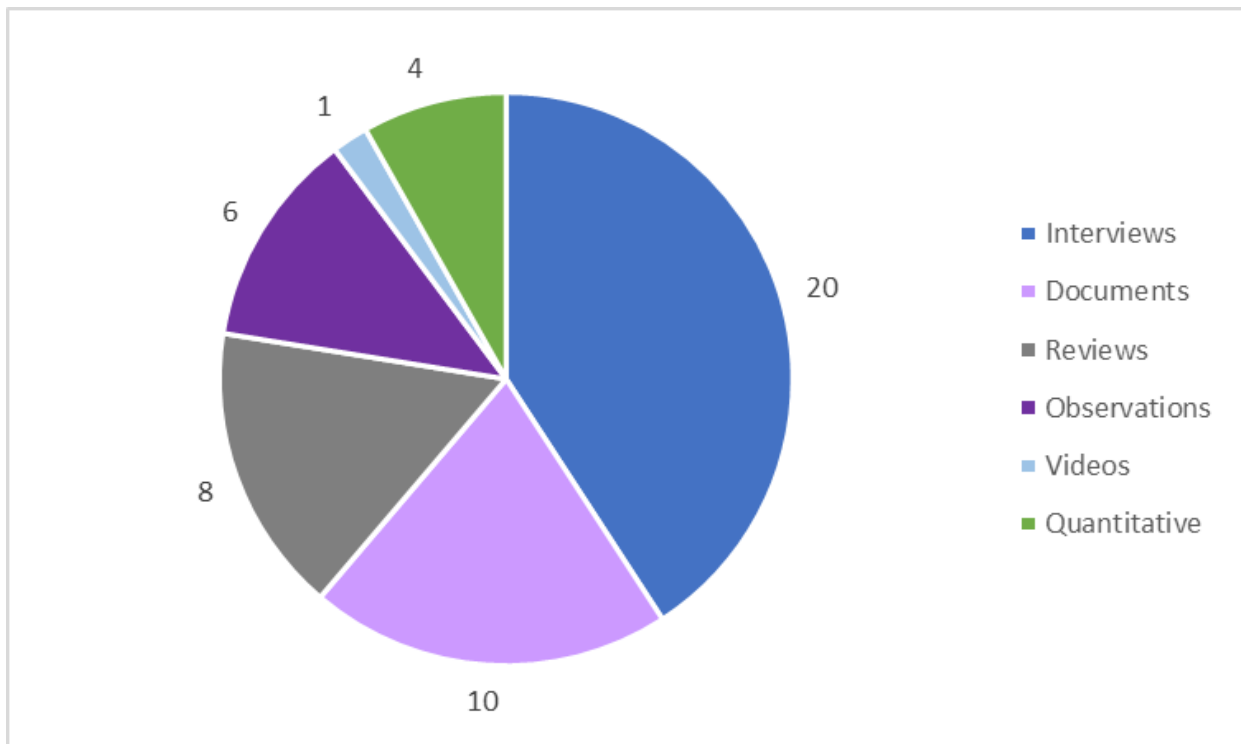
Figure 3.7: Methodologies used in the publications

where more than one method was employed in a paper, they have been counted separately to accurately capture the frequency of use.

3.3.7 Scope of power transmission

When considering how power is transmitted between actors within a supply chain, different levels of focus and scope were given in different papers. For the sake of this analysis, 4 levels of scope are considered, from narrow to broad:

1. Dyadic level: when research is primarily concerned with the specific relationship between two actors, such as issues around contract design (Fu et al, 2020; Repar *et a*l, 2017)
2. Supply chain level: power transmission from an actor to several other actors in the supply chain, considering issues such as compliance through suppliers to sub-suppliers (Grimm *et al*, 2016), and apportionment of risks along a supply chain (Glover & Touboulic, 2020)
3. Network level: consideration of stakeholders that are not directly involved in the supply chain, but have the ability to influence its practices, such as NGO standards (Nesadurai, 2018) and government interventions (Bayne *et a*l, 2019)

4. Societal level: the broadest scope ranking, where national and international issues are considered in relation to a supply chain context, such as natural resources and existing knowledge (Jacobi & Llanque, 2018), as well as media exposure (Phillipov & Gail, 2020).

As **Figure 3.8** shows, 47% of studies consider power between actors in an agri-food supply chain context, representing the most common scope explored in existing research. Dyadic level relationships were the focus of 22% of studies, considering both supplier-buyer (Chkanikova. 2016) and supplier-supplier (Hooks *et al*, 2017) formations. A minority of studies considered relationships and factors beyond the immediate supply chain, with 7 papers taking a network level approach, and only 4 studies considering social issues.
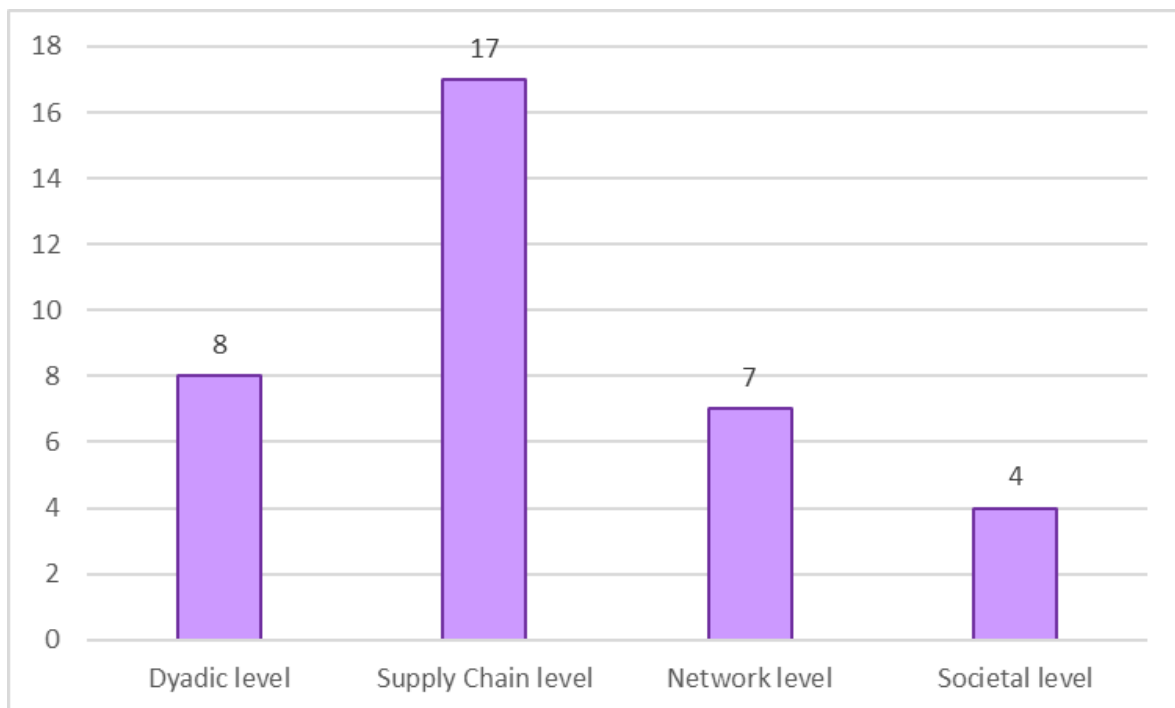
Figure 3.8: Scope of power transmission between actors

3.3.8 Primary stakeholder perspective of study

Out of the 36 papers utilised in this review, 7 articles did not feature empirical data collection, and instead offered either a literature review (Dania *et al*, 2018) or overviews of particular sustainable issues (Dauvergne, 2018, Nesadurai, 2018, Oosterveer, 2015). From the remaining 29 empirical studies, 5 different categories of stakeholder perspective were coded: farmers, processors, retailers, multiple stakeholders and others. The phrase *primary stakeholder perspective* is used to refer to the stakeholder from which either the data was mostly collected from, such as all participants being farmers (Glover, 2020), or relationships between a particular actor and others being of specific interest, such as trader intermediaries with other actors (Grabs *et al*, 2021). **Figure 3.9** shows that only 31% of studies specifically consider the perspectives of multiple stakeholders, highlighting the specific unidimensional focus afforded by the majority of research. Note that the *other* category comprises of the media (Phillipov & Gale, 2020) and third sector organisations (Thapa Karki *et al*, 2020). The favouring of a single stakeholder focus in a research project might well bring depth to analysis, but at the expense of criticality. Considering the perceptions of multiple stakeholders may afford opportunity to contrast viewpoints against one another, leading to a fuller
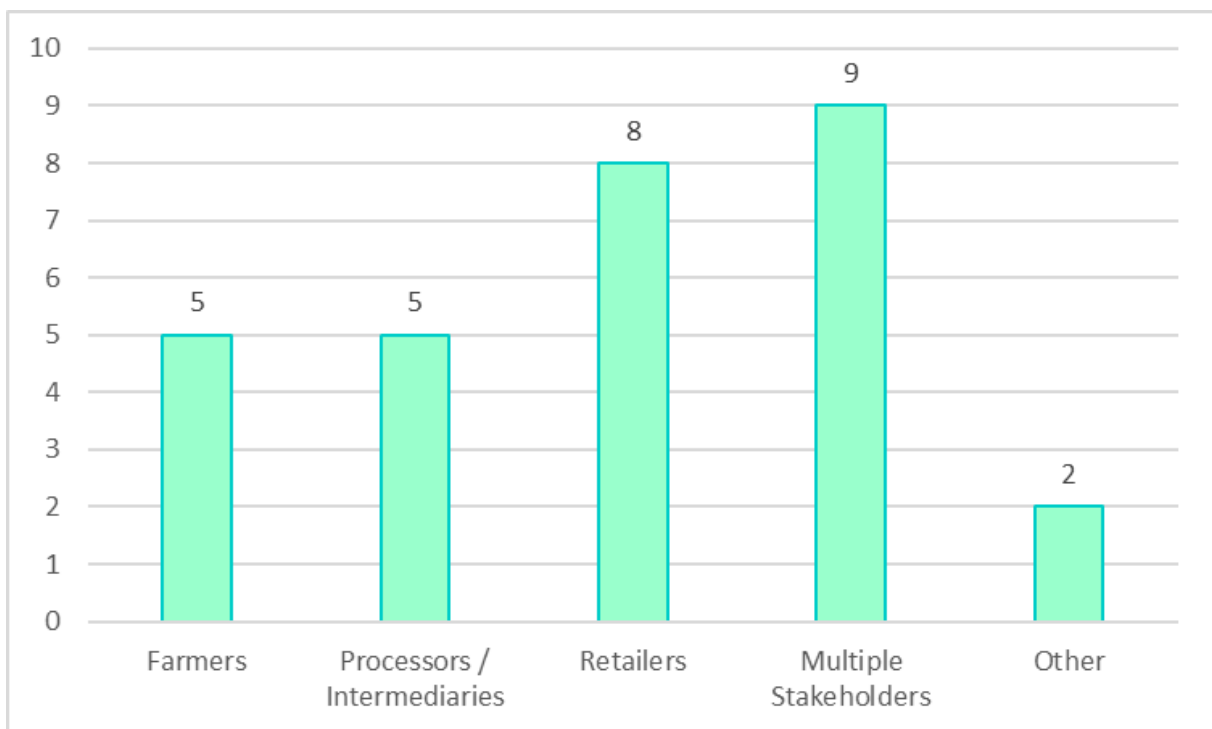
Figure 3.9: Primary stakeholder perspective assumed

understanding of why certain power-related behaviours and sustainable practices exist. Once such a holistic overview is gained, it can provide a foundation for addressing any unfairness or inequality, fostering positive change.

3.4 The interaction between power and sustainable supply chain management

The unifying factor for all the papers in this review is that they highlight the importance of power in relation to sustainability in an agri-food supply chain context. The power asymmetry that can exist in such agri-food systems has been already highlighted (Madichie & Yamoah, 2017; Touboulic *et al*, 2014), and so too has the importance of ensuring sustainable supply chains for the future (United Nations, 2020). To capture an overview of current literature on this topic, key points from each paper were compared against each other, to both make sense of aspects that are explored, and highlight issues that have not been explored. When contrasting the output of these papers, specific attention was given to where, why, when and how power was wielded in a sustainable supply chain context, as per the research agenda proposed by Reimann and Ketchen (2017).

Through synthesising the papers, two contrasting aspects emerged: the relative power held by the focal actor or group of actors in a study, and the perception of fairness and equity in relation to associated sustainable supply chain practices. This led to 4 differing perspectives on power and sustainability: those who *influence* and *impose* sustainable practices hold significant power, and those who *accept* or attempt to *resist* are the weaker actors in the supply chain. Such categorisations should not be taken as resolute for specific actors, but can change depending on the circumstances and nature of power in a relationship. For instance, if a group of weaker actors were to join together as a collective and resist through the imposition of sustainable practices, they would then be considered as the more powerful entity in a relationship. This synthesis is summarised in **Table 3.3**, where a summary of each perspective is given.

To illustrate the differences between the proposed differing perspective classifications, a sample case from each category will be compared against the

counterpart perspective. An example of a paper where powerful actors appear to *impose* unfair sustainable practices on others is Glover (2020), who highlights how farmers are compelled into economically unsustainable positions by large retailers. In contrast to this is a power actor's ability to *influence* fair sustainable practices, such as creation of greater efficiencies within the entire supply chain through coordinating processes between actors (Fu *et al*, 2020). When research considers what encourages weaker actors in a supply chain to *accept* fair sustainable practices, a flexible and adaptive approach to sustainability is suggested, responding to market uncertainties (Neimark *et al*, 2019). If the sustainable practices appear unfair, weaker actors may attempt to *resist* the need to adopt such activities. For instance, farmers can assemble together and pool their collective power into the formation of a co-operative, where it is important to engage with and balance the situation of all member farmers (Hooks *et al*, 2017). This section will now consider each of these perspectives in greater detail, giving an insight into how power is wielded in the supply chain.

Table 3.3: The relationship between relative power of an actor/group of actors, and the perception of sustainable supply chain management practices

		Relative Power of Actor / Group of Actors	
		Powerful	Weaker
Perception of Sustainable Supply Chain Management Practices	Fair	**INFLUENCE** • Power can be used to encourage sustainable behaviour • Collaborate and integrate to improve supply chain sustainability • Maintaining a good relationship is important to influence in supply chains.	**ACCEPT** • Dependence on other actors • Perception of sustainability influenced by others • Effective sustainable practices consider differences in individuals
	Unfair	**IMPOSE** • Passing of risks • Manipulation of contracts and standards • Lack of transparency over practices. • Typically, large retailers, such as supermarkets	**RESIST** • Formation of cooperatives and horizontal interaction between suppliers • Brand differentiation and limiting supply chain visibility are strategies to resist power • Existing research primarily concerned with economic factors

3.4.1 Fair perception of powerful actors

The first interaction to be explored is when powerful members of an agri-food supply chain appear to wield their power fairly, resulting in a positive outcome for supply chain members. The level of power held by an actor can vary based on dependence of others, which can in turn effect the sustainability practices followed in a supply chain (Chkanikova, 2016). The influence held by powerful actors can be wielded in different ways, spanning from the presence of formal unilateral mechanisms, such as issuing codes of conduct and auditing practices (Packer *et al*, 2019) to more collective approaches (Dania *et al*, 2018). Collaboration between actors in the supply chain can facilitate exchange of both data and knowledge (Freidberg, 2020), and supply chain integration can improve efficiency through alignment of processes (Fu *et al*, 2020).

Powerful actors can also influence the sustainable practices of their supplier's suppliers. However, to facilitate such a reach, the powerful actor needs to actively work with second-tier suppliers, such as providing information transparency (Wilhelm *et al*, 2016), as well as assessment and collaboration activities (Grimm *et al*, 2016). When it comes to fair sustainable practices, power is multifaceted and does not always belong to a single actor in the immediate supply chain. Bayne *et al* (2019) discuss the key role that government can play in environmental reporting practices, whereas Nesadurai (2018) highlights the power non-government organisations (NGOs) can wield over sustainability standards in the absence of government power. Furthermore, when tackling sustainable issues in the agri-food industry, multiple stakeholders can form overarching steering networks, which can face horizontal battles of power between actors, as well as within the immediate supply chain (Oosterveer, 2015). Ultimately, regardless of who is the most powerful actor, it is clear that sustainable practices can be beneficially influenced in a supply chain.

3.4.2 Unfair perception of powerful actors

Whilst it appears that sustainable practices can be enhanced by the actions of powerful actors in an agri-food supply chain, another section of research exposes the more problematic side of wielding power. The motivation to wielding power with negative outcomes is ambiguous, with some highlighting well-intentioned initial actions, and others suggesting more unethical behaviour. An example of the former

is given by Rossignoli & Moruzzo (2014) when they are analysing private retail standards; although there are positives for such an action, some can find themselves in an unsustainable situation, facing the rising costs of standard compliance. Unethical behaviour manifests itself when the weaker actors lose control and are placed under pressure by powerful actors (Glover, 2020), potentially resulting in the imposition of unfair contracts (Repar *et al*, 2017; Grivins *et al*, 2016) and unequal distribution of environmental and social risks along the supply chain (Glover & Touboulic, 2020).

Supermarkets appear to be identified in the literature as perpetrators of unfair practices, who can manipulate markets and industries to their economic advantage (Bowman *et al*, 2013; Burch *et al*, 2013). However, supermarkets do have the power to bring about positive changes to sustainable practices (Leat *et al*, 2011b). Furthermore, government could intervene by imposing statutory regulation on supermarkets, instead of voluntary codes of behaviour (Bowman *et al*, 2013). Moreover, it is not always retailers that use their power in an unfair fashion. The horsemeat scandal in 2013 demonstrated that through a combination of dependence and lack of transparency, retailers were reliant on the unethical practices of powerful suppliers (Madichie & Yamoah, 2017). It has therefore been shown that power can be used as a force for bad when considering sustainability in agri-food supply chains, whether purposefully or inadvertently.

3.4.3 Fair perception of weaker actors

When considering the fair perception of weaker actors, it is the acceptance of sustainable supply chain management practices that others have control over. Indeed, the powerful actors not only shape and perpetuate the industry narrative of sustainability (Dauvergne, 2018; Jacobi & Llanque, 2018), but they can also manipulate how those outside the supply chain can perceive the sustainability of weaker actors (McCarthy *et al*, 2018). Neimark *et al* (2019) advise that for sustainable practices to be accepted by all actors, a nuanced and adaptive approach should be taken, emphasising the idiosyncrasies of differing network relationships. There is a notable scarcity of research on how weaker actors conceptualise sustainability beyond economic considerations in an agri-food setting, as well as an analysis on how those in power are able to perpetuate a sustainable narrative over

others. However, a great equalizer when it comes to power in agri-food business does exist: all actors ultimately answer to the wider market (Smit *et al*, 2008).

3.4.4 Unfair perception of weaker actors

As Foucault (1978, p.95) said, "*Where there is power, there is resistance*", and the agri-food supply chain is no exception to this. When faced with dominance of a buyer, suppliers can interact and collaborate with each other to enhance their collective resistance (Touboulic *et al*, 2014), such as through farmer associations (Testa *et al*, 2014) and cooperatives (Hooks *et al*, 2017). In some countries, there may be distrust in entering collective structures; education of farmers would therefore be key in assuaging such fears (Filipović, 2019). Branding and differentiation can also be implemented to increase the power of weaker players (Segovia-Villarreal *et al*, 2019; Hooks *et al*, 2017), as well as limiting the visibility within the supply chain for powerful actors (Freidburg, 2017). As with **Section 3.4.3**, research into resistance to power within an agri-food supply chain appears to be limited in its scope, with a predominant focus on improving the economic sustainability.

3.5 A research agenda

The importance of the agri-food supply chain in sustainably feeding a growing global population has been emphasised throughout this review. Therefore, it seems surprising that only 36 papers consider this context in relation to the concept of power, particularly when the impact that a power imbalance between stakeholders can have on influencing sustainable supply chain management practices is known (Touboulic *et al*, 2014). The growing trend of new articles being published on the subject may indicate that the academic community are responding to this scarcity, as shown in **Figure 3.2**. Given the United Nations (2020) setting of sustainable development goals, as well as their calls for strengthening food supply chains, it is expected that the influence power can have over sustainability in an agri-food supply chain context will remain a pertinent area of research interest, and the number of relevant papers published will continue to rise.

Figure 3.4 shows that a variety of different contexts within the agri-food sector are drawn on in existing research. Given that different industries may face their own unique challenges, and that acceptance of sustainable practices by suppliers can be increased based on acknowledgement of such idiosyncrasies (Neimark *et al*, 2019), such variety in specific research context is welcomed, ensuring as many different permutations are considered. Variety also exists in the framing of sustainability, as **Figure 3.5** shows. Whilst a significant proportion of papers consider sustainability from a triple bottom line perspective, the majority do not consider all three pillars in their research. To facilitate consideration of a wider range of sustainability issues faced by agri-food industries, future researchers would be encouraged to continue considering a broader conceptualisation of sustainability in their work. As such, in this research project, sustainability will be modelled and considered from all three pillars in the triple bottom line.

As **Section 3.4.3** and **3.4.4** state, sustainability from the perspective of the weakest actors is primarily framed through an economic lens, with a broader approach to sustainability taken when considering the stronger actors' viewpoint. As such, the conceptualisations of sustainable narratives of weaker actors are overlooked; indeed, powerful organisations have been shown to manipulate both the industry narrative of sustainability (Dauvergne, 2018; Jacobi & Llanque, 2018) and the perception of weaker actor sustainability held by wider society (McCarthy *et al*, 2018). Social and environmental sustainability from the perspective of weaker actors is a research gap that has been highlighted in this review, and it is recommended that future studies could consider these aspects when considering stakeholder acceptance and resistance to sustainable supply chain management practices. The lack of perspective from the weaker actors encouraged use of cultural hegemony in this project, which is discussed further in **Section 4.4**.

Analysis in **Section 3.3.7** showed that the majority of research only considers stakeholders within the supply chain, with only 13 studies considering the role that government, NGOs and wider societal factors can have on power in sustainable agri-food supply chains. Considering a broad scope of how power is transmitted and any associated effects helps facilitate a fuller understanding of a potentially complex web of power relations. This provides a further rationale for the use of cultural hegemony, which is shown in **Section 4.4** to facilitate a broad overview. A similar point on broad

scope can be made relating to **Section 3.3.8**, with only a quarter of existing studies considering multiple stakeholder perspectives on issues. To encourage critical analysis on any unidimensional perspective, comparison with the perspectives of others will also foster a more comprehensive overview of power relations and their consequences to sustainable supply chain practices.

Perhaps the most startling outcome from this study is the lack of theory that is applied to research looking at power and sustainability in the agri-food context. As **Figure 3.6** illustrates, two thirds of all research considered had no meaningful interaction with existing management theories within the supply chain, whose use could provide novel framing and additional insights and explanations into established issues and relationships. In past research, theory has been successfully used in relation to both power (Reimann & Ketchen, 2017) and sustainability (Touboulic & Walker, 2015). Resource dependence theory (RDT) is the most frequently drawn on lens in this study, but its application remains in its infancy, featuring in only 4 separate articles. The application of RDT appears to have provided effective corroboration with empirical findings, as well as deepening a fundamental understanding of power relations in a sustainable agri-food context. Use of theory was also shown to vary in meaningfulness, with the majority of papers showing alignment with existing theory, and the minority using theory to suggest new ideas or explain findings (Zorzini *et al*, 2015). As such, future papers would be encouraged to embrace and embed theory in their design and results, rather than offer a restrained interaction.

As shown in **Section 3.3.5**, theory has only been applied to certain aspects of power-related topics, and given the wide range of issues facing agri-food supply chains, this leaves scope for further integration of previously utilised theoretical arguments in future research projects, such as institutional theory and power dependency theory. As theory has been only seldom employed when exploring power in an agri-food sustainable supply chain context, there also remains a range of relevant theories that can be drawn on by researchers. Examples could include dynamic capability and relational theory, both previously in sustainable supply chain management literature (Touboulic & Walker, 2015), or social exchange theory, which features widely in supply chain power research (Reimann & Ketchen, 2017). Further recommendations include power-based lenses that would be novel in the wider

sustainable supply chain management field, such as cultural hegemony; a gap which is being addressed through the use of cultural hegemony in this project, more details of which are given in **Chapter 4**.

In sum, this review calls for more studies to be undertaken at the nexus between power and sustainable agri-food supply chains. Future work should aim to assume a broad definition of sustainability, beyond just economic or environmental issues. There is a particular research gap when considering social and environmental sustainability from the perspective of weaker actors. Different contexts should be considered to account for industry-specific idiosyncrasies. The analysis highlighted a minority of research that considers stakeholders outside the immediate supply chain, or multiple stakeholder perspectives on an issue; both of which are recommended to ensure a holistic understanding of power behaviour and sustainable issues. Finally, there is a call for theoretical lenses to be drawn on when researching power in an agri-food sustainable supply chain context, aiding in deepening understand of how power forms and operates in such settings.

3.6 Chapter 3 conclusion

By following a systematic literature review process, a comprehensive overview on literature that explores power in an agri-food sustainable supply chain context has been presented in this study. Drawing from two databases, Scopus and Web of Science, 36 papers were included in this review, after removing duplicates and applying exclusion criteria. Bibliographic information was then analysed to identify key characteristics of the literature, which revealed a gradual increase over time of relevant papers, which feature a range of different industries in the wider agri-food sector. Sustainability was shown to be conceptualised in several different ways in relation to the triple bottom line, with the majority of studies not considering all 3 pillars of economic, social and environmental sustainability. An analysis of how different actors wield power in a sustainable supply chain management was given, which contrasted different perceptions of sustainable supply chain management practices from the different perspectives of actors in the supply chain.

From this analysis, a research agenda was then given, which highlighted gaps and suggested areas for future focus. Two key gaps were highlighted here: the fragmented approach to researching different actors and the application of theory to research. The fragmented approach refers to the focus given to how powerful actors can wield their power and influence the sustainable supply chain management practices, whilst the actions of weaker actors is given less attention. Sustainability has been shown to be a multifaceted and complex issue, and the lack of research that tackles this issue in a supply chain from multiple actor perspectives means a unified voice of how to progress fairly, equitably and sustainably is not given. Therefore, research that goes beyond solely considering the perspective of the most powerful actors is called for. This gap led to a refinement of the wording of research question 3 in this project. Initially, power was going to be examined the perspective of "*different*" stakeholders. However, for the sake of clarity, "*different*" was replaced with "*multiple*", which better describes the intended scope of the question and reflects the outcome of this systematic literature review.

Furthermore, future research should also endeavour to integrate a meaningful theoretical component to future analyses, providing deeper insight into the issues faced by the agri-food sector. This could be in the form of theories already used, novel theoretical perspectives or a mixture. Theory would ideally be employed to suggest new ideas, explain results or be expanded. The identification of such recommendations for future study is a strength of this study, but it is not without its limitations. Whilst it is possible some studies may have been missed, the detail given on the methodology of this literature review process demonstrates the rigour that went into designing and executing this research, minimising the chances of missing relevant literature. 36 papers were utilised, resulting in a sample size where some may question the generalisability and validity of the findings. However, it should be acknowledged that the sample size reflects the emerging nature of this topic in supply chain management. Although in a fledgling stage, exploring power in relation to agri-food sustainable supply chain management has global implications for future generations. This section calls for future research to be comprehensive and fair in its supply chain perspective, and theoretically informed in its evaluation, which is the approach assumed throughout this project. The impact of these suggestions on the research project, along with the key research gaps identified in **Chapter 2**, are

summarised in Table 3.4. The purpose of this table is collate and review how the research has been shaped by the literature reviewed in this study.

Table 3.4: An overview of the research gaps identified so far, and their relationship to this research project

Chapter Two	
Summary of research gap	*Link to research project*
All aspects of the sustainability triple bottom line are shown as important to the UK dairy industry, but there is no unity or common understanding on addressing these issues	Formation of research question 1
The aim of this research is to understand how sustainability is implemented by the dairy industry, and the current approach is disparate and fragmented. An understanding of commonalities and idiosyncrasies may practically facilitate unification and adhesion on sustainable matters	Formation of research question 2
A clear power imbalance exists, and previous research has shown power can influence sustainable practices. In the dairy context, how does such an imbalance impact sustainability conceptualisation?	Formation of research question 3
Chapter Three	
The framing of sustainability in most of the existing research does not effectively consider all pillars of the triple bottom line	Helped structure data collection and analysis instruments to ensure all aspects of sustainability are covered
Theoretical lenses are seldom drawn on in existing literature	Integration of theoretical lenses with the research design and analysis
Social and environmental sustainability are scarcely covered from the perspective of weaker actors. Key stakeholders outside the supply chain are usually omitted from existing research.	Specific use of cultural hegemony to encourage broad outlook from the weaker perspective

Summary of key points

- o To capture a comprehensive overview of the literature on power in relation to sustainable agri-food supply chain practices, a systematic review is undertaken. Critical evaluation of the existing literature facilitates the formation of a future research agenda.
- o In total, 36 papers are included in the review, ranging from 2008 to the present day.
- o Differences between the papers include industry context explored and framing of sustainability
- o The majority of papers in the review do not employ a theoretical lens, and of those that do, only a minority use theory to suggest new ideas and explain findings.
- o Power is most frequently explored by stakeholders within a supply chain, leaving a minority of studies considering external actors. A unidimensional stakeholder perspective is also more frequently used than a broader multi-perspective approach.
- o The interaction between power and sustainable supply chain practices can be understood in relation to the relative power of actors and the perception of practices, resulting in 4 discrete approaches; influence, impose, accept or resist.
- o Proposed future research is recommended to be theoretically informed, offer multiple stakeholder perspectives and consider a broad approach to sustainability.
- o Key research gaps and their links to research questions and design choices in this project are reflected on and summarised.

4

Stakeholders, dependency & hegemony

4.1 Introduction

Considering the use of theoretical lenses are important in the research process, as existing theory in the researcher's mind underpins their understanding of research and knowledge in general (Walshaw, 2012). Acknowledging and using theories in a research project provides different angles to view an issue, each of which might afford a new way of understanding the subject (Reeves *et al*, 2008). Yet, even with this advantage, only a minority of sustainable supply chain studies consider any theoretical lenses (Touboulic *et al*, 2014). As **Section 3.3.5** shows, this imbalance is also the case in agri-food supply chain and power research. To ensure a strong, clear basis in theory, the three theoretical lenses drawn on in this project will be explored in this chapter: stakeholder theory, resource dependence theory and cultural hegemony. Whilst alternative supply chain and management theories were considered, those selected fit best with a multi-player power focused topic from a qualitative perspective. Institutional theory was considered for this project, and has been employed successfully in similar research (Glover *et al*, 2014). However, whilst institutional theory might be capable of identifying a dominant logic (Glover *et al*, 2014), cultural hegemony can do this whilst also exploring how the mechanisms of power work. As such, cultural hegemony was opted for instead of institutional theory. Each lens will be given a dedicated section, after which an explanation on how these theories connect with each other and inform the research will be discussed. Some concluding remarks will then be given, as well as the highlighting of key points from this chapter.

4.2 Stakeholder Theory

Based on the seminal work by Freeman (2010), Stakeholder theory suggests the adoption of a socially responsible attitude to business by going beyond the shareholders of a focal firm and considering all those who affect and are affected by the activities of said focal firm (Bevan & Werhane, 2011). This conceptualisation is in contrast to the traditional input-output corporation model (Donaldson & Preston, 1995), and can be perceived as more ethical and socially responsible than the view that firms solely exist to maximise the wealth of shareholders (Alpaslan, 2009).The location of the firm in an integrated web of other players is a key concept of the theory, which provides a basis for managerial consideration of the complex links between an organisation and wider society (Bevan & Werhane, 2011). The externalities that are produced by an organisation are what concerns stakeholders, who ultimately want to maximise positive externalities and minimise negative externalities (Sarkis *et al*, 2011).

Govindan (2017) demonstrates the usefulness of stakeholder theory in mapping supply chains for sustainability. He mentions how past academics have used stakeholder theory in their sustainability research, looking at issues such as stakeholder influence and co-operation, and establishes relevance to food supply chains in particular (Govindan, 2017). Stakeholder theory is fundamental to this project as it facilitates the provision of a full account of sustainable activities by covering several perspectives, as well as highlighting the wider economic, social and environmental contexts that an organisation finds itself in (Govindan, 2018). As such, different stakeholder perspectives are built into the research questions themselves, as well as the methodology, which looks at different discourse outputs and opinions of stakeholders. Furthermore, stakeholder theory will contribute to analysis as it will help define the actors under consideration, drawing on the power, urgency and legitimacy framework of Mitchell et al (1997). Out of these three key constructs that define stakeholders and their importance, it is the concept of power that is of most interest in this research, which is explored in greater depth with resource dependence theory and cultural hegemony.

4.3 Resource Dependence Theory

At the core of Resource Dependence Theory (RDT) is the principle that organisations have to navigate and transact with others in an external environment, leading to differing levels of organisational interdependence, and consequently control and power (Pfeffer & Salancik, 1978). Pfeffer & Salancik (1978) go on to explain the tenets of dependency on a resource, which are based on the importance of a resource to an organisation, control over the allocation of said resource by another party, and the lack of alternative sources for the resource. For instance, if only a handful of parties hold or control a resource desired by many others, power is consequently awarded to the resource controllers. A key point of RDT is that these resource controllers can use their power to their benefit, exploiting those in the less powerful position (Reimann & Ketchen, 2017). To negate such adverse effects of power being wielded over other parties, strategies to lessen dependency and uncertainty should be engineered, such as exploring alternatives and coordinating with others, with the ultimate aim of increasing autonomy (Davis & Cobb, 2010). Another such mitigation strategy could be entering a supply chain, which might reduce uncertainty felt by an organisation by solidifying relationships with others, but also increases dependence on others within the supply chain (Crook & Combs, 2007).

RDT as a theoretical lens has only been used infrequently to explore SSCM practices (Genovese *et al*, 2020; Esfahbodi *et al*, 2016; Touboulic & Walker, 2015), but aligns well with ethos of SSCM, including relationship issues such as resource sharing and control (Esfahbodi *et al*, 2016). Consideration of power imbalances between actors, as well as any mutual dependencies, when utilising RDT can help explore future relationship structuring (Casciaro & Piskorski, 2005). When considering SSCM, exploring power imbalances along the supply chain with an RDT lens helps explain motivations and resistance to adoption of SSCM by different actors, as well as how sustainable considerations can have implications for dependency levels (Touboulic *et al*, 2014; Wolf, 2014). Supply chains can operate globally, and multinational companies can hold the power to spark such SSCM motivations in suppliers from emerging markets (Wu, 2015). RDT is drawn on by Chen (2018) to explain how economic power is wielded by larger organisations, such as multinational corporations; he explicitly mentions the food industry as a domain

where power imbalances can lead to exploitation and unethical practices. Whilst there is a mutual dependence between farmers and retailers, the small number of retailers compared to farmers is what drives the power imbalance in the food sector, as retailers have a greater choice of who they can transact with (Chen, 2018).

Whilst effective management of relationships in a supply chain seems key to negating the adverse effects of dependency, and indeed can generate competitive advantages (Paulraj & Chen, 2007), high levels of trust are not a substitute for effective control measures when implementing SSCM practices (Schnittfeld & Busch, 2016). To lower the sustainability-related risk felt by a buyer, information may be requested from a supplier; a dependent supplier who invests in SSCM practices to give such information and reduce the risk for a buyer may give themselves an advantage over other dependent parties (Foerstl *et al*, 2015). RDT has also been used to consider the effectiveness of board members in enhancing the flow of resources into an organisation (Cordeiro *et al*, 2020; Lu *et al*, 2020). Clearly, whilst resources can vary in their nature, any dependence on resources is inextricably linked to power in the supply chain. In this research, RDT will be drawn on when analysing the origin and structure of power held by influential stakeholders who could manipulate the dominant storyline of SSCM. Given this research project's focus on power and RDTs established effectiveness in SSCM practices, it is drawn on in this project to help understand micro-level power dynamics between actors. The power focus of the theory also aligned with the methodological choice of critical discourse analysis, which encourages consideration of power dynamics. Whilst RDT provides a proven lens to appreciate dyadic power imbalances, the macro-level dynamics will be considered through a novel lens: cultural hegemony.

4.4 Cultural Hegemony

Antonio Gramsci's concept of cultural hegemony (Gramsci, 1971), whose application in the supply chain field is novel, is offered in this research to provide insights into how both dominant and suppressed storylines are influenced by particular groups, namely different stakeholders. **Figure 4.1** illustrates how Gramsci (1971) conceptualises the maintenance of a cultural hegemony in society. Prestige is awarded by wider society to the dominant actors, who use their power and position

to influence the dominant cultural hegemony. This worldview is then consensually accepted by the general population under the guise of common sense. Dissent against this dominant hegemony in wider society can come in the form of a passive revolution on culture, where small, individual acts of opposition gradually consolidate to act as a catalyst for hegemonic disruption. Gramsci (1971) described this passive revolution as *molecular changes*, which culminates in a *war of position*, the outcome of which decisively leads to acceptance or change of the status quo. It is the tacitly consented stances held by wider society due to the power held by dominant players that this research is interested in exploring in a supply chain context. Ultimately, the challenging of a dominant hegemony can lead to a social transformation (Genovese & Pansera, 2020), which in the case of this research context would be a more equitable reframing of sustainability along the supply chain.
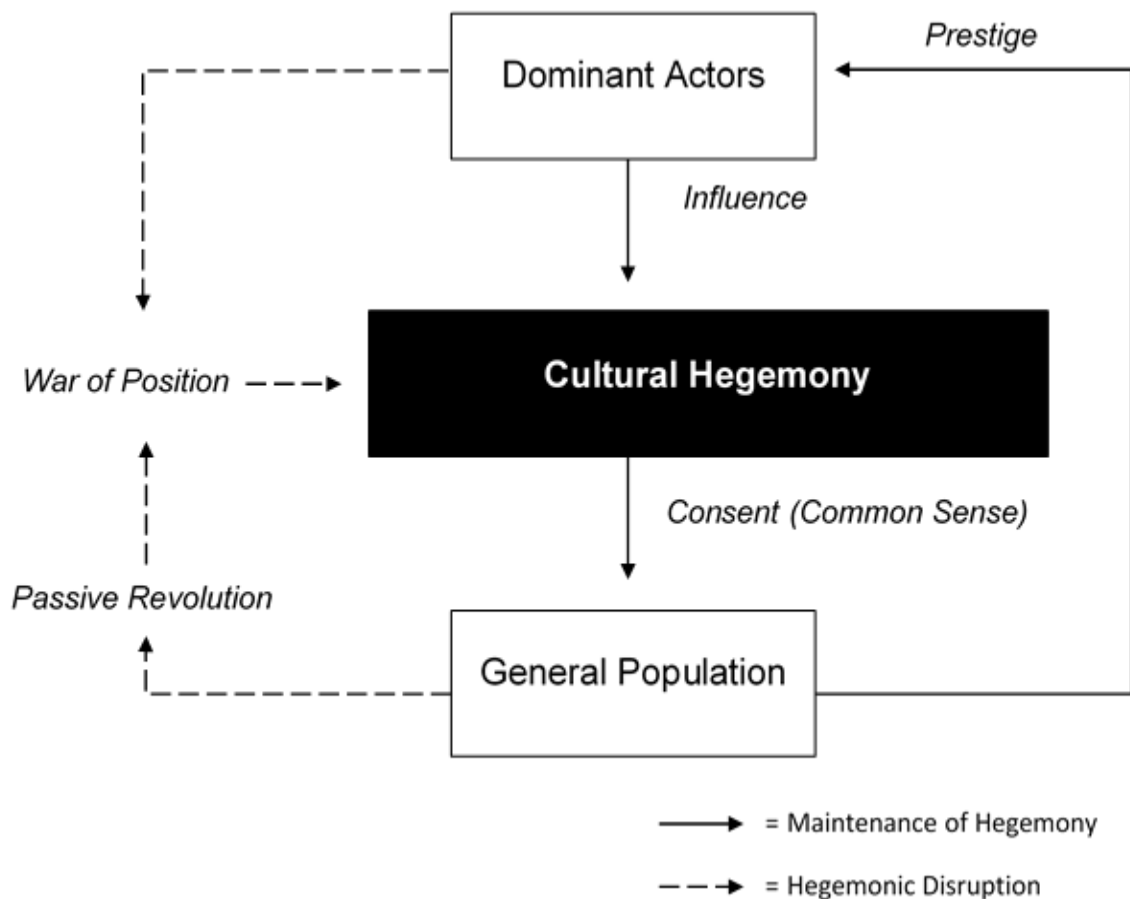
Figure 4.1: An overview of Gramsci's Cultural Hegemony concept

Gramsci's notion of hegemony has been previously drawn on within management literature when considering corporate power interacting with wider society (Barros & Taylor, 2020; Moog *et al*, 2015), as well as issues regarding the environment,

corporate social responsibility and sustainability (Kourula & Delalieux, 2016; Moog *et al*, 2015; Shafer, 2006). Indeed, while Gramsci was exploring politics and wider society when he offered his thoughts on cultural hegemony, it is proposed that this theory can provide an insightful lens through which a richer picture of power relationships in industries and supply chains can be understood. For instance, just as Gramsci said that hegemonies found in individual nations are idiosyncratic in their character (Gramsci, 1971. pp. 240-241), so too could be the case between different supply chains and sectors. Indeed, as was highlighted in **section 3.5,** the broad approach taken by cultural hegemony provides a rationale for the theory's inclusion in this project, as a wider view will provide a more accurate representation of the difficulties facing the dairy industry. Equally, when considering what causes the cessation of a particular hegemony, *the chaotic and disorganised movement, without leadership* referred to by Gramsci (1971, pp. 229) could be seen as describing the proliferation of approaches to sustainability in supply chain contexts, as was discussed in **Section 2.2**.

When describing cultural hegemony as being able to provide a richer picture of power relationships, this alludes to the *dual perspective* on power (Gramsci, 1971, pp. 169), encompassing authoritative and hegemonic power. Whilst authoritative power is forced without consent, hegemonic power is imposed and consented to via the *prestige which the dominant group enjoys* (Gramsci, 1971, pp. 12). This outlook on power is similar to that of Michel Foucault, who saw power constantly featuring throughout all social exchanges (Lynch, 2014). Indeed, cultural hegemony is closely linked to Foucault's concept of biopower, however whilst biopower places importance on each individual interaction (Taylor, 2014), cultural hegemony appears more concerned with the binary relationship of dominance and submission, better aligning with Emerson's (1962) definition of power, mentioned in **Section 2.7**.

Foucauldian thought is drawn on in this research when considering the nature of power, as well as its relationship to knowledge. The nature of power refers to the idea that power is not just a negative force, but can also be wielded positively; Foucault acknowledges this by identifying resistance as a form of power that is found alongside dominance (Feder, 2014). This resistance will be highlighted in the perspectives of dairy industry stakeholders that differ from the dominant storyline. As was highlighted in **Section 3.5**, the weaker stakeholder perspective is usually neglected in agri-food

sustainable supply chain research; the attention which the cultural hegemony lens places on the repressed parties provides a key rationale in using this theory. When considering the relationship between power and knowledge, Foucault is clear about their inextricable relationship (Feder, 2014). Indeed, *that knowledge is always the historical and circumstantial result* of external forces of power is given as fundamental concept by Foucault (1973, pp. 13).

Common sense at a particular epoch is conveyed through discourse, the origin of which represents the source of knowledge, and therefore power (Hall, 2001); indeed, discourse is identified by Foucault (1973, pp. 5) as an arena in which power is transmitted. Hence, the discourse being produced by different stakeholders in the UK dairy supply chain will be drawn on to offer insight into what the dominant approach towards sustainability is, as well as identifying any counter-hegemonic storylines. Similar work on the conceptualisation of sustainability from discourse in an organisation setting has been undertaken (Allen *et al*, 2012), but this remains internally focused, concentrating on employee perceptions.

4.5 The relationship between the theoretical lenses

Central to this PhD research is the interaction between different actors which is why stakeholder theory provides the foundation that this project is built upon. Stakeholder theory (ST) will be used to take a broader industrial view when defining those actors with influence over the UK dairy supply chain. Different stakeholders may have different storylines regarding their perception of sustainability, with one approach appearing more dominant than the alternatives. Cultural hegemony (CH) will provide a lens to explore how those stakeholders in powerful positions communicate a dominant sustainability approach, whilst alternative approaches are marginalised. Further reinforcement of power dynamics between those in powerful positions and those in weaker positions will be framed through resource dependence theory (RDT). Exploring the nature of this power relationship using resource dependence theory will contribute to explaining why some stakeholders are able to influence the cultural hegemony found in the dairy industry, whilst others have to accept this worldview. Ultimately, the power imbalances that inhibit sustainable progress can be

identified and addressed, to the advantage of stronger supply chain relationships. **Figure 4.2** expresses this relationship.

RDT appears to interact with CH by being able to explain how hegemonic power materialises; whilst CH focuses on abstract forces such as consent and prestige (Gramsci, 1971), RDT concretises these concepts into a more specific resource form. The consent given by the general population in CH could be motivated by the interdependence between organisations for certain resources in RDT (Pfeffer & Salancik, 1978). Furthermore, the steps taken by organisations to lessen such dependency in RDT (Davis & Cobb, 2010) appear to reflect the molecular changes of the passive revolution that feature in CH (Gramsci, 1971). This emerging complementary relationship between RDT and CH is developed further in **Section 8.2.4** through the proposal of the hegemonic resource value concept.

In addition to relating with each other, the theoretical lenses are explicitly linked with the research design of this project, as shown in **Figure 4.3**. ST provides the foundation for all three research questions, as contrasting different perspectives of stakeholders in the dairy industry are central to this research project. In answering research questions 1 and 2, CH is utilised to conceptualise the different sustainability narratives in the dairy industry, as well as to make sense of how sustainable performance factors can impact a narrative. Both CH and RDT are drawn on when
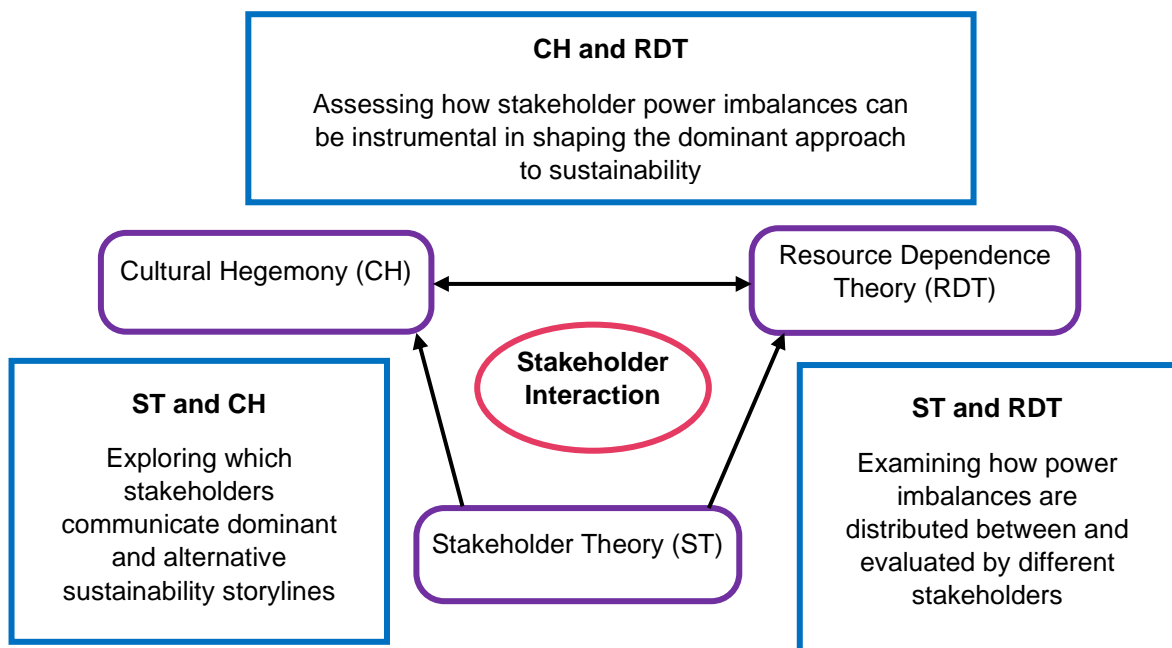
Figure 4.2: Relationship between different theories used in this research project

| Methods | **Critical Discourse Analysis**

*Choice of critical discourse analysis was influenced by inclusion of CH and RDT. More detail can be found in **Chapter 5**.* | **Interviews**

*Sampling decisions relating to interviews were related to ST. Definition of different actors facilitated a collection of multiple perspectives. More detail can be found in **Chapter 5**.* |

| Research Questions | **RQ1 & 2: Different approaches to and evaluation of sustainability**

CH drawn on to identify dominant and alternative approaches towards sustainable supply chain management in the UK dairy industry | **RQ3: Relationship between power and sustainable approaches**

Blend of CH and RDT to identify where power is distributed, show how power is managed and understand both the positive and negative repercussions of a power-imbalanced supply chain |

Research Foundation

ST utilised to help define different actors and perspectives under consideration in this research

ST: Stakeholder Theory　　CH: Cultural Hegemony　　RDT: Resource Dependence Theory

Figure 4.3: The Utilisation of Theory in the research project

answering research question 3, helping to explain power and its ability to influence sustainable narratives. Methodological choices made in this research were also influenced by theory, such as the selection of critical discourse analysis due to their strong alignment with CH and RDT, and sampling criteria decisions based on stakeholder categorisations. The interaction between theory and methodology is explored in further detail in **Section 5.10**.

4.6 Chapter 4 conclusion

The purpose of this chapter was to emphasise the fundamental role theoretical lenses play in this research project. The motivation behind the use of theory was two-fold: to provide a grounding in existing streams of supply chain research, but also to encourage taking a new viewpoint on an issue. The effective previous use of stakeholder theory and resource dependence theory in sustainable supply chain literature (Touboulic & Walker, 2015) demonstrates their suitability for exploring and understanding a sustainable supply chain context. Conversely, the novel inclusion of

a cultural hegemony perspective is to facilitate original insights into the research problem, thus introducing a new lens that can be utilised by others in the supply chain field.

Each theoretical lens that features in this research has a distinct rationale for its application, from the identification of stakeholders to explaining the enduring nature of dominant storylines. Together, the theories complement each other in exploring the approaches taken towards sustainability by different actors in a supply chain, as well as the influential nature of power-dynamics found between said actors. By providing a conceptual grounding and offering fresh insights, the application of stakeholder theory, resource dependence theory and cultural hegemony serve to strengthen the quality and impact of this research.

Summary of key points

- Three theoretical lenses are drawn on in this research project: stakeholder theory, resource dependence theory and cultural hegemony.
- Stakeholder theory underpins the structure of this research, helping distinguish different actor perspectives
- Resource dependence theory will a tested theory for explaining the power dynamics found in the dairy supply chain.
- The novel use of cultural hegemony should complement the identification of dominant and alternative sustainable storylines found in the dairy industry.
- As well as relating to each other, the theoretical lenses link with the research questions and methodological choices in this research.

5

Research Methodology

5.1 Introduction

Intrinsic to the research process is the researcher. Throughout the entire research journey, it is the individual behind the project that makes decisions on how to collect, analyse and present data. As Silverman (2013) advises, inclusion of the researcher within the methodology chapter lends itself to providing a fuller account regarding justification of research design, facilitation of discussion on obstacles that have been overcome in the research process and allows for contextualisation of research topic selection. Therefore, to foster transparency for the reader and candour in the text, I will offer personal insights into the formation of the methodology for this project.

The information presented throughout this chapter has been guided by Murcott (1997), who poses four core questions that a research methodology should answer. They are:

How did you go about your research?

What overall strategy did you adopt and why?

What design and techniques did you use?

Why those and not others?

These questions suggest that the methodology chapter needs to go beyond a descriptive account of research design and offer a rationale of methodological choices made at each stage of the research process. As such, insights into my

decision-making process are included in every section in this chapter. Rather than writing an overly formalised methodology chapter, which can often be unengaging (Silverman, 2013), I hope to instead guide the reader through the story behind the process of this research project.

To begin, there is a clarification of the research objectives, all of which will be reflected on as the theoretical framework of the project is discussed. The two subsequent sections, research philosophy and strategy, will mostly involve theoretical discussions about the nature of my research, whereas research design will bridge theory with practical considerations. Four separate sections on the practicalities on data collection and data analysis are then given, followed by a reflection on how the theoretical lenses employed in this project relate to methodological choices made. Issues around ethics are then considered, from the perspective of both the researcher and the participant. The researcher background and reflections will be discussed, providing an opportunity to behave reflexively and to explain both the impact of past experience and obstacles in the PhD process to the reader. Finally, a summary is offered, drawing the methodology section together and providing an overview for the reader. The structure of this chapter is captured in **Figure 5.1**. Note that the research journey was not sequential, but there was a feedback loop between methods, which is captured in **Figure 5.2** in **Section 5.5.**

```
Research Objectives                    Interviews: Data Collection
        ↓                                         ↓
Research Philosophy                    Interviews: Data Analysis
        ↓                                         ↓
Research Strategy                          Theoretical Lens
        ↓                                         ↓
Research Design                        Ethical Considerations
        ↓                                         ↓
Critical Discourse Analysis:          Researcher Background and
Overview                                      Reflections
        ↓                                         ↓
Critical Discourse Analysis:               Summary
Analytic Process
```
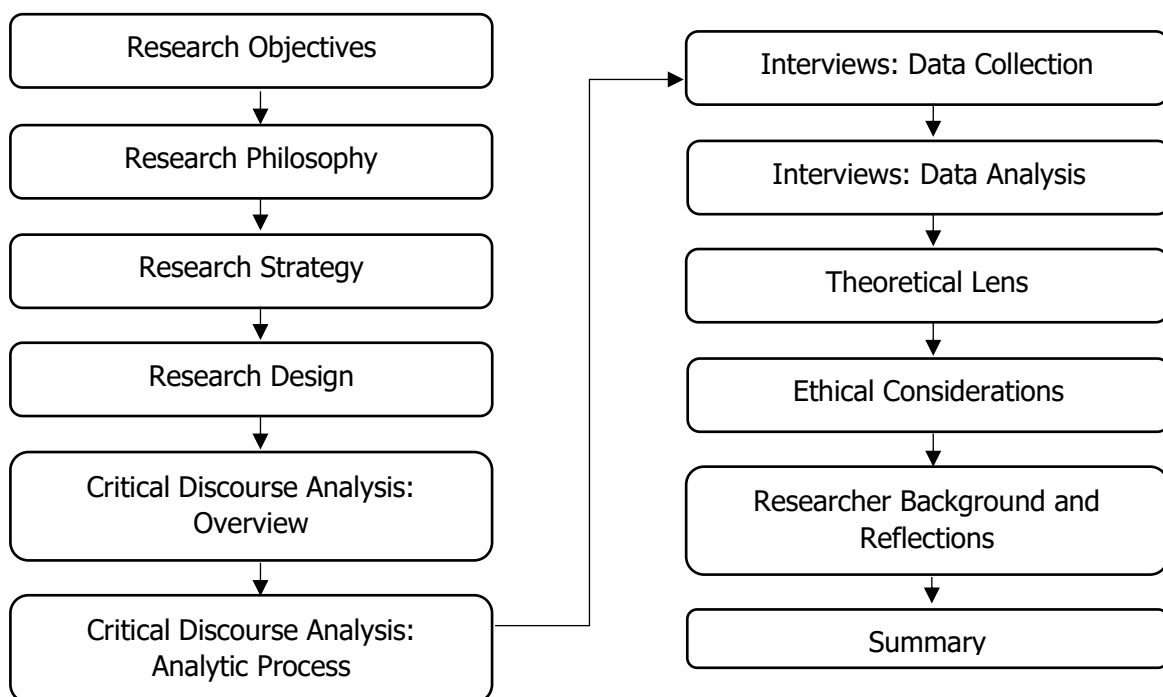
Figure 5.1: The structure of the methodology chapter

5.2 Research Objectives

Through highlighting gaps in knowledge within the literature review, three research questions were formed. This project will aim to answer each of these questions as fully as possible. Although they have undergone several revisions throughout the project, I formulated a set of research questions early in the process. As Bryman (2012) warns, failure to create research questions in the preliminary stages of research can result in a lack of focus in design and lack of depth in data collection. Instead of the interrogative nature of research questions, the research objectives are written as declarative statements. The objectives of this research are:

1. To explore how sustainable narratives are conceptualised from a multi-stakeholder perspective in the UK dairy supply chain

2. To understand how sustainability performance are evaluated from a multi-stakeholder perspective in the UK dairy supply chain

3. **To explore how power held by multiple stakeholders influences sustainable narratives created within the UK dairy supply chain**

The choice of initial verb in these objectives is carefully considered, as it relates to the purpose of the research. Both research objective 1 and research objective 3 are exploratory, as indicated by the use of *explore*. Alternatively, research objective 2 is concerned with developing *understanding* on stakeholders' evaluative processes.

Blaikie (2009) explains how the research purpose links to methodological design, both in terms of philosophy and methods employed. He discusses how exploratory research, which is used to gain insights into both a topic and context that little is known about, requires methods that favour flexibility. This is reflected in the choice to undertake a semi-structured interview, as it affords the ability to probe if any interesting topics surface in the interview, rather than undertaking a more rigid structured interview (Gray, 2014). The importance of context in exploratory research is reflected in the decision to pursue a critical discourse analysis, as this method uses context to ensure relevance of findings (Morgan, 2010). On the other hand, research involved with understanding should aim to capture to specific interpretations of individuals involved with the subject under investigation (Blaikie,

2009). This aligns with the importance placed on valuing the subjectivity of social actors in the research philosophy, as discussed in **Section 5.3.**

5.3 Research Philosophy

At the core of the research process are the philosophical beliefs held by the researcher, comprising of their epistemology, ontology and theoretical perspective. Consideration of these elements are crucial to the methodology as they are inexorably linked to the choice of methods used. As Gray (2014) explains, the methodology chosen is influenced by the theoretical perspectives adopted by the researcher, which is in turn influenced by the researcher's epistemology and ontology. Whilst methodological decisions can take place without an awareness of these philosophical foundations, an appreciation of them allows for greater understanding of the research process. The framework established by Moon and Blackman (2014) is used to label approaches taken, as this ensures consistency and alignment of concept definitions.

First to be explored is epistemology, which addresses the issue of how an individual can understand the world (Jenkins, 2002). It is important to recognise what epistemological approach is taken, as each different outlook on how the world can be understood can affect the gathering and interpretation of data (Gray, 2014). In academia, epistemology considers how a discipline defines knowledge, with a replication of natural science procedure in the social science world being referred to as positivism (Bryman, 2012). Rather than seeing the social world as a place to perform experiments to obtain objective results, I believe knowledge is constructed through the perception of each individual. Referred to as constructionism, this epistemological approach posits that each individual constructs their own meaning of knowledge based on their respective idiosyncratic life experiences (Moon & Blackman, 2014). Ultimately, understanding of the social world can be seen as a construction of those within it (Gray, 2014). This is reflected in the research objectives in **Section 5.2** as they aim to explore different stakeholder approaches and perspectives on the same issues of sustainability and power.

Whereas epistemology considers how the world can be understood through knowledge, ontology is concerned with what the world is, and the structure of reality

(Gray, 2014). I believe that reality is not the same for everyone, but the experience of what reality is can be similar across individuals within a specific group. This ontological approach is known as bounded relativism, which allows for individuals to have their own perception of reality in their minds, but suggests that groups bounded together by a particular trait can share the same perception of a reality (Moon & Blackman, 2014). In the context of this project, these discrete groups could be the different approaches to agriculture or different stakeholders in the dairy industry, linking with the theoretical lenses as discussed in **Section 3.10**. There is congruence between constructionism and bounded relativism, as both concepts acknowledge the subjectivity of the individual in the construction of reality.

My epistemological and ontological stance come together in the theoretical perspective I take as a researcher, which is that of interpretivism. This theoretical perspective values the subjective, multifaceted and emotion-laden interpretations that exist within a socially constructed world (Hurworth, 2005). Interpretivism links with constructionism and bounded relativism, due to the value placed on the subjective individual. It is taking this theoretical perspective that influenced my research strategy and overall design, covered in **Sections 5.4** and **5.5**. Out of the several traditions found within the interpretivist stance, this research project aligns most with symbolic interactionism, which posits that actions of an individual are influenced by the perceived meaning given to aspects of the social world (Bryman, 2012). Language is central to symbolic interactionism, as it is through language that individuals can create meaning from symbols (Polk, 2017). The importance of language is reflected in the decision to conduct a critical discourse analysis as part of this project, where the meaning behind texts is examined.

A final point made by Bryman (2012) regarding the philosophical foundations of research is that they do not fit into discrete, unambiguous categories when relating them to research practices, and as such should not be overvalued. Indeed, even the authors referenced in this section have no consensus on the definite application of these philosophies. However, the purpose of considering these philosophical underpinnings is to explain how these theories can relate to methodological decisions made within the research process, as I have evidenced throughout this section.

5.4 Research Strategy

Mason (2018) explains that the research strategy of a methodology shows the logic behind method choices in addressing the project's research questions. The strategy adopted in this research is based on the qualitative approach, which developed to explore the diverse life experiences that have come with ever-evolving social change (Flick, 2009). Qualitative research promotes the understanding of meanings given by social actors, as well as acknowledging the importance social context plays in fully understanding data (Bryman, 2012). As Bryman (2012) goes on to say, qualitative research also fosters flexibility that can deal with both the idiosyncrasies of individuals and the constant flux of the social world. As well as acknowledging the subjectivity of the studied individual, qualitative research allows for reflexivity of the researcher (Flick, 2009), as is reflected in **Section 5.12** for example.

The subjective nature of enquiry valued by qualitative strategy aligns with the constructionist epistemology and interpretivist theoretical perspective discussed in **Section 5.3**. This alignment should not be oversimplified; these philosophical foundations are not exclusive to a qualitative approach, as some forms of quantitative study can be shaped by interpretivism (Bryman, 2012). However, considering the purpose of this research is to explore and understand, as mentioned in **Section 5.2**, the qualitative approach has a more appropriate fit than its quantitative counterpart.

Whilst a qualitative approach provides a good fit for this research, there remains some criticisms about the nature of this strategy. Generalisability of findings, validity of observations and reliability of methods are all limitations in qualitative research that have been acknowledged throughout academia (Flick, 2009; Mason, 2018). All these points are impositions of positivist quantitative-based research criteria on an interpretivist qualitative study, so a mismatch in criteria comes as no surprise (Mason, 2018). Qualitative research does not see an individual as a collective of variables, but instead embraces the full complexity of the subject in context (Flick, 2009). Therefore, instead of assessing qualitative research with quantitative criteria, a different framework of quality judgement needs establishing.

As Mason (2018) acknowledges, the issues of validity, generalisability and reliability should not be totally disregarded, but instead the values behind these measures

should act as guidance for the formation of other quality indicators. The appropriateness of methods is one such example (Flick, 2009), with informed methodological choices leading to improved credibility of research (Bryman, 2012). Understanding the importance of undertaking research with care and rigour is another quality indicator, demonstrated through accuracy in handling data, honesty through lack of data fabrication and transparency in terms of research reflexivity (Mason, 2018). As Bryman (2012) summarises, it is important to demonstrate the trustworthiness of the researcher.

The need for rigour in qualitative research provided the rationale for using two qualitative methods instead of one, endeavouring to capture a comprehensive and accurate representation of the UK dairy industry. Indeed, the mixing of qualitative methods not only adds depth to the findings, but also helps answer specific research questions (Mason, 2018). Both of these are the case in this research project, as all research questions are answered by both qualitative methods, but research question 2 is only answered through the interview stage.

The features of qualitative research discussed in this section lend themselves to an inductive research strategy (Bryman, 2012). The study's purpose to both explore and understand the topic under investigation involves initially making sense of the world and consequently drawing conclusions. Developing theory from a set of observations is the inductive research process, contrasted by the deductive process of taking theory initially and then testing it through the research process (Bryman, 2012). Blaikie (2009) explains that an inductive research strategy begins with data collection and ends with the findings being linked to the research questions, which reflects the strategy undertaken in this project.

Caution should be taken when using the word *theory* in inductive research, as there is not an expectation to generate universal laws akin to those tested in deductive research. Instead, the output will be specific to the individuals under investigation (Blaikie, 2009; Bryman, 2012). Furthermore, the use of theoretical lenses discussed in **Section 5.10** are only utilised to make sense of findings inductively, and not tested deductively in this project. When this project started, no existing theories were taken as a starting point. As the inductive sensemaking process took place, along with familiarisation of the literature, it was at that point in time that the usefulness of both

stakeholder theory and resource dependence theory emerged. The final lens of cultural hegemony emerged through wider reading and discussion of power outside the management context, where I saw the potential application within the dairy industry. So, these theories are not tested in any way, but instead emerged as helpful in understanding the findings of both the critical discourse analysis and the interviews.

5.4.1 Triangulation in Qualitative Research

To improve the reliability of a qualitative piece of research, Gray (2014) stresses the importance of building triangulation into the research strategy. In simplistic terms, triangulation involves ensuring that the research topic has had multiple perspectives captured when addressing the research questions (Flick, 2009). Denzin (2017) categorises the four different types of triangulation as data, investigator, theory and methodological, each providing a different approach to capturing multiple perspectives. Flick (2009) warns against acknowledging triangulation purely for superficial purposes, but instead encourages an explanation of the rationale behind considering the concept. In this project, the reasons for considering triangulation are twofold: my research questions inherently demand thought on different perspectives, and as I alone will form emerging themes from the data, a lack of investigator triangulation requires compensation.

When discussing triangulation in the context of this qualitative research piece, the aim is not to end up with an accurate interpretation of the situation, as the concept of objectivity does not align with the subjective constructionist epistemology taken. As Mason (2018) explains, triangulation involves trying to capture a richer account of a situation, showing the different dimensions of any solution to the research questions. Taking heed of this definition, the three different approaches to triangulation adopted in this research are explained in **Table 5.1** overleaf.

Table 5.1: The triangulation of data in this research project

Type of triangulation	Use in research project
Data	Space triangulation is utilised in the sampling of both the documents and the participants, ensuring they come from multiple sites.
Theory	Stakeholder theory, resource dependence theory and cultural hegemony are drawn on in this project, giving different perspectives.
Methodological	The different data collection methods of the critical discourse analysis and the interviews provides between-method triangulation, widening the scope of the research.

5.5 Research Design

The design of this research project needs to solve the intellectual puzzle presented by the research questions. Using Mason's (2018) classifications, I would describe this research as being an ecological puzzle, meaning there is an interest in the interactions and workings of a particular situation. In the case of this research project, it is the interrelationships between UK dairy stakeholders regarding perceptions of power and sustainability-related communications that form the basis of this intellectual puzzle. Due to the importance placed on context in this project, the research design that appears to best compliment the addressing of this particular ecological puzzle is a case study design.

The term *case* in case study design has a broad definition (Flick, 2009) and in this project refers to the UK dairy industry. A case study takes an idiographic approach to research (Bryman, 2012), meaning the unique aspects of the UK dairy industry can be focused on. Bryman (2012) refers to the depth and contextualisation offered by a case study approach as an intensive analysis, whilst warning about issues regarding generalisability. In this instance, I would refer the reader back to **Section 5.4**, which

considers qualitative quality criteria. The case study lends itself to exploring current events in a comprehensive manner, including use of documents and interviews (Yin, 2009). It is a combination of this ability to capture depth, as well as acknowledging the unique aspects of a case, that aligns this research design with the project's research philosophies and strategies. Additionally, case studies have been utilised effectively in exploratory and inductive research (Blaikie, 2009), further aligning with this project's methodology.

Following Yin's (2009) categorisations of case research design, this project represents an example of a single-case embedded design. The single-case element refers to the singular context under consideration: the UK dairy industry. The embedded element refers to the different components under analysis, which in this research project are the different stakeholder perspectives within the same context.

As mentioned explicitly in **Section 5.4**, this research is following a multi-method approach, as is pictured in **Figure 5.2**. Note the circularity between the methods shown in the diagram, which reflects the feedback and comparison loop that took place between analysing the documents and undertaking the interviews. The Critical Discourse Analysis was undertaken initially, but overlapping with the interview phase sparked ideas when it came to coding the documents under analysis. Equally, the sustainability narratives identified in the critical discourse analysis and the interview phase are juxtaposed with each other in this circular process. Although one method was mostly undertaken chronologically before the other, it is the comparison of perceptions and interpretations that **Figure 5.2** is primarily aiming to portray.
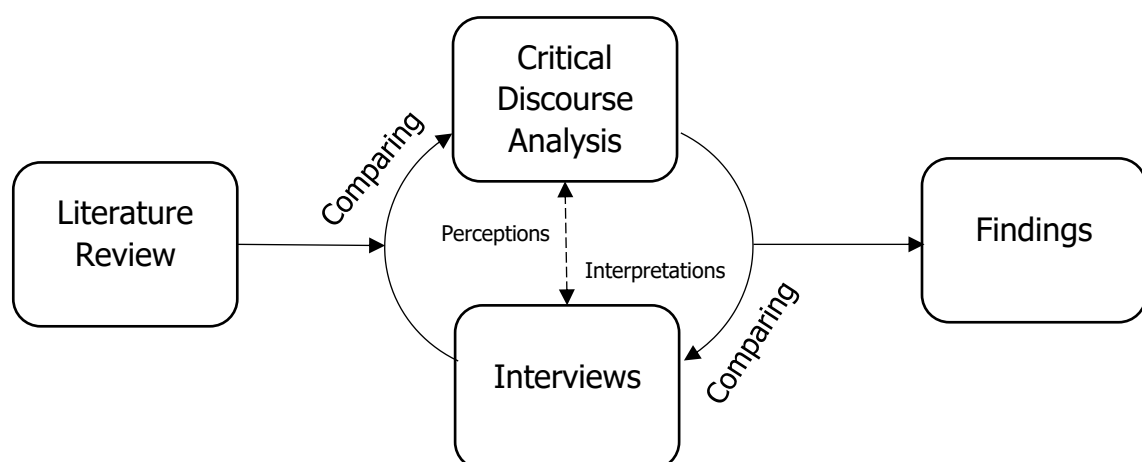
Figure 5.2: The circular nature of analysis in the research design

Table 5.2 summaries the methodological discussion undertaken so far, capturing key elements of research philosophy, strategy and design. The next four sections of this chapter will consider the particular methods utilised in this project: Critical Discourse Analysis and Interviews. Although the analysis of these qualitative methods used in this project are represented through the circular model, their ordering in this thesis is based on the order in which the data collection was undertaken. As such, critical discourse analysis will be discussed first, followed by the interviews.

Table 5.2: An overview of the methodology argument so far

Methodological foundations	Perspective of this study
Epistemology	Constructionism
Ontology	Bounded Relativism
Theoretical Perspective	Interpretivism
Research Strategy	Qualitative Inductive
Research Design	Case Study Multi-method Circular process

5.6 Critical Discourse Analysis: Overview

The use of documents as data has been used in qualitative studies across different disciplines (Atkinson & Coffey, 2011). The analysis of documents facilitates a comparison between different perspectives, as well as allowing for contextualisation (May, 2011). Silverman (2014) discusses the advantages of using documents as

data, which includes their naturally occurring nature and their availability. The natural occurrence of documents is of benefit as it has been formed without the influence of those studying it, reducing researcher bias. The availability of documents is also advantageous, as it removes issues around access. When access issues were experienced in the interview phase of this research project, as discussed in **Section 5.8**, the use of documents allows for stakeholder perspectives to remain represented, such as those of large retailers.

Consider the constructionist stance I take towards research, which values individual subjectivity. Taking this approach towards using documents as data encourages viewing them as topics can that cannot speak for themselves, in need of interpretation and contextualisation, potentially leading to the identification of conflicting perspectives (Silverman, 2014). This aligns well with research question 1, which aims to capture the different perspectives taken towards sustainability in the UK dairy industry. Viewing documents as topics relates with going beyond just analysing content, considering how they are used, interacted with and the scope of their influence (Prior, 2011). However, as Atkinson & Coffey (2011) warn, although documents exist as social facts within reality, it should not be assumed that they are faithful representations of actual organisational practices. It is through noting this warning that I am encouraged to be critical of the documents, providing one of the rationales behind the choice of critical discourse analysis.

Critical discourse analysis (CDA) is a type of discourse analysis that facilitates a focus on power relations (Silverman, 2014), particularly lending itself to answering research question 3 regarding power. More broadly, the focus that CDA places on addressing power inequalities and social issues (Vaara and Tienari, 2010) compliments the sustainability-enhancing aims of this research project. CDA acknowledges the context and ideologies of discourse produced by those in powerful positions (Wodak, 2001). Through this contextualisation, CDA can explore why particular perceptions of discourse are more widely accepted in society than others (Bryman, 2012), linking with the cultural hegemony lens discussed in **Section 5.10.** Indeed, the method has been previously utilised in the literature to explore topics of power and class (Dunn & Eble, 2015), as well as the intentions and structures of institutions (Wang, 2019). CDA has also demonstrated the important role context plays in understanding an issue (Siltaoja & Vehkaperä, 2010), as well as facilitating

the comparison of different players and perspectives (Wang, 2019; Winkler, 2011). Whilst CDA has begun to be used in a management context to explore marginalisation of narratives (McCarthy *et al*, 2018), the use of CDA in relation to power dynamics over the sustainability of a supply chain is novel to this research, and therefore is another original contribution to knowledge that this research makes.

The critical aspect of CDA comes from the positionality of the researchers throughout the analysis, which sit from the perspective of those in the weaker position (Van Dijk, 1986; Wodak, 2001). Following Glover *et al*'s (2014) findings, this would be from stakeholders that have little power over the supermarkets, such as SMEs and dairy farmers. A criticism of CDA relates to the lack of objectivity in this process, with the main counterargument being that true objectivity is an illusion and the researcher is intrinsically in the social world they are investigating (Cameron & Panovic, 2014). Given my research philosophy, I align with the latter, arguing that being explicit about researcher positions provides greater transparency for research quality judgement.

The CDA method would address both research question 1 and 3, looking at the different sustainability narratives in the UK dairy industry and how important power is in ensuring the success of these narratives. Fairclough (2010) acknowledges there are several different approaches to CDA, resulting in accusations regarding lack of detail regarding specific CDA procedural detail (Vaara and Tienari, 2010). Therefore, for consistency when implementing the method, I needed to choose a specific approach. Given Norman Fairclough's important status as a founder of CDA (Locke, 2004), and the frequent use of his books in wider CDA literature (Breeze, 2011), I decided to follow his approach. Fairclough's (2001) procedure involves analysing the text itself, the context and the power relations within that context (Keller, 2013). To operationalise Fairclough's approach to CDA, I added in specific detail for each step based on Bloor & Bloor (2007). The protocol used in this study is shown in **Figure 5.3**. The context of the dairy industry and stakeholder authorship is initially examined, followed by analysis of the author positionality, intertextuality and linguistic features of each document. These subsequent steps give insights into how legitimacy is conveyed through the discourse. Finally, a critique is given on what approaches have been found, relating findings with context and suggesting changes

that could be implemented. It is in these final steps that the cultural hegemony lens in applied, as discussed in Section **5.10**.

Given the level of depth in analysis for each piece of discourse in this study, as well as the comprehensive account needed of the context in which they find themselves, 20 documents were ultimately analysed. A purposeful sampling strategy was employed in this research, as such a strategy can lead to in-depth insights and understandings though the selection of specific materials (Patton, 2002). Such a strategy facilitated the reaching of data saturation, where no additional useful information would be added with additional documents (Saumure & Given, 2008). Using Patton's (2002) categorisation of sampling strategies, this research follows a maximum variation sample, also known as heterogeneous sampling. This strategy involves selecting materials that differentiate based on a specified characteristic,
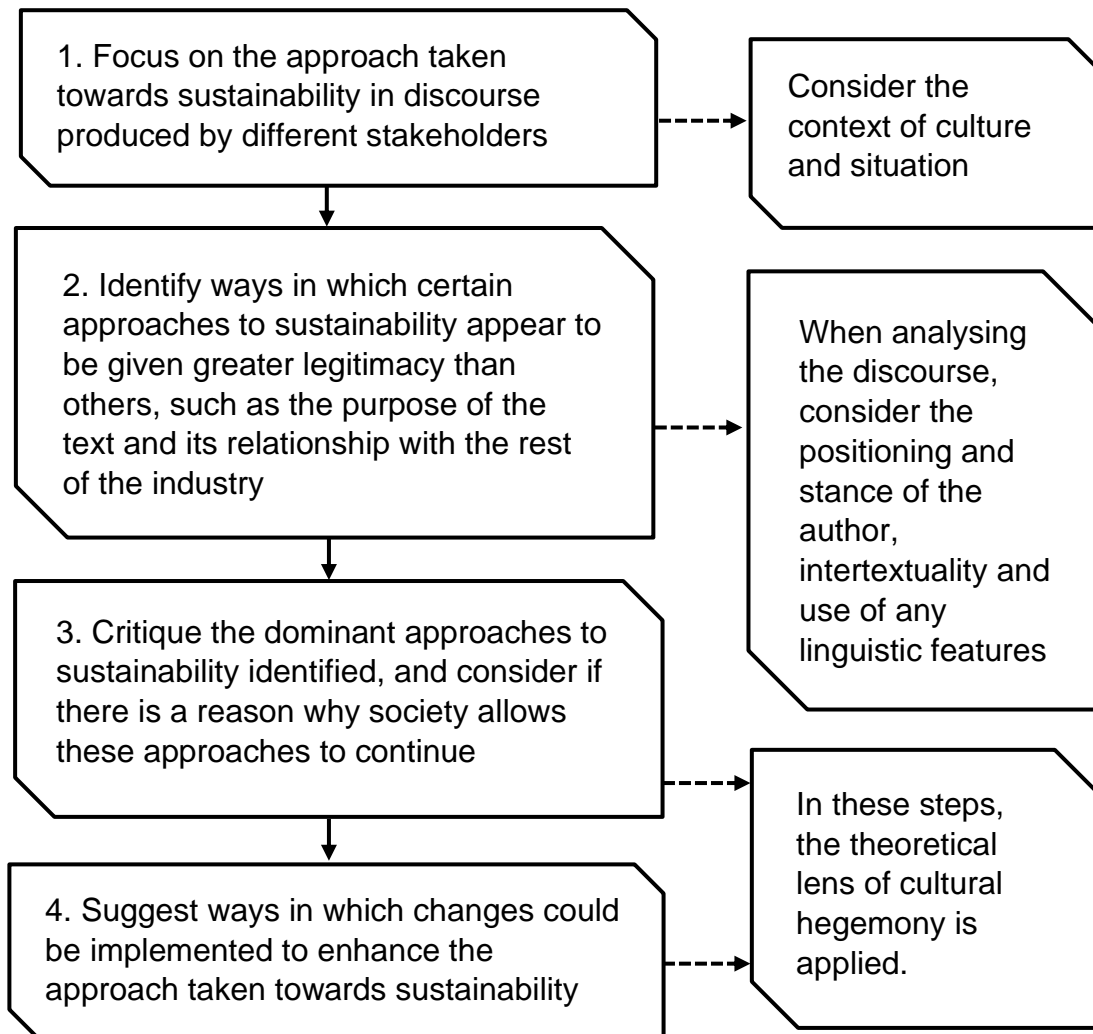
Figure 5.3: The Critical Discourse Analysis process used in this study, based on Fairclough (2001) and Bloor and Bloor (2007).

ultimately highlighting both the idiosyncrasies and central commonalities across a particular setting (Patton, 2002). The differential characteristic in this research is the author of the discourse, distinguished through their stakeholder grouping. The division between stakeholders' links with Stakeholder Theory, as expanded on in **Section 5.10**, and consequently with the research questions, which aim to capture the multiple narratives and perceptions held by different stakeholders. **Table 5.3** captures the particular stakeholders and documents that were selected for analysis.

All the documents used in this CDA were digital and sourced from the internet. They were all publicly available for everyone to see, requiring no special access procedures. The use of grey literature to investigate sustainability in a supply chain context has been implemented effectively in existing academic literature (Stewart and Niero, 2018). However, unlike Stewart and Niero's (2018) study, this research is not concerned about general trends in the industry, with emphasis instead on the idiosyncratic storylines produced by different players across the supply chain. For the sake of relevance, the content of the documents needed to have an application in the UK dairy sector. To keep the research focused on the contemporary UK dairy supply chain, I ensured no documents were published earlier than 2017: the year in which data collection started. Like interviews, undertaking a CDA also comes with its own ethical considerations, which are covered in **Section 5.11**.

Table 5.3: Stakeholders and documents selected for CDA

Acronym*	Stakeholder**	Type(s) of document
TA1	National Trade association	Annual Review, Guidelines
TA2	International Trade	Annual Review, Sustainability
GD	Government Department	Policy Paper, Reports
S1	Premium supermarket	Sustainability Report, Webpages
S2	Mid-range supermarket	Sustainability Report, Webpages
P1	Larger national processor	Sustainability Reports
P2	Smaller local processor	Sustainability Policy Webpages
LG	Industrial lobby Group	Sustainability Related Webpages
AW	Animal Welfare Group	Campaign Leaflet, Report

Based in the UK unless specified otherwise

*** Acronym is used to refer to stakeholders in the Findings and Discussion sections*

5.7 Critical Discourse Analysis: Analytic Process

Following guidance from Bloor & Bloor (2007), the context of culture was refined throughout the CDA process, but was initially explored by understanding the history of the dairy industry, as well as the contemporary issues it faces and the institutions within in. The context of situation is also established for each document, including setting of production and author identity. The documents were then uploaded to NVivo 12, where the analysis shown in step 2 on **Figure 5.3** took place. Using NVivo 12 simplified the process of making links between documents, as previously identified characteristics were stored in a framework that was displayed alongside text, aiding in the coding of additional data.

Fairclough's approach to CDA is based on three processes: description, interpretation and explanation (Titscher *et al*, 2000). These link with textual, discursive and social levels respectively, as is shown in **Figure 5.4**. Titscher *et al* (2000) explain that at a text level, the content and form of the document are analysed, including grammatical choices, metaphors, rhetorical features and other linguistic features. Gioia *et al* (2013) suggest a transparent and rigorous approach of coding, a diagram of which can be found in **Figure 5.5**. These textual level considerations are the first codes that were assigned to each document. The discursive level links the document to the wider context it finds itself in, through considering the intertextuality of the discourse with other texts and conventions found in industry discourse and similar genres (Titscher *et al*, 2000). In this instance, genre refers to an item of discourse that follows a particular structure determined by society (Bloor & Bloor, 2007), such as a corporate sustainability report. Coding at this level included references to other sources, as well as use of specialist language. Then, the findings are contextualised and explained in relation to social practices found within the wider dairy industry and institutions (Titscher et al, 2000). At this level, I drew on the theoretical lens of cultural hegemony to explain findings at the textual and discursive stages.
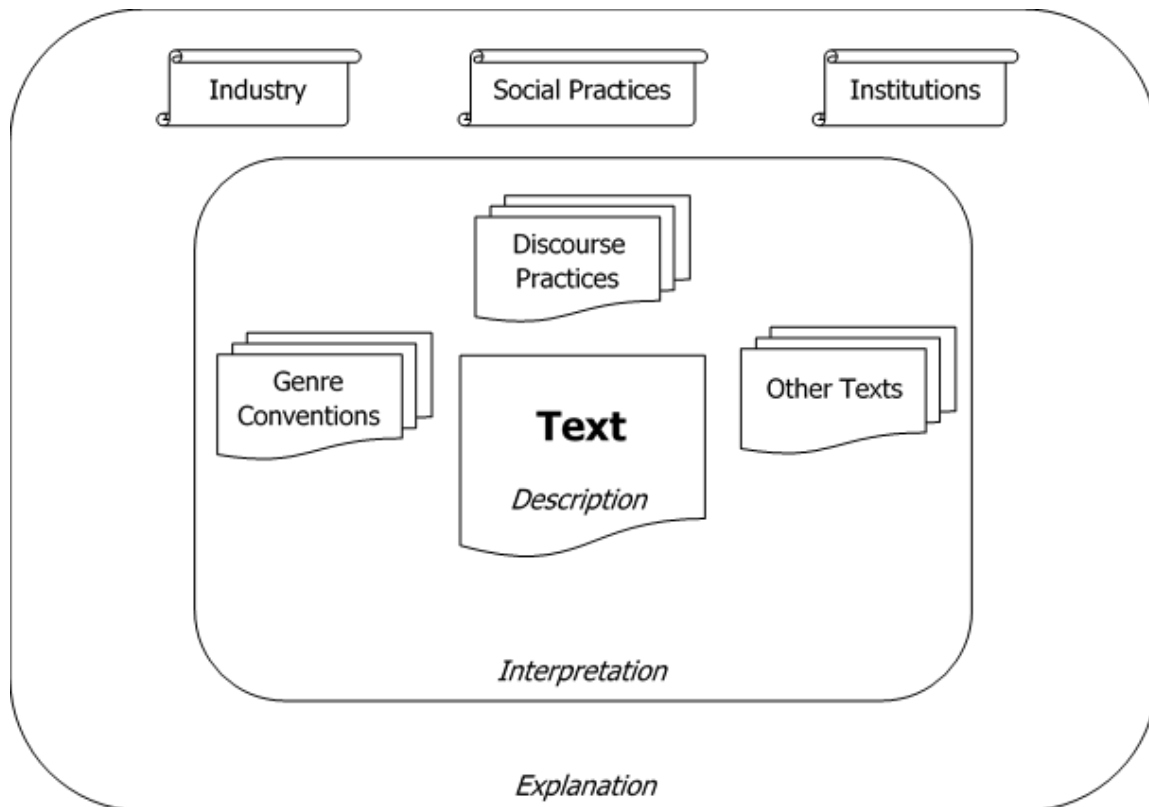
Figure 5.4: The three levels of analysis using Fairclough's CDA approach, based on Titscher *et al* (2000).

After one document was analysed, a second document was then coded using the existing codes shown on NVivo 12, adding any additional codes as necessary. This iterative process continued across all the documents, with codes being continuality updated and each document being revisited multiple times, exemplifying the circular nature of this research as discussed in **Section 5.5**. This cyclic process also links with the subsequent interview phase, with comparisons being made between stakeholder perceptions and what is found in the dairy industry discourse.

As the coding process drew to its conclusion, the main narrative found in the CDA emerged, as well as alternative, suppressed storylines. As was discussed in the paper published from this CDA, two storylines are intentionally chosen to ensure any suppression or controlling activities is highlighted clearly and undiluted as one against the powerful dominant storyline (Else *et al*, 2022).
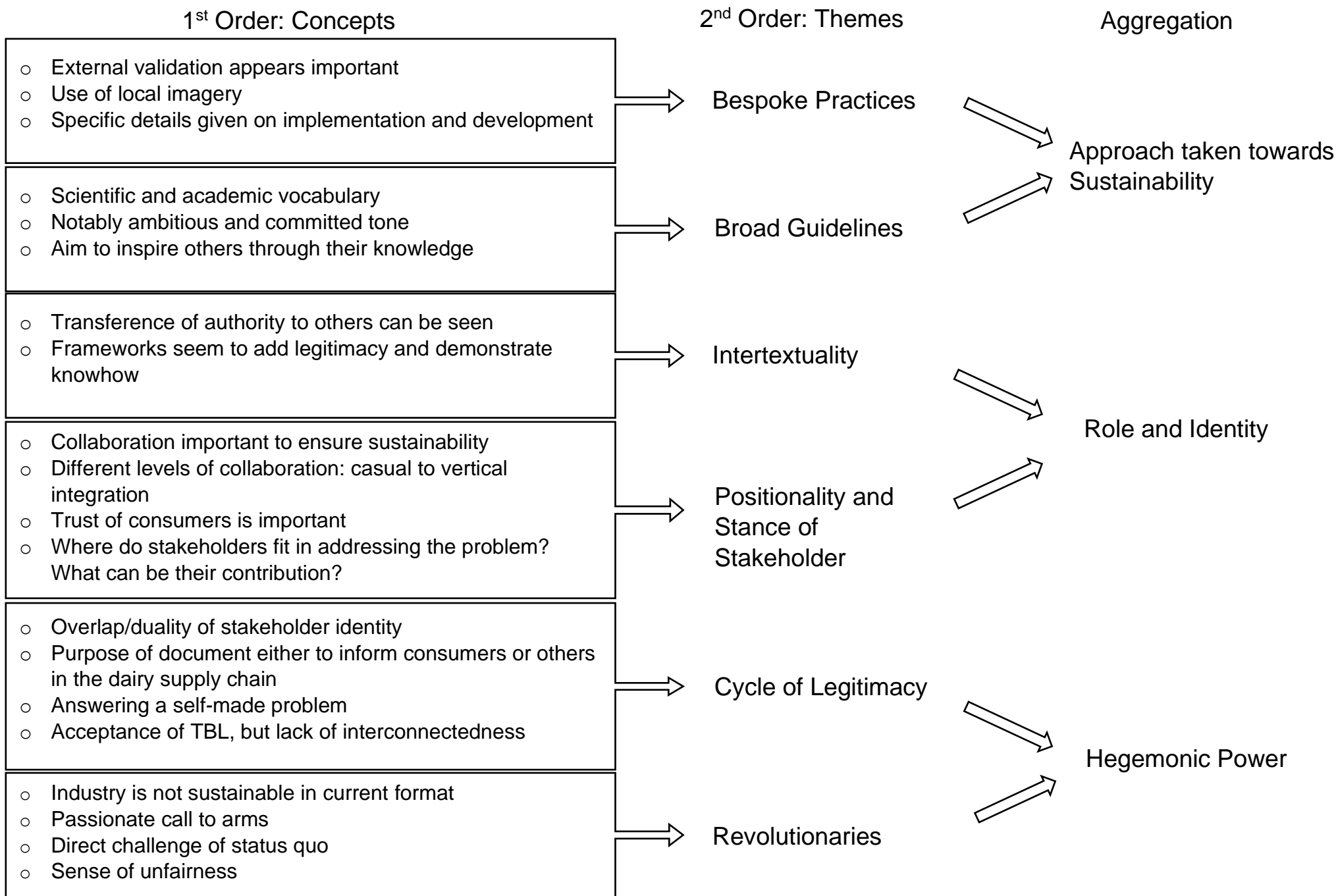
Figure 5.5: Development of Coding in the Critical Discourse Analysis

5.8 Interviews: Data Collection

The second method to be employed in this research is semi-structured interviews. Due to the co-production of knowledge between participant and researcher in the interview process, it fits perfectly with my constructionist epistemological position (Gray, 2014; Mason, 2002). The interactional nature of interviewing helps in gaining understanding of context (Mason, 2018), linking this method with CDA and the research objectives, both of which are interested in the context around the collected data. The semi-structured interview ensures data on key questions are collected, whilst having the flexibility to probe, add new questions and change the structure of the interview to fit the natural flow of topics (Gray, 2014; May, 2011). Interviews have their negatives though, such as researcher bias in design and their resource-intensive nature (Salkind, 2012). I ensured a large data collection window for the interviews in response to the time-consuming nature of the method. Following Gray's (2014) recommendations, researcher bias was kept to a minimum by using the same wording when asking the key questions to all participants, as well as standardising researcher behaviour by dedicating the same amount of time for building rapport with the participants. The interview schedule used in this data collection, covering what questions were asked in the interviews themselves, can be found in **Appendix C**.

Given that the participants for this study are based all over the UK, the telephone was used in many cases to undertake the interview, with others being undertaken face-to-face in the field. My initial apprehension for using the telephone came from issues around building an authentic rapport and not being able to observe body language (Fielding & Thomas, 2016). Once in the field, my worries were eased as I found interviewing on the telephone reduced the obtrusiveness of the researcher, leading to participants feeling comfortable to share sensitive information, as well as allowing me to take comprehensive notes without maintaining active listening body language, such as eye contact (Lechuga, 2012).

The interviews were designed to primarily answer research question 2 and 3, with the participants being different stakeholders within the dairy industry. Deciding how many stakeholders to interview was complex, as issues around resource constraints and research design needed consideration (Daniel, 2012). A key document that helped me reflect on sample size is Baker & Edwards' (2012) methods paper on this

issue, which draws together the opinions of 14 prominent social scientists across several disciplines. There remains no consensus regarding how many interviews are enough, with it depending on factors unique to the researcher, including philosophy and complexity (Baker & Edwards, 2012). Reflecting on my interpretivist stance, the desire to capture context and intricacies whilst not being overwhelmed with data implied a smaller sample size. However, the complexity of capturing the opinion of different stakeholders across the dairy industry led to the realisation that the sample size could not be too restrictive. This led to the conclusion that I should collect data until saturation is reached, meaning that no new overarching patterns in the data are emerging with respect to the research objectives (Saumure & Given, 2008). In the end, 26 participants were interviewed. **Table 5.4** shows the breakdown of the participants and their respective groupings.

Table 5.4: Breakdown of Interview Participants by Actor Groupings (Clarkson, 1995)

Type of Actor Grouping	Number of Participants
Farmers	10
Primary actors	8
Secondary actors	8
Total	**26**

Dairy farmers are taken as the focal actor as they are furthest upstream in a conventional dairy supply chain; being upstream in the supply chain means being close to the harvesting of natural resources (Singer & Donoso, 2008), which in this case is liquid milk. The primary actors are those who have a high level of interdependence on farmers in the dairy supply chain (Clarkson, 1995), covering downstream stakeholders such as processors, retailers and consumers. The secondary actors are those who are not directly involved in the dairy supply chain, but have the ability to influence, or be influenced by, the supply chain (Clarkson, 1995). In this research, secondary actors are accreditation boards, non-government organisations, academics and other standards boards. At least two participants were interviewed from each stakeholder group. Although there were access issues regarding processors and retailers in the primary actor grouping, they are well represented in the CDA phase of this research. More detail relating to the breakdown

of stakeholders interviewed can be seen in **Figure 5.6**. The numbers attributed for each stakeholder relate to the grouping for this research, however the dashed line on the diagram shows that some participants associated themselves with more than one stakeholder grouping.

Given the wide variety of stakeholders that needed representing, I followed a non-probabilistic sampling strategy. As with the critical discourse analysis, this followed a maximum variation sample, also known as heterogeneous sampling (Patton, 2002). The initial sampling was purposive, as I wanted to ensure members from each stakeholder group were represented in the interview phase. Purposive sampling involves defining specific participant criteria and deciding who will take part in the research (Oliver, 2006). This ensured control over the number of dairy farmers interviewed, which prevented overrepresentation of this stakeholder and made sure my own researcher biases were restrained, as discussed in **Section 5.12**. A limitation of undertaking purposive sampling is the subjectivity of the process; if another researcher was to undertake this study, they might choose a different structure for the sample (Battaglia, 2008). Although such limitations mean it is
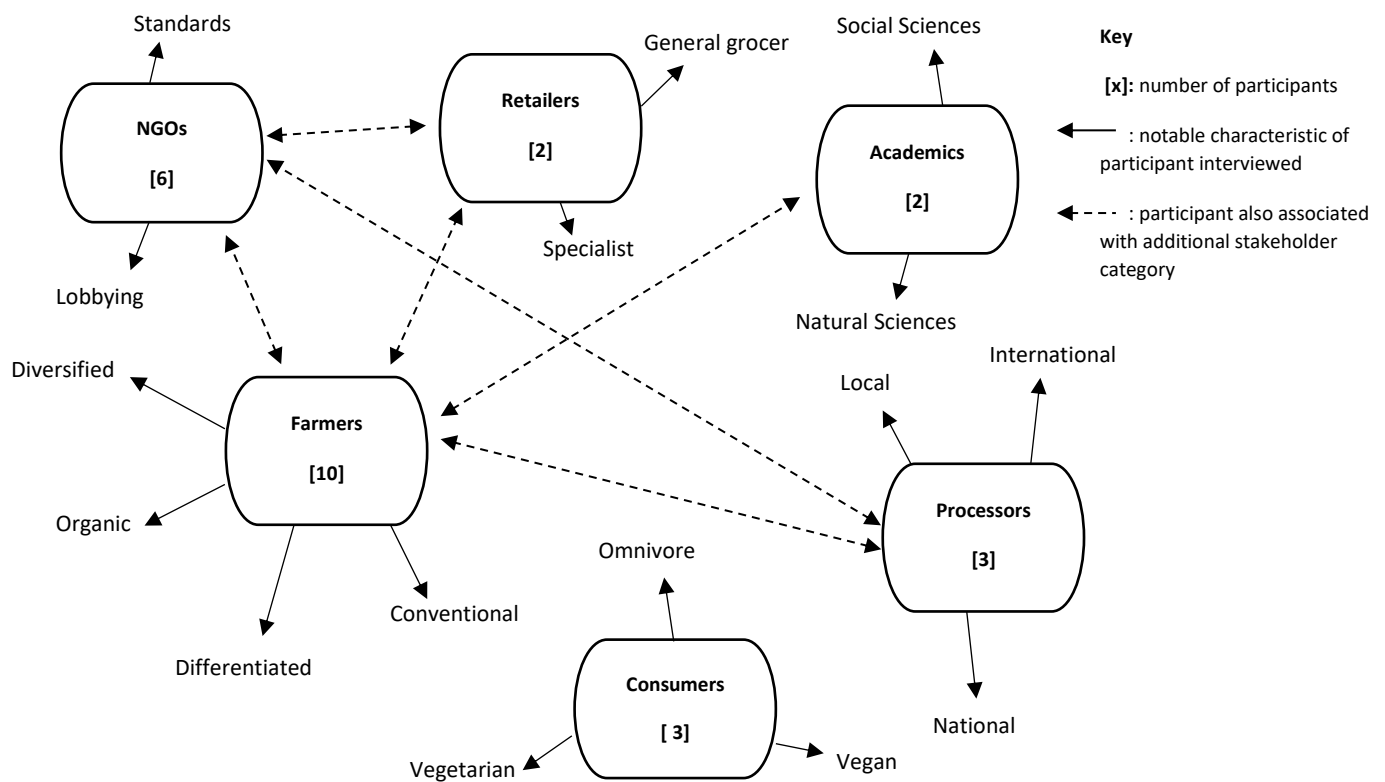
Figure 5.6: Interview map of participant stakeholder groupings

difficult to generalise the findings (Bryman, 2012), this is not the intention of this research. Instead, the findings will provide an insight into the opinions and experiences of professionals across the dairy supply chain, as is consistent with the philosophy behind this research.

There were two instances in the research project where the participant suggested another individual that might be interested in taking part in the study. This is an example of snowball sampling, as it helps contact individuals that might otherwise be difficult to access (Atkinson & Flint, 2004). However, snowball sampling should be treated with caution, as overreliance on just one of these gatekeepers could introduce further bias into the research (David & Sutton, 2011). This issue is coupled with the notion that snowball sampling is biased anyway, due to the likelihood of participants identifying individuals with similar characteristics to themselves (Lee, 1993). As only one participant from each gatekeeper was approached, I have aimed to keep the introduction of any bias to a minimum.

5.9 Interviews: Data Analysis

The transcripts produced from the interviews will be explored by using the template analysis procedure. Template analysis aligns well with a constructionist perspective, as the method can be comfortably employed whilst acknowledging multifaceted and subjective interpretations (Brooks & King, 2014). The strength of the process lies in its adaptable structure and transparency, which respectively creates an efficient system that demonstrates the development of the coding structure (King & Brooks, 2017). For this project, the initial template is shown in **Appendix D**, and the final template is shown in **Appendix E**. Some may view template analysis as being too flexible, which makes it difficult for a simple focus to be found (King & Brooks, 2017). However, I believe that flexibility is the method's strength in this project, as it means the template can be adapted to capture the complexity of the dairy industry, as well as facilitate the use of theoretical lenses in the analysis phase.

The application of template analysis in the management discipline has been strengthened through the work of Nigel King, who remains a key figure in promotion of this analysis (King & Brooks, 2017). Due to his management-based approach and influential position, the procedure used in this template analysis is based on that of King & Brooks (2017). After familiarising myself with the data by reading through the

transcripts, 3 transcripts were coded initially, comprised of 1 example of each type of actor listed in **Table 5.4** in **Section 5.8**. These codes were clustered into a structure and, along with the findings from the CDA and the theoretical lenses, represented the initial template of a priori themes. Then, as each interview is analysed, this initial template was altered, with some themes being dropped and others being added. Once this development phase ended with the last interview, the final template was then applied to all previously-analysed interviews, ensuring that any earlier data related to themes later identified were captured fully. The final template then provided a structure to help write up the findings. As with the CDA, NVivo 12 software was used for coding of transcripts and the development of the template. The template analysis process used in this project is illustrated in **Figure 5.7**, which also highlights how CDA and the theoretical lenses link into the analysis process .
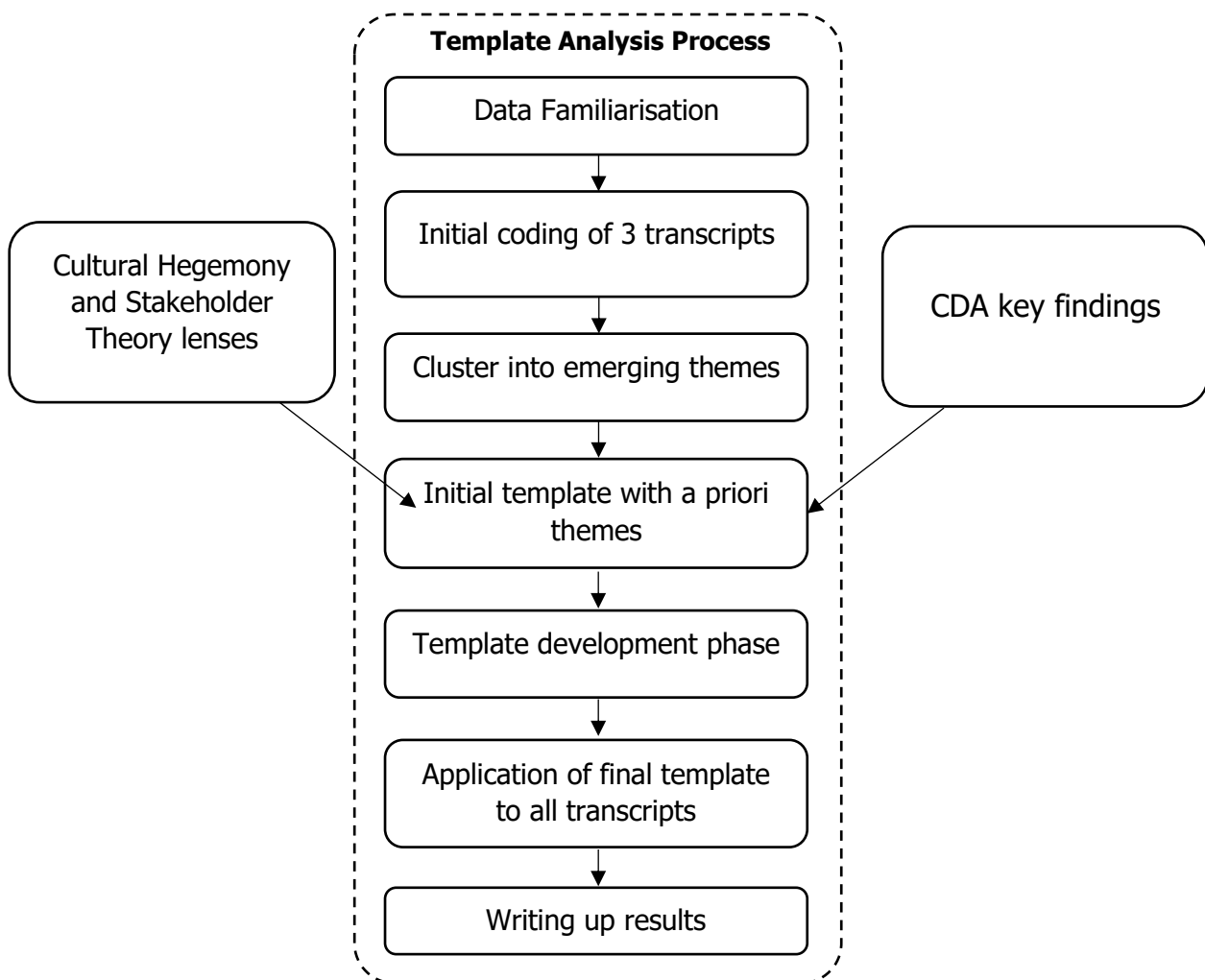
Figure 5.7: The Template Analysis process used in this study, based on King and Brooks (2017)

5.10 Theoretical Lenses

Throughout the thesis so far, I have repeatedly referred to the theoretical lenses utilised in this project: cultural hegemony, resource dependence theory and stakeholder theory. These theories are discussed in greater detail in **Chapter 4** and related to the project as a whole. However, this section aims to explore both how the theoretical lenses influence methodological issues in this project and how consideration of these lenses is built into the design of this project. A dedicated section to theoretical lenses has been created as theory informs many stages of the methodology process, including links with epistemology, analysis and researcher influence on the process (Collins & Stockton, 2018). Rather than discussing the theories in isolation, this section will follow the chronological ordering of the research process from literature review to findings. The important links between this projects methodology and the theoretical lenses are summarised diagrammatically in **Figure 5.8.**

Chapter 4 is where the theoretical lenses are introduced, with the links between the research questions and the theoretical frameworks being discussed in **Section 4.5**. Once moving on to the initial research design phase, both lenses influenced methodological choices. My ontological approach of bounded relativism links well with that notion of many different stakeholder groupings being able to influence an organisation. These different perspectives on the same situation can be seen as the different realities held by different groupings of individuals. This further aligns with the research questions, which call for consideration from multiple perspectives. Cultural hegemony also links with the philosophical foundations of this project, as the idea of having predominant and supressed values implies there will be differing subjective judgements on what is accepted as the dominant worldview.

Another decision taken in this initial research phase is the role that theory will have in the research, linking with the strategy taken. The research questions are not focused around testing hypothesis, but instead are seeking to explore and understand, as is mentioned in **Section 5.4**. To aid in this inductive process, resource dependence theory and cultural hegemony will be used to help make sense of findings and relate them to existing ideas and frameworks. It is in this sense that I use the wording
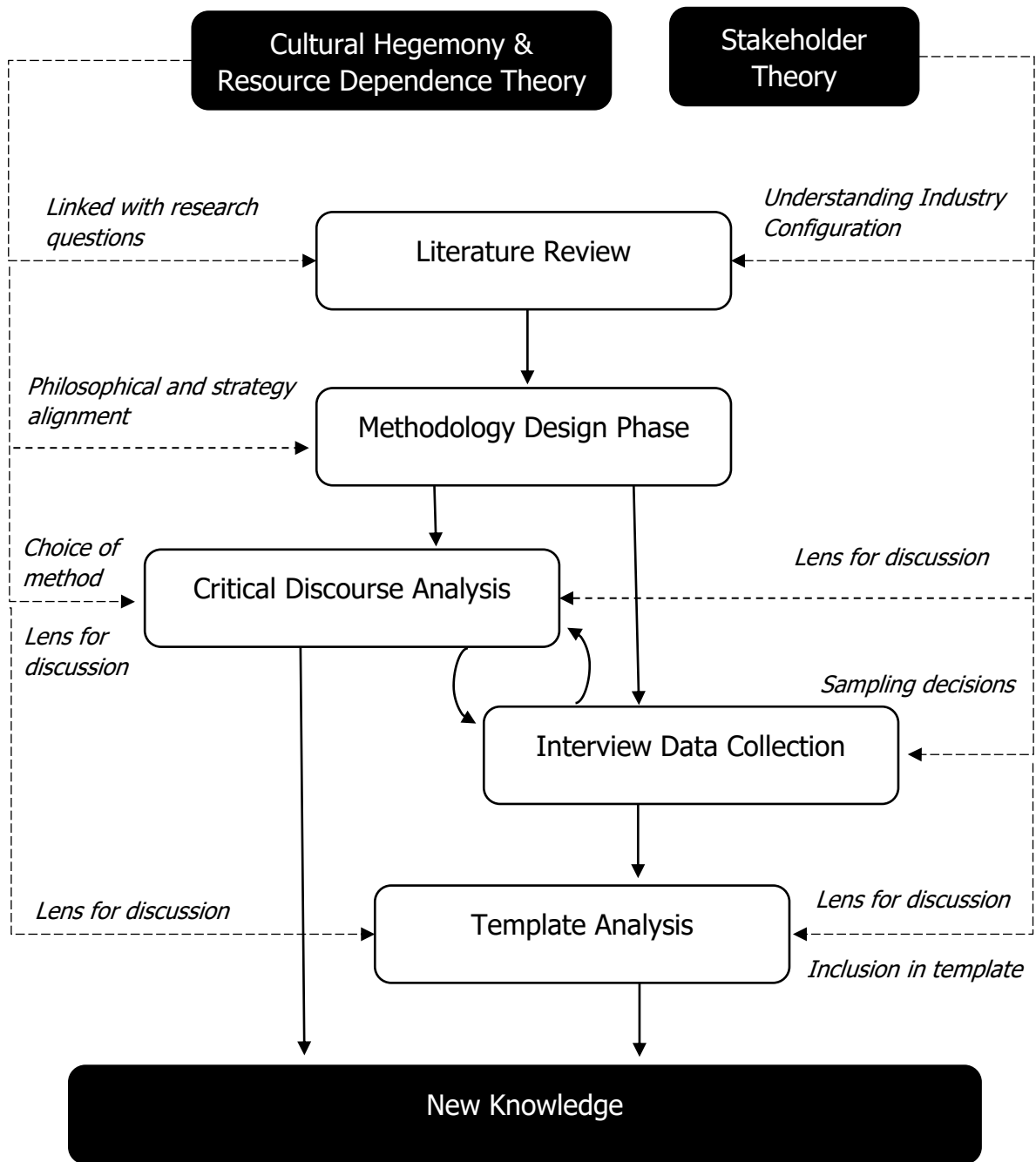
Figure 5.8: The relationship between the theoretical lenses and methodological considerations

theoretical lens, as they will be looked through when considering the implications of the findings.

The choice of CDA as a method was influenced by cultural hegemony, due to the power focused nature of this analysis. By taking the perspective of the least powerful players when considering a dominant perspective in CDA, the link with the

suppressed values against a common worldview in cultural hegemony is clear. As Collins & Stockton (2018) mentioned, the choice of a theory can reflect the role of the researcher, which is true in this project's case and is discussed in more detail in **Section 5.12**. When considering the design of the CDA process, stakeholder theory influenced the sampling of documents, as they were differentiated by their stakeholder grouping. Cultural hegemony also influenced document selection, as both powerful actors and less powerful actors required representation. The absence of the individual dairy farmer remains a limitation of the CDA, due to the lack of relevant documents. However, the creation of a specific *farmer* grouping in the interview phase was aimed at correcting this imbalance. Within the CDA process, the theories were applied as lenses for both critique of the dominant narrative and wider discussion.

When considering the interview design, stakeholder theory influenced the sampling strategy undertaken. Reflecting back on **Table 5.4** in **Section 5.8**, the actor groupings are defined by bringing together different stakeholder groups, relating back to the research questions' aim to explore different perspectives. Furthermore, trying to capture the different perspectives of multiple stakeholders within actor groupings influenced the individuals that were approached for interview as the fieldwork progressed. As the template analysis process began, cultural hegemony and stakeholder theory were included under the *theoretical lenses* first-tier grouping on the initial template. This inclusion provided a reminder to link back to the theoretical lenses whilst analysing transcripts, which facilitated regular reflection and created links with the theoretical lenses as the template evolved.

5.11 Ethical Considerations

From the design phase of this project onwards, ethical issues have been reflected upon, with action taken as appropriate. The need to consider ethics spans over the entire project, from the perspective of both the participants and myself. Additionally, CDA and interviews have their own respective ethical issues that will be reflected on in this chapter. It should be noted that this project received ethical approval from the Sheffield University Management School ethics committee.

Whilst no participants were approached in the primary data collection of CDA, there remained several ethical issues to consider when undertaking this analysis. Indeed, the first issue comes from this very lack of participant interaction, relating to the initial collection of the discourse. As all 20 pieces of discourse were publicly available and intended for public use, there appeared to be no barrier in their inclusion in this study. Although a critique is offered of the powerful players in the dairy industry that control the dominant sustainability narrative, I do not want to cause reputational damage to any one particular organisation. As such, the identities of the discourse authors have been anonymised, with an acronym based on stakeholder category used in place of an organisational name, as shown in **Table 5.3** in **Section 5.5**. As lengthier quotes may result in identification of the discourse author, as smaller word count as possible will be adhered to. Rather than thinking about a particular real-world organisation, I want the reader to consider the discourse as from a generic organisation that is illustrative of their particular stakeholder group. Ultimately, the aim of critical discourse analysis is ethical, as it intends to act as an enabler of social action to produce greater equality in society (Graham, 2018). As is demonstrated in this section, I have strived for this project to be undertaken with this ethical aim weaved throughout.

As well as considering ethical issues from the perspective of the subject, I have reflected on the problems faced in this project as a researcher. When considering the CDA phase, the notable problem from the researcher perspective is honesty with the reader. As the critical discourse analysis process is inherently critical, it is important from a moral perspective that my position is made clear, so as not to deceive the reader (Graham, 2018). To reiterate for emphasis, this discourse analysis comes from the perspective of the least powerful in the dairy industry, including farmers and smaller processors (Glover *et al*, 2014).

When considering the interview phase of this project, the subject under study shifts from documents to human beings. As such, this raises a number of ethical considerations to address in this section. When considering issues from the participant perspective, three main ethical concerns stand out: informed consent, participant anonymity and storage of confidential data. Whilst the subsequent paragraphs will explain how these issues were addressed, it should be noted that this research project has been designed in accordance with the ethical advice given

by the Economic and Social Research Council (2015), as they are the body who are funding this research. The Framework for Responsible Innovation (Engineering and Physical Sciences Research Council, 2020) has also been considered in this project's design, as is demonstrated through my reflections on the research process and the thematic summary sheet disseminated to all interview participants.

To define informed consent fully, Israel & Hay (2006) break down the concept into its two constituent parts: informed means the participant clearly understands the research and their role in it, whereas consent indicates that the participant is voluntarily taking part in a study. In this research, the participants were informed by reading a participant information sheet before taking part, which was sent over by email. To ensure they clearly understood the situation, the participants were also given an opportunity to ask any questions, either on the telephone or over email. When in the briefing stage of the interview, but before the Dictaphone was switched on, the researcher read out key information to the participant to consolidate their understanding and confirm they had been informed. A copy of both the participant information sheet and the interview schedule containing briefing prompts can be found in **Appendix F and C** respectively.

Once the participant is informed, consent was then sought and recorded though a consent form, which was signed by the participant and the researcher (Sieber & Tolich, 2013). Courser (2008) mentions that the consent form contains, inter alia, verification regarding participant harm and the right to withdraw. As such, the participant was clearly informed on the consent form that they could choose to not answer a question, or withdraw from the research completely, at any point of the data collection process without needing any reason. Whilst a printable copy of this consent form was initially created, the progression to telephone interviews led to the document also being signed digitally using an online intermediary platform called Google Forms. A copy of the consent form in both the physical and digital format can be found in **Appendix G**. Participants were also verbally reminded of their right to withdraw in the briefing stage of the interviews. All information sheets and consent forms were prepared in line with guidance on General Data Protection Regulations.

After the interviews had taken place, quotes from participants are vital to illustrate themes found during the analysis phase. However, any revelation of a participant's

identity would break confidentiality and could cause distress and disruption to their lives (Bryman, 2012). It is therefore important to ensure participant anonymity, which means hiding the real identities of participants (Wiles, 2013). When considering quoting from interview transcripts, this means giving pseudonyms to all participants (Wiles, 2013), as well as changing locations and other identifiable characteristics. To replicate an image of the participant faithfully in the readers head, the pseudonyms chosen in this project correspond to the actual age and sex of the participant. As the research involves looking at different supply chain members, the participant's stakeholder group in the supply chain is also disclosed in the analysis. Due to the broad nature of stakeholder groupings, I do not believe such categorisations will risk the anonymity of participants. Nevertheless, permission for this disclosure was sought on the consent form.

In addition to anonymity, confidentiality can also be secured through effective storage of data (Ward & Westlake, 2004). Following the guidance given by Holmes (2004), any physical documents were filed away in a locked cabinet at the researcher's home and any electronic documents were saved onto a USB stick, which will also be stored in the locked cabinet. Additionally, any laptop or desktop computer used during the research will always be password protected. After the research project has finished and the PhD is awarded, all records and documents will be deleted or shredded. However, one full anonymised interview transcripts will be included in the PhD thesis' appendices as evidence, for which informed consent has been sought on the consent form. A full consideration of how data were managed throughout this project can be found in the data management plan shown in **Appendix H**.

 Finally, when considering ethics throughout the interview process from the researcher perspective, personal safety when both in and out the field is paramount. To address the risks facing me in this phase, I created a fieldwork risk assessment. The purpose of this document was to highlight potential risks in the research process, and facilitate the design of measures to lower the level of risk faced. For instance, I did not feel comfortable using my personal phone number when speaking to participants, as this provides a means of potential unwanted contact after the interview process is finished, blurring personal and professional life. To address this, a work phone number was established and used when undertaking telephone

interviews. The entire risk assessment document can be found in **Appendix J**. A summary of all the issues considered throughout this section can be found in **Table 5.5.**

Table 5.5: An overview of the ethical issues faced in this research project

		Perspective	
		Participant/Subject	Researcher
Method	Critical Discourse Analysis	• Availability of documents for use • Reputational damage of document author	• Honesty on positionality in the CDA process
	Interviews	• Informed Consent • Anonymisation of participants • Storage of confidential data	• Risk to personal safety

5.12 Researcher Background and Reflections

A reflection on relevant experiences and past research projects is not only important for providing a fuller picture for justifications (Silverman, 2013), but it affords an opportunity for the researcher to behave reflexively. Byrne (2016) discusses reflexivity in relation to researcher bias, stating any assumptions a researcher has should be made explicit, and consequently be acknowledged in the design of a research project. Therefore, this section creates a space for acknowledging the links between my own experiences before and during the PhD progress, as well as any subsequent decision making.

I grew up in a rural community and lived on a farm that raised both cattle and sheep. Although managed by someone else, I came into close contact with the daily

workings of the farm, including hand rearing young livestock. Couple these childhood experiences with peers that own and operate other farms, including dairy farms, and it becomes clear why I have always felt a strong affinity to the farming community. As is shown in the objectives listed in **Section 5.2**, this project considers sustainability and power relations across the entire UK dairy industry, not just from the perspective of farmers. As the aim of this project is to improve the sustainability of the entirety of the dairy industry, the livelihoods of farmers would also improve, providing a personal motivation for me to undertake this project. However, this affinity with the farming community should not interfere with portraying a fair and comprehensive overview of the dairy industry. As such, I have acknowledged this in **Section 5.6**, through both the initial method selection and the perspective taken by the author in the critical discourse analysis. **Section 5.8** also addresses this issue of fairness through the participant sampling strategy implemented when interviewing. The desire I have to create a fairer, more sustainable future for all stakeholders in the dairy industry also encouraged me to utilise cultural hegemony as a theoretical lens. This is due to the cultural hegemony's capability to highlight any suppressed narratives and elevate them in importance next to the dominant narrative identified, ensuring attention is given to all stakeholder perspectives on sustainability, not just the most powerful voices.

This research project has its foundations in my MSc dissertation, which considered sustainability from the perspective of the dairy farmer (Else, 2015). It was in that initial dissertation that I realised my passion as a qualitative researcher. Even though I thought my strength was always numeric, the research process led me to realise the high value I place on the lived experiences of individuals. This shapes my personal research philosophy, which is discussed in greater detail in **Section 5.3**.

Formed in the first year of my PhD, the initial plan was to undertake a creative interview technique that involved creating metaphorical models from LEGO. The paper that introduced me to the LEGO technique was by Fletcher *et al.* (2016), who recommended the method could be applied to a supply chain context to help normalise complex topics between different stakeholders. The major constraints with this method were the time-consuming nature of undertaking the interview and participant willingness to undertake a novel interview. Once in the field, I quickly realised I was undertaking what Flick (2009) refers to as an expert interview, with a

view to collect knowledge from experts across the dairy industry to answer the research questions. There are two key drawbacks of interviewing experts: they are under time pressure in their jobs and the interviewer needs to appear as competent and knowledgeable (Flick, 2009). The literature review, CDA, a thorough interview schedule and my previous farming experience prepared me to appear as competent and knowledgeable. However, the lack of time available from the participants, coupled with the access issues of contacting and building rapport with appropriate participants, led me to depart from creative interviews and instead follow the usual spoken format.

To speak with individuals all over the UK and remove geographic constraints, the majority of interviews were conducted over the telephone. I agree with Ward et al (2015) that without being seen, the participants felt less judged and only heard an actively listening researcher on the end of the phone. Verbal acknowledgement of interest was highlighted in the interview schedule, as I usually nod my head in agreement when speaking, but needed to convey this same sentiment on the telephone.

5.13 Chapter 5 conclusion

Intrinsic to the research process is the researcher. By telling the story of this methodology from my perspective, through the guidance of Murcott's (1997) questions, I have shown how contextualising the researcher helps illustrate the evolution and strengthening of the project over time. With foundations rooted in my passion for farming and my MSc project, this research considers sustainability from the perspective of several different stakeholders in the supply chain, with an explicit focus on the perception of power held by these different actors. The objective of this project is to explore and develop an understanding of sustainability and power in the dairy industry. Aligning with these objectives is the interpretivist theoretical perspective I have taken in this research, which refers to the value I place on the subjectivity of individual values, acknowledging the existence of multiple realities.

The philosophical basis of this project has also influenced the choices made regarding research strategy and the design. The importance assigned to the

subjective individual led me to follow a qualitative research strategy that takes an inductive approach, emphasising the need to explore and understand. The UK dairy industry is used as a case study and is explored through a multi-method approach, including both critical discourse analysis and semi-structured interviews. Guided by Fairclough (2001) and Bloor and Bloor (2007), the critical discourse analysis was undertaken first using documents from the UK dairy industry. Then, the interviews took place with different stakeholders across the dairy industry.

Once the interviews were transcribed, a template analysis was undertaken, following the approach given by King and Brooks (2017). The initial template contained a priori themes influenced by the findings from the critical discourse analysis and the theoretical lenses: cultural hegemony and stakeholder theory. These theories have been shown to guide decisions made throughout the research process and align the research design with the project as a whole. Finally, ethical issues have been considered throughout the entire project, focusing on both participant and researcher perspectives.

Summary of key points

- The theoretical perspective assumed in this research is interpretivist, influenced by the constructionist epistemology and bounded relativist ontology
- A multi-method qualitative case study is proposed in the UK dairy industry, comprising of a critical discourse analysis and semi-structured interviews.
- Triangulation has been built into the research strategy, to improve reliability of results.
- Initially, grey literature from different stakeholders in the UK dairy industry was utilised in the critical discourse analysis.
- Then, 26 semi-structured interviews took place across several stakeholders in the dairy industry, with the resulting transcripts undergoing a template analysis process.
- Ethical and theoretical impacts on the methodology are considered, as well as the positionality of the researcher.

6

Dominating suppressed sustainable storylines

6.1 Opening Remarks

"Power is everywhere; not because it embraces everything but because it comes from everywhere." (Foucault, 1978).

This quotation from Foucault provides a fitting introduction to this chapter on the findings of the critical discourse analysis (CDA), as it provides a reminder of why CDA is utilised in this study. As discussed in **Chapter 2**, power can be wielded in a supply chain to both the benefit and detriment of other stakeholders. The complexity of the dairy industry and the power imbalances already noted in the literature further stress the importance of understanding the concept of power and its impacts on the dairy supply chain. **Chapter 5** explains how the approach and focus of CDA make it an effective method for exploring power and its transmission through discourse. But, as the headline Foucault quote reminds the reader, discourse is just one of many different ways to transmit and exercise power. Therefore, whilst the findings in this chapter are of great benefit to addressing the research questions of this study, it must be remembered that only one means of power transmission is considered. The complexity of power relations within the dairy industry should not be underestimated and oversimplified, but this CDA offers an insightful illustration of how power diffuses through discourse around the dairy industry.

Initially, information regarding the discourse under consideration will be given, followed by the context surrounding these documents, which is the first step of the CDA process

as shown in **Figure 6.1**. The concept of discourse coalitions will then be introduced, strengthening the relationship between cultural hegemony and the critical discourse analysis methodology. Based on **Figure 3.3**, **Figure 6.1** relates each step of the CDA with their corresponding subheadings within this chapter. After the context, a separate section is dedicated to each of the two thematic structures that emerged from the analysis. These findings are then discussed and critiqued through a cultural hegemony lens and discourse coalition concept, after which a concluding remarks section is given to reiterate the key points from the CDA. A dominant sustainability narrative in the dairy industry, perpetuated by powerful players in the supply chain, is identified, but so too are the suppressed voices of revolutionary stakeholders affected by the practices of the dairy industry. The presence of such opposition would come as no surprise to Foucault, who famously remarked:

"Where there is power, there is resistance." (Foucault, 1978)
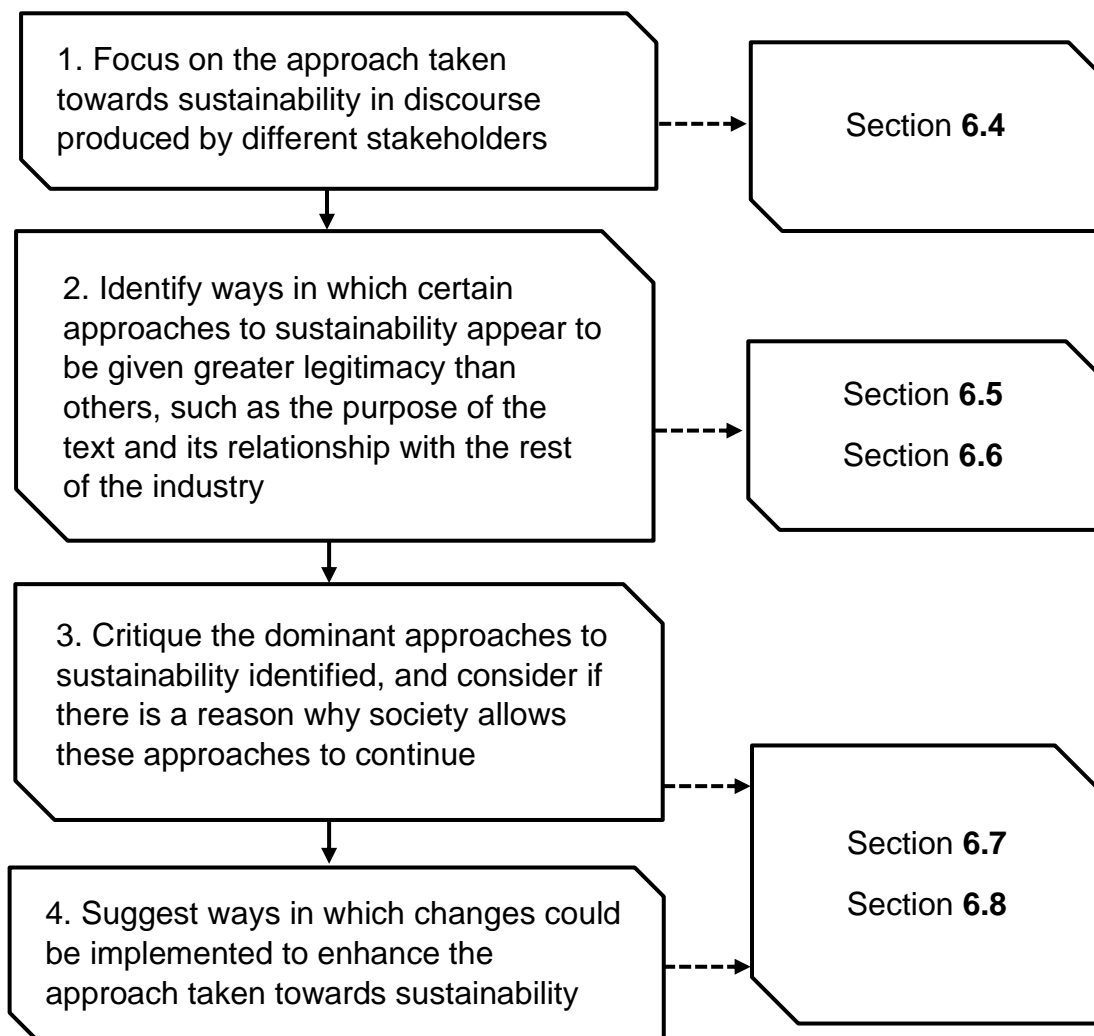
Figure 6.1: The chapter structure of the Critical Discourse Analysis process

6.2 Selection of Documents

As was explained in **Section 5.6**, a maximum variation purposive approach was taken towards the sampling of the documents (Patton, 2015). This was applied from a stakeholder perspective, as the approaches taken to sustainability by these differing parties are the point of interest, demonstrating the influence stakeholder theory had on the design of this project. **Table 5.3** highlights the different categories of document that have been selected for analysis. The acronyms are used to refer to the different pieces of text throughout the analysis. A description is provided to give context for the reader, but is intentionally vague to protect the identities of the authors, addressing an ethical issue discussed in **Section 5.11**.

One of the main criteria for data selection was that each piece of text had to have application to the UK dairy supply chain, given that this is the scope of the project. As well as representing a different stakeholder in the dairy supply chain, the other restriction placed on document selection was that they had to be published from 2017 onwards. This interval is purposely narrow to ensure the approaches being compared in the texts are all of a contemporary nature and were produced and distributed within the same societal context, whose importance to CDA has been previously emphasised. Reflecting on the issues facing the UK mentioned in **Chapter 1**, this interval corresponds to the period of Brexit, but before the Covid-19 pandemic. In total, 20 pieces of text were selected for this study, including examples of frameworks, reports, policies and campaign leaflets that were authored by stakeholders in the UK dairy industry. All documents could be accessed digitally from the internet in the public domain, and appeared to be designed for consumption by any interested parties.

6.3 Discourse Coalitions

The concepts behind cultural hegemony will be primarily applied in this study by drawing on Hajer's (1993) discourse coalition framework, which builds an effective link between Gramsci's cultural hegemony and the use of critical discourse analysis as a method. Hajer defines a discourse coalition as "*the ensemble of a set of story lines, the actors that utter these story lines, and the practices that confirm to these story lines, all organised around a discourse*" (Hajer, 1993, p. 47). The concept of

discourse coalitions has been successfully applied in existing management literature to make sense of power dynamics, such as understanding how think-tanks enact policy change (Pautz, 2011), and highlighting the diverse perspectives that can exist on an issue, such as waste management (Duygan *et al*, 2018) and the circular economy (Alvarado *et al*, 2021). In this study, the interest is in how actors of the industry transmit their power through discourse to influence sustainable supply chain management practices in the industry; uncovering this structure through application of cultural hegemony and discourse coalitions represents a novel contribution of this research.

Hajer takes a Foucauldian and Gramscian approach toward discourse analysis, considering the power and political relations underlying environmental discourse (Hajer, 2005; Hajer, 1995). Hajer sees the environmental crisis as a discursive one, where understanding can be sought through uncovering many individual interpretations of the same complex issue (Hajer, 1995). Such individual interpretations can take the form of a story, where complex issues are distilled into an account where the narrators can address and make sense of a topic; Hajer refers to these understandings as storylines (Hajer, 2005), which are used in this study to distinguish between the different interpretations of sustainability found within a discourse grouping. The concept of discourse coalitions focuses on the alignment of actors with these storylines through the language used (Alvarado *et al*, 2021), examples of which are evidenced in this research through the use of quotations from the sustainability literature in the dairy industry. This study defines discourse as the context and practices around a specific grouping of texts and utterances (Hajer, 2005; Mills, 2004), such as the traditions used in the formation of sustainability-related texts in the dairy industry. Furthermore, any discussion around the concept of common sense relates to underlying knowledge that is accepted in society without critical thought, and is embraced by most as a generally positive concept (Gramsci, 1971). For clarity, these key definitions are summarised in **Table 6.1**, with the link between them illustrated in **Figure 6.2**. Note that **Figure 6.2** shows the dominant storyline as being seen as common sense, excluding any alternative narratives.

An assumption when drawing on a neo-Gramscian lens, such as discourse coalitions, is that the exertion of hegemonic power is conceptualised as domination, rather than a liberal framing of leadership (Persaud, 2016). In a sustainable supply chain context,

this research will demonstrate that the contextual nature of the research is important when implementing this framing. The adverse effects shown felt by several stakeholders in the dairy supply chain due to hegemonic power motivates the categorisation of forceful domination, rather than effective leadership. Persaud (2016) suggests what unites these categories is legitimacy, and it is uncovering the mechanisms behind the securing of this legitimacy in the dairy supply chain that is exposed in this research.

Table 6.1: Definitions of storyline, discourse and common sense

Concept	Definition	Link between concepts
Storyline	A condensed account of facts related to a complex topic, helping the narrator to interpret and make sense of the subject. Multiple individual storylines can exist for the same topic (Hajer, 2005)	Within a particular discourse, multiple storylines can exist. Groupings of stakeholders can share storylines and produce their own interpretations, referred to by Hajer (2005) as discourse coalitions. Common sense links with how the dominant storyline is perceived by society.
Discourse	The context and set of practices around a specific group of texts and utterances (Hajer, 2005; Mills, 2004)	
Common Sense	Underlying knowledge held in society that is accepted without critical thought (Gramsci, 1971)	
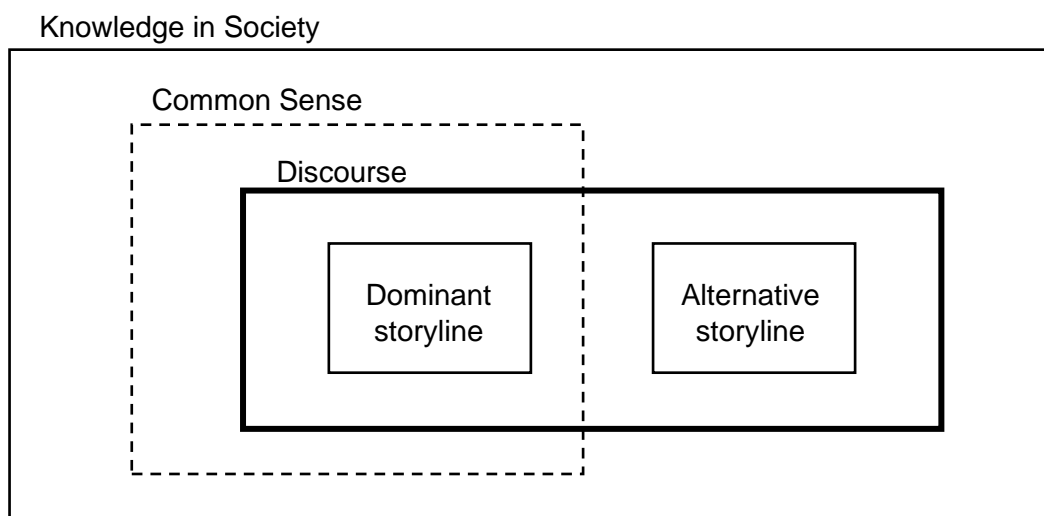
Figure 6.2: The relationship between storyline, discourse and common sense

6.4 Context

As was emphasised in **Section 5.6**, the critical analysis is coming from the perspective of those who have least power, relative to those who can exert the greatest control over other stakeholders. It is important to note this framing when considering this discussion on any findings. Before exploration of the narratives emerging from the critical discourse analysis, the context in which the discourse is situated needs considering.

The dairy industry is one of historical importance for the UK, with the price of milk being determined by locality and technological advances (Taylor, 1974). The image traditionally conjured up in the public imagination is one of cattle being milked in a rural farmhouse setting (Taylor, 1987). The images of cows out to pasture in fields features in several of the documents, suggesting this rural ideal is something the intended audience still expects to see. In the UK, milk was historically stored in churns, then picked up by milk lorry, or taken into urban areas by rail. Eventually, milk tankers were introduced, and as longer shelf life became expected of milk, supermarkets were favoured over delivery from the localised milk man (Wilbey, 2017).

Another key historical institution in the UK dairy industry is the Milk Marketing Board (MMB), which ran from 1933-1994 and acted as an intermediary between small farmer business and large powerful processor organisations. The MMB was a large organisation that helped SMEs by encouraging best practice, sharing new scientific techniques, publicising the dairy industry and ensuring milk was bought from farmers. The eventual demise of the MMB was coherent to the implementation of free-market and deregulation reforms in the 1980s (Empson, 1998). Several institutions have filled the void created by the cessation of the MMB, including lobbying groups and collaborative organisations. A diagram comparing a contemporary milk supply chain with that of a past configuration including the MMB is shown in **Figure 6.3**.

Two points of interest relating to these industrial organisations are their focus on economic issues and difficulty in obtaining a consensus over what sustainability is. As demonstrated through the activities of the MMB and the evolution of milk delivery and purchase, the dairy industry has been historically concerned with economic issues of sustainability, mirroring the prevailing economic paradigm in society. As a shift takes place to consider social and environmental issues of sustainability, their validity may

initially have to be backed up by an economic argument to ensure acceptance. Secondly, the multiple organisations acting on behalf of different stakeholders in the dairy industry all have the potential to champion sustainability on behalf of the dairy industry, but the different, and sometimes competing, agendas of the organisations mean approaches to sustainability are inherently idiosyncratic; there is an absence of a unifying body.

A contemporary issue facing the UK dairy industry has been the withdrawal of the UK from the European Union, a process known as Brexit. The European Union has played a key role in UK dairy industry, from the introduction, and later abolishment, of milk quotas in 1984 (Wilbey, 2017), to the farming subsidies paid through the Common Agricultural Policy (Downing, 2016). Uncertainly in the dairy industry has therefore been heightened in recent years, with concerns expressed over regulatory changes, self-sufficiency capabilities (Bellamy, 2016), increases in trade costs and labour market changes (Bakker and Datta, 2018), as well as the announcement of the gradual phasing out of farming subsidies (Great Britain. Department for Environment, Food & Rural Affairs, 2020b). Given this uncertainty, worries about the economic sustainability

A contemporary UK dairy supply chain

A historic UK dairy supply chain featuring the Milk Marketing Board
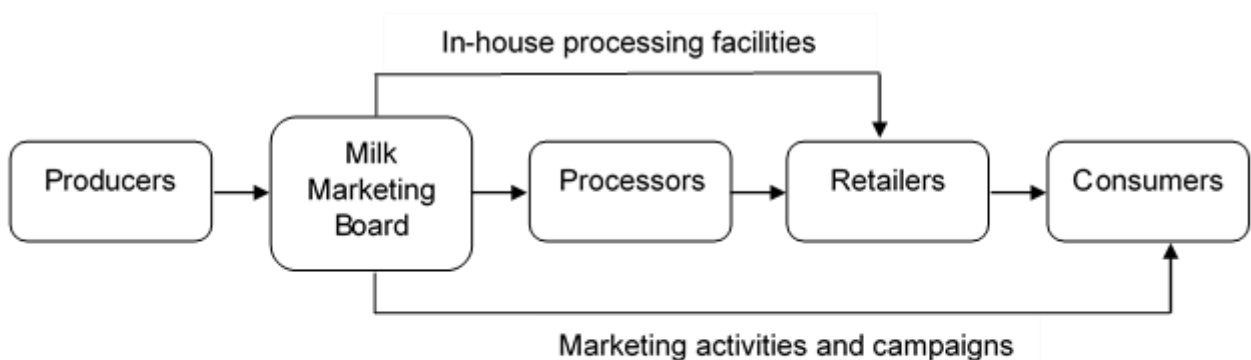
Figure 6.3: A comparison between an example contemporary and historic UK dairy supply chain

of the dairy industry might be forgiven. The key points to acknowledge regarding the context of the discourse are summarised in **Table 6.2**.

Table 6.2: Context key points
- Locality and technology have shaped the UK dairy industry over time, with the now abolished Milk Marketing Board playing a major role in that system.   - The prevailing economic paradigm in society continues to shape the UK dairy industry and its practices.   - The presence of many stakeholders, coupled with the absence of a unifying organisation, may explain the incidence of multiple approaches towards tackling sustainability.

6.5 Approach taken to sustainability

From analysis of the documents, two main separate sets of themes seem to have emerged and are illustrated graphically in **Figure 6.4**: approach to sustainability practices and role of stakeholder. **Figure 6.4** shows the trend that emerged between the two themes when considering the stakeholders of the dairy industry. It is at the nexus of these two themes where the dominant and alternative storylines emerge, which are given in **Table 6.3** alongside illustrative quotations from the analysed documents. The following section will offer evidence of the storylines in the texts through linguistic and grammatical analysis. Blending this detail together with a broad industry approach, considering both the position and power held by the stakeholder authors within the dairy industry, as well as the contextual information shown in **Section 6.4**, the commonalities and differences taken by stakeholders become apparent and were grouped into the storylines presented. A criticism of taking a neo-Gramscian approach is that is can overly structure a topic, not fully appreciating the complexity of a situation (Andreé, 2011)
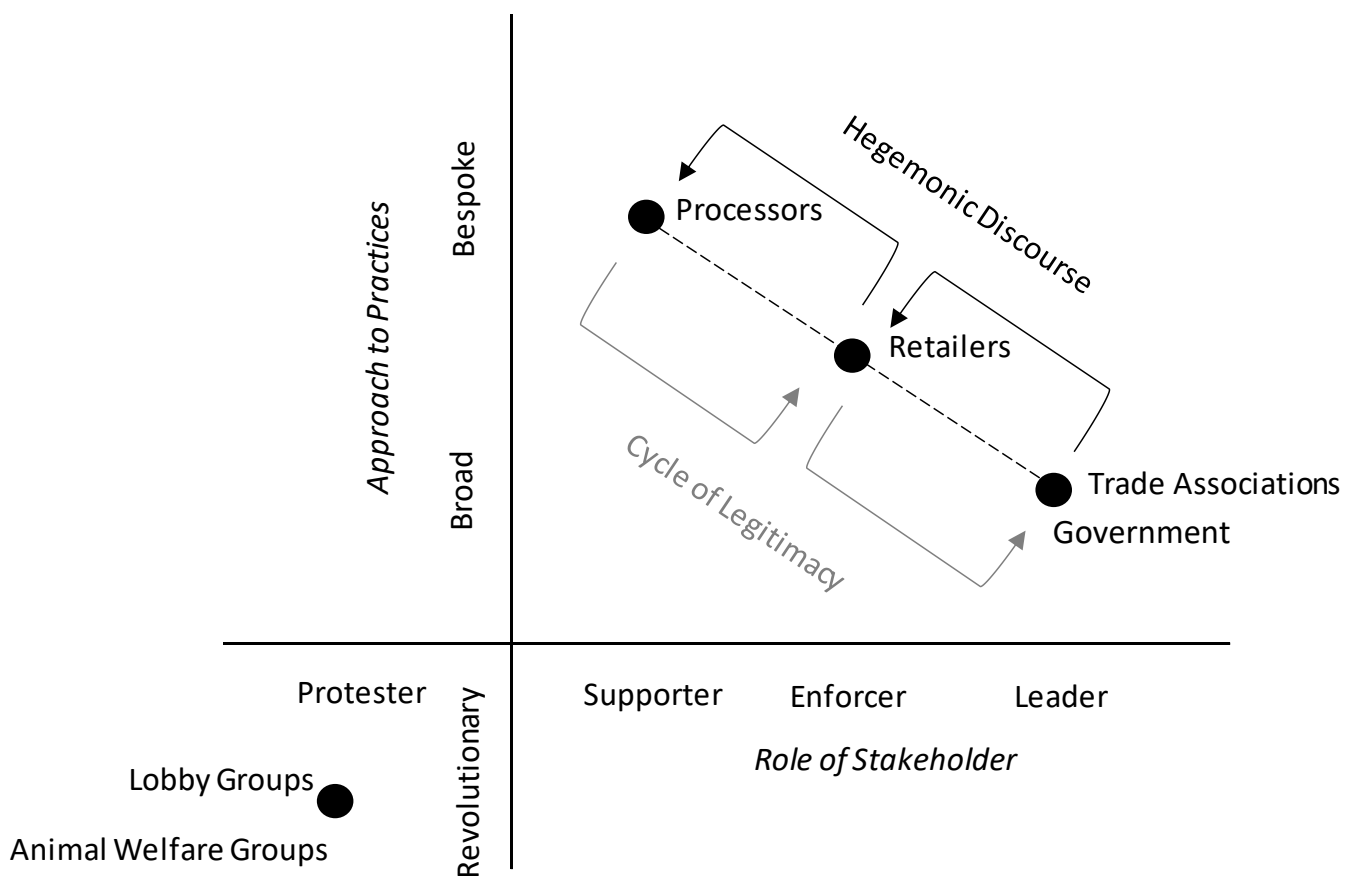
Figure 6.4: A diagram of the storylines in relation to the identified CDA themes

Table 6.3: Definitions of the dominant and alternative sustainability storylines

	Dominant Storyline	**Alternative Storyline**
Definition	A traditional "box ticking" development approach to sustainability, where social and environmental issues are isolated and reported on separately. Validated by external industry standards and goals.	A revolutionary approach to sustainability, where economic, social and environmental concerns should be valued equally and embedded in practices. Validated through intrinsically fair and respectful treatment of all living beings in the dairy industry.
Sustainability scope	*Economically-driven sustainability*	*Ecologically-driven sustainability*
Associated Stakeholders	*Supermarkets, Large Processors, Trade Associations, Government*	*SMEs, Farmers, Lobby Groups, Animal Welfare Groups*
Supporting quotations from the documents	*"[We have] achieved great success including higher milk yields, improved animal welfare, and a price guarantee."* *"[Dairy Farmers] all work to a detailed set of animal welfare standards"* *"We believe that becoming a truly consumer centric organisation is key"* *"The aim of achieving nutrition and socio-economic improvement goals is widely recognized."* *"We have implemented a series of initiatives to ensure [our sustainable] objectives are delivered".*	*"When trying to resolve the sustainability issue, there is a wider context [than the environment] to consider."* *"Farmers have become commodity slaves"* *"Building better, fairer supply chain relationships"* *"The only reason to zero graze or intensively farm animals is to lower production costs and increase product yield"*

Whilst further levels of division and apportionment of importance appeared to vary between specific stakeholder groups, the division into two storylines is intentional, to highlight the suppression of an alternative narrative with clear and undiluted emphasis. The dominant approach taken by powerful stakeholders towards sustainable practices, who take an instrumental approach towards the TBL, forms the basis of the dominant traditional development storyline. The documents from TA1, TA2 and GD both talk about sustainable goals in general terms, only providing specific examples to highlight certain case studies. Examples of such generic terms used regarding stakeholder purpose include *"collaboration with partners"*, *"striv*[ing] *for environmental best practice"*, *"improve the environment" shar*[ing] *ongoing activities"* and *"ensur*[ing… a] *thriving dairy industry".*

Given that these documents were designed for multiple stakeholders in the dairy industry to consume and utilise, the broad nature of the written voice may well be unsurprising. However, this creates a knowledge gap that may place smaller members of the supply chain, such as SMEs, at a disadvantage. By creating a general 'one size fits all' approach to sustainability that needs to be tailored by the end user, organisations that have access to more resources will have the time and money to be able to act on framework recommendations quicker and more effectively than a small organisation or sole trader that lacks the appropriate resources and expertise. Furthermore, the use of ambiguous adjectives, such as *best* and *thriving* in the previous quotations, can lead to misinterpretation through the subjective opinion of the reader.

When considering the context in which these documents were created, the boards that steer the agenda of TA1 and TA2 are formed of key representatives from large supermarkets, processors and other trade associations. Hence, it would make sense for them to put forward suggestions that are achievable for their respective organisations, without putting in as much thought for others. Similarly, GD will be answerable to the wider government, influenced by political agenda, economic growth and global initiatives, and may subsequently want to achieve visible successes. In a post-Brexit UK, the appearance of success may be more important than usual, especially after the "*bureaucratic Common Agricultural Policy*" has taken its *"toll on wildlife"*. In a country that historically values a neo-liberal economic policy (Jones *et al*, 2005), serving only yourself may be tolerated as acceptable. However, take into

consideration what Krause *et al* (2009) said about only being as sustainable as your suppliers; clearly in a world where the paradigm is shifting towards holistic consideration of the triple bottom line, aid and assistance needs to be offered to those in less powerful positions. This is where socially sustainable actions could effectively be implemented, linking with the importance of collaboration in facilitating effective sustainable supply chain management (Yawar & Seuring, 2017; Gimenez & Sierra, 2013; Drake & Schlachter, 2008) and the implementation of circular economy practices (Ciccullo *et al*, 2021).

The bespoke approach is the next part of the traditional development storyline; rather than the responsibility lying with the general guidance to stakeholders, sustainability is so idiosyncratic and location-dependent that stakeholders need to accept responsibility themselves without the need of an intermediary. Examples from P1 and P2 demonstrating this bespoke ideal include *"us[ing our own] standards to drive continuous improvement"*, *"developing our own plan", "buy[ing] products and services from local businesses" and "zero waste to landfill… which we are very passionate about".* This location-dependent stance comes across clearly with P2, which uses imagery around family and community to embed themselves within their location and are responsive to the environment, rather than frameworks. By using *"local farmers"* that utilise *"traditional farming methods"*, and implementing *"regional supply chains"* to *"keep food miles to a minimum"*, the interlinkage between sustainable practices and locality becomes apparent. Just the use of *"local"* has connotations of a positive environmental image, not dissimilar to that of organic food (Paloviita, 2010). However, it is SMEs in these rural settings that find themselves in a weaker position than large corporations, but are expected to address challenging environmental issues imposed on them (Glover & Touboulic, 2020).

If the bespoke approach became the sole dominant storyline, a flexible external body that acknowledges idiosyncrasies faced by businesses would be needed to enforce a satisfactory level of sustainability standards. The onus would then be on the individual business to comply to standards and behave sustainably, rather than to voluntarily opt into frameworks that may improve business prospects. Indeed, **Section 2.3** explores the effect that power over other stakeholders can have on supply chain management. In the current broad-to-bespoke approach, the intertextuality employed in P1 and P2 documents aims to strengthen the rationale for their behaviour to the external reader,

as well as legitimising their sustainable efforts. Examples of this include being *"compliant with Red Tractor",* supporting the Prince's Countryside Trust or undertaking work *"facilitated by WRAP[1] and Dairy UK".*

S1 and S2 act as an intermediary between both the approaches identified so far; they take the broad guidelines and translate them into a set of expectations they expect from their suppliers and themselves. This intermediary role is highlighted through the importance S1 and S2 place on collaboration and creating standards along the supply chain, as demonstrated in *"We'll only achieve [the Sustainable Development goals] through creativity and collaboration", "We'll use [existing sustainability data] to shape future production standards"* and *""work*[ing] *more closely together* [between farmer and retailers]*".* S2 demonstrates the supermarkets' perceived role in being an intermediary by interpreting what supply chain sustainability means to them, then *"building farm systems to meet these principles"* by creating their own set of standards. When talking about their own standards, intertextuality plays an important role for both S1 and S2 in legitimising their activities by discussing where *"measures are adapted from"* and with which standards they *"100%... comply with".*

As well as flowing from broad to bespoke, both S1 and S2 identify bespoke challenges being faced and how they are overcome with broad guidelines, highlighting a gap in existing frameworks for trade associations to work on. However, this appears to be for self-serving promotional reasons, rather than for any altruistic motivation. For instance, when discussing about importance of *having "to be able to afford high standards"* if the industry demands them, S1 highlights how they have found a solution for a sustainability issue whilst showing off their credentials as a *"empowering"* and *"trusted retailer".* S2 makes a similar statement on how an action taken contributes to them being the *"most trusted"* outlet. Furthermore, when considering the lack of consensus around what sustainability means in the dairy industry, as mentioned the context section, S1 is filling this gap by clarifying a definition that unifies their suppliers in their understanding of the concept. Whilst this

---

[1] WRAP is a UK-based charity that promotes and encourages a transition in industry towards a circular economy approach (WRAP, 2019)

still falls short of industry-wide unification, it represents a move in a promising direction.

Countering this traditional development storyline is the revolutionary change storyline taken by AW and LG. They have been labelled as revolutionary as their sustainable ideal would be unable to coexist with the dominant sustainable storyline. AW comes from the animal welfare perspective *that "there's no reason to drink cow's milk",* and that dairy cows are "*manipulated*" and exposed to "*abnormal physiological demands*". On the other hand, LG reasons that the existence of a dairy industry is sustainable, but greater consideration needs to be taken of certain factors. This includes campaigning for *"contracts that are fit for purpose"*, helping farmers *"better manage risk"* and supporting greater farmer representation, as well as arguing that appreciating sustainability involves the *"contextualising of environmental impact[s]"* and rejecting claims against dairy produce based on "*a dearth of traditional science"*. These two revolutionary stakeholders represent the lost voices from the dominant storyline; how these lost voices are challenging the dominant storyline is discussed in more detail in the applying the cultural hegemony lens section. Key points from this section are summarised in **Table 6.4**.

Table 6.4: Sustainability approach key points
- The broad approach to sustainability is typified by frameworks produced by trade associations and government to guide other stakeholders. Note that these trade associations are not independent of other influential players in the dairy industry.   - The bespoke approach to sustainability is rooted in locational idiosyncrasies, where players have responsibility to action sustainable guidance.   - Intermediary organisations, such as supermarkets, act as interpreters between the broad and bespoke approaches, but may not always execute this altruistically.   - Revolutionary stakeholder approaches are identified, which do not fit in with the dominant broad/bespoke paradigm.

6.6 Stakeholder identity in the dairy industry

Besides the approach taken towards sustainability, the other main theme which has emerged from the analysis is that of stakeholder identity. As with the previous theme, the different stakeholder identities are illustrated in **Figure 6.4**. The stakeholder identities emerging in this analysis are that of leader, supporter, enforcer and protestor; the first three align with the traditional development storyline, whilst the protestor identity lies in the revolutionary change storyline. The documents by TA1, TA2 and GD have been interpreted as leaders. The stance they present is that of an innovator, a collaborator and an agenda setter. This is echoed through phrases used in the documents, such as *"provid[ing] a template replicated around the world"*, *"remain[ing] committed to improvement"*, *"collaborative spirit"* and *"ambitious targets"*. GD succinctly summarises the leader role in the quote *"If we work together to get this [sustainable plan] right, then a decade from now the rest of the world will want to follow our lead"*. Assuming the role of a leader has been linked with the broad approach taken to sustainability by TA1, TA2 and GD, where their place in the traditional development storyline is to provide wider guidelines and targets for others to follow and draw inspiration from.

Conversely, P1 and P2 appear to present themselves as supporters, not only of behaving sustainably by being *"aligned with… frameworks"* and *"help[ing] both the public and private sector"* address climate change issues, but also taking *"an active role supporting"* local community, charities and employees. The supports appear to present themselves as helpful, caring and diligent. Given that sustainability is not the expertise of the supporters, they also appear to have transferred authority to those who set guidance and accreditations, demonstrated by the intertextuality of organisations such as the Red Tractor, WRAP and Free-Range Dairy. Being a supporter has been linked up with the bespoke approach mentioned earlier; a supporter of guidance produced by a leader interprets and apply any given standards in their own situation.

The role of the enforcer seems to be assumed by S1 and S2, which marries up with the intermediary approach taken by the supermarkets towards sustainability. The stance presented by the enforcers is one of trustworthy, responsible and strong. Phrases used throughout the texts displaying these characteristics include

"strengthens our commitment to address [sustainability issues with] bold new targets", *"our goal remains clear: to be the most trusted retailer"* and to be *"agricultures most trusted partner"*. In a S2 sustainability report, repetition is utilised as a rhetoric device when discussing the pillars of their sustainability plan, which adds to the intensity of the point being made (Bazzanella, 2011). Furthermore, S1 and S2 discuss *"indicators"*, *"measures"* and *"performance scorecards"* based on guidelines issued by the leaders, used to assess the sustainable performance of their suppliers, which in the dairy industry include processors and farmers.

The flow of information consumption can start with TA1, TA2 and GD with broad guidelines, which are then interpreted and enforced by S1 and S2 and supported by P1 and P2. There is then a '*cycle of legitimacy'*, as the processors report back to the supermarkets, who in turn liaise with the trade associations and consult with government. However, the processor and supermarket members of the trade associations that set the frameworks somewhat blur the distinction between the roles of leader, enforcer and supporter. Whilst trade associations hold influence in their role as a leader, a supermarket or processor may find it easier to be an enforcer or supporter of an external agenda that they have been able to shape; a *self-perpetuating* cycle of legitimacy is created. This point exemplifies the importance of considering the origin of a document when assessing if it is independent and altruistic in nature. Although this ambiguity exists, it remains apparent that stakeholders seem to play specific characters in the traditional development storyline. The process of this cycle of legitimacy is illustrated in **Figure 6.5**, as well as being including in **Figure 6.4.** This cycle is shown in **Figure 6.5** through the flow of discourse between actors, namely guidelines and reports.

The stakeholders remaining are the lost voices of the revolutionary change storyline: AW and LG. AW has been labelled as a protestor, which is borne from the stakeholder's belief that the dairy industry can never be sustainable as cows' milk is *"not for humans",* with the dairy industry *"inflict[ing] unacceptable and unavoidable pain on cows"*. LG has also been labelled as a protestor against the dominant storyline, but believes the dairy industry can be sustainable, advocating for *"transforming the environment"* to create *"a better future"* for farmers, as well as suggesting the multitude of arguments in the dairy industry "*can become a headache for consumers"* trying to behave sustainably. Whilst they both differ on their opinion of whether the dairy

industry can be sustainable, both LG and AW remain united in their desire for challenging the dominant sustainable storyline, possessing the protestor characteristics of concern, passion and determination. A review of the results is given in **Table 6.5**, which links together the approaches to sustainable practices and stakeholder identities to their respective storylines

Table 6.5: Summary of Storylines

	Dominant Traditional Development	**Alternative** Revolutionary Change
Associated stakeholders	Trade associations Government Department Processors Supermarkets	Lobby groups Animal rights organisations
Summary	Broad targets are set by external organisations for other stakeholders to action and translate into bespoke practices, who then report back progress	The current approach is not adequately addressing the needs of all stakeholders from all aspects of the TBL
Sustainable outlook	Through meeting external targets, sustainable practices are progressing and development	Change is needed, as the industry approach is inherently unsustainable
Stakeholder identity	Leader Enforcer Supporter	Protestor
TBL alignment	Instrumental approach	Ecological approach
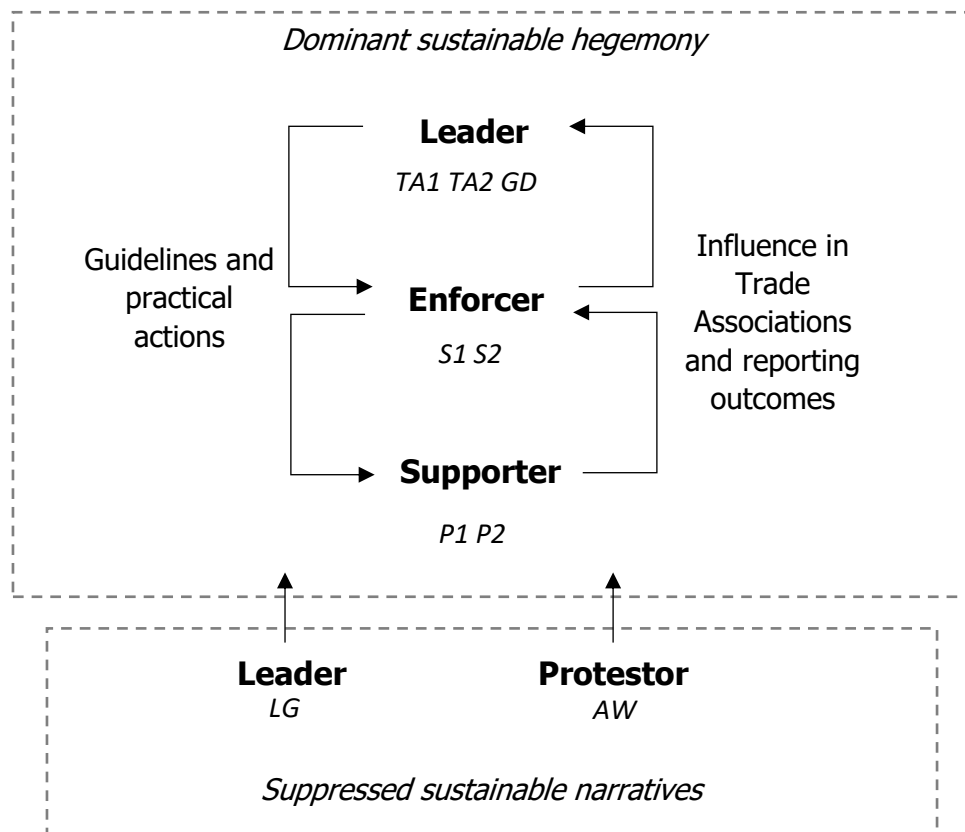
Figure 6.5: The self-perpetuating cycle of legitimacy

The summary of the dominant and alternative sustainable storylines in **Table 6.5** succinctly responds to research question 1. As has been shown throughout this section by initially identifying the approaches taken to sustainability, and matching them up to the proposed identity of their authors, the sustainable storylines were formed and drawn on to characterise both the text and its author. The stakeholder identities emerged through both close analysis of syntax employed, as well as taking a broader contextualised overview of the positionality of stakeholders within the dairy industry. A contribution made in answering research question one is the effective use of critical discourse analysis in exploring sustainable supply chain management issues, in particular highlighting the presence of more than one sustainable storyline in a supply chain. The findings also respond to research question 3, which considers the transmission of power through discourse via the *self-perpetuating cycle of legitimacy*, which forms another original contribution of this study. This cycle is further explored through the cultural hegemony lens in **Section 6.7**. **Table 6.6** summarises the points raised in this section.

Table 6.6: Stakeholder identity key points
- Differing stakeholder roles are identified and linked to the different sustainable approaches based on the actions undertaken.   - Existing roles facilitate a self-perpetuating cycle of legitimacy, upholding the strength and validity of the dominant sustainable narrative.   - Revolutionary voices have differing identities based on their motivations.

6.7 Discussion

As previously stated, the concept of discourse coalitions looks at the storylines, actors, language and practices around a discourse (Hajer, 1993). Therefore, when applying this hegemonic lens to the dairy industry, there are several factors that need specific consideration, as per the critical discourse analysis process shown in **Figure 6.1**. Firstly, how the text promotes the traditional development storyline through the linguistic features used will be considered, followed by a critique of the traditional development storyline. This critique will be framed around the power dynamics evident in dairy industry sustainability discourse, culminating towards a discussion on vertical supply chain integration. Finally, the revolutionary change storyline from AW and LG will be discussed, alongside suggestions of how they could be integrated into the dominant storyline of the dairy industry.

6.7.1 Linguistic and Rhetoric Features

Focusing on linguistic features, quantification and scientific imagery appear regularly throughout the documents featuring in the dominant storyline, from justifying the setting of a target to exemplifying the scope and size of an organisation. The use of numeric symbols and specialist language enhances the perceived legitimacy of an organisation, as the scientific method has been central to developing new knowledge for centuries. Perceived legitimacy is specifically alluded to, as remembering the literature on effective measurements and targets in SSCM (Isaksson *et al*, 2010), any measurements may well be superficial and could consequently hinder sustainable progress (Morali & Searcy, 2013). Specialist language and statistics present a perception of being knowledgeable, which Foucault would link to being powerful

(Smart, 1985). Hence, the organisations using this imagery are perceived as powerful and are able to perpetuate the existing dominant hegemony.

Rhetoric features are also used to promote the power status of the author to the reader, such as repetition and intertextuality. Repetition can be used as a rhetorical tool to emphasise certain words and make them more memorable (Davison, 2008). Words are frequently repeated to emphasise perception of size, such as *"global"* and *"world leading"* in TA1 and TA2, as well as strength, such as *"pillar"* and *"commitment"* in S1 and S2. Both aspects create an image of a powerful author in the reader's mind, which is then further reinforced in the framework documents by the presence of multiple logos of partners and affiliates found throughout dairy industry texts. These pages of logos act as pictorial lists that not only emphasise the support given to these documents by the names on list, but suggest to the reader that the support is continuing to grow, along with the list (Davison, 2008). The presence of these logos suggests collaboration with other members of the dairy supply chain, which is known to enhance SSCM practices (Yawar & Seuring, 2017; Gimenez & Sierra, 2013; Drake & Schlachter, 2008).

6.7.2 Critique of the dominant narrative

The motivation for applying the discourse coalition concept was not only to expose how dominant stakeholders maintain a hegemony through language, but also to provide a critique of the traditional development storyline. As is clear from the findings section, the storyline is controlled by those in power. Given that processors and supermarkets are the main constituents of industry trade associations, who in turn advise government departments, there follows a self-perpetuating cycle of legitimacy, which creates a duality of stakeholder identity. For instance, a group of processor supporters can make up a trade association leader, which adds to the complexity of the dairy industry and makes it more difficult to introduce sustainable guidelines that the supporters would be reluctant to endorse, such as a pay increase to farmers. The uncovering of the self-perpetuating cycle of dominant storyline legitimacy through a duality of stakeholder identity on trade association and standards boards is a key contribution to emerge from this research. Such boards may be inclined to recommend a particular approach to sustainability, such as a circular economy approach to the industry, if implementation is economically favourable (Geissdoerfer *et al*, 2017).

Whilst a circular economy approach has been shown to help with emission reduction (Genovese et al, 2017), reverse logistics (Dev *et al*, 2020; Frei *et al*, 2020) and supply chain resilience (Nandi *et al*, 2021), the sustainable benefits need to be felt by those in powerful positions for trade associations to recommend such practices, seemingly at the expense of those weaker parties in the supply chain. The context of the dairy industry certainly influences this conclusion, as industries with truly independent trade association and standards boards might be able to introduce sustainable practices, such as the circular economy, that benefits players other than the powerful in supply chains.

The self-perpetuating legitimisation of the dominant sustainable storyline is emphatically exemplified in S2. When discussing their sustainable efforts in the dairy industry, S2 reminisces about the "*gate price for milk plummeting and serious risks*" that dairy farmers faced in 2007. What S2 does not mention is in 2007, in the wake of dairy price fixing accusations (Davies, 2007), supermarkets were directly contributing to the plummeting milk price by taking a larger portion of profit margin (Lawrence, 2007). Instead, S2 discusses how they have been collaborating with farmers *and "unlocking insights"* to *"understand… challenges"*, which suggests they have simply been speaking with one another. From a hegemonic perspective, S2 is implying they are liaising with those in less powerful positions when contributing to the dominant storyline discourse. In essence, they are implying they can be trusted, thereby silencing any stakeholders in a less powerful position that disagree.

Another application of power in the dairy industry text comes from the emphasis on collaboration with farmers. From P2 working *"closely with their farmers"* to ensure quality and standards, to the *"long-standing relationships"* and *"partnership"* with farms of S1 and S2 respectively, the integration of farmers into the dominant storyline is clearly shown. The emergence of supermarket dairy groups, where a dairy farmer sells milk to a supermarket, so long as they adhere to the standards set, is a major outcome of this collaboration. However, through such adherence, the farmer is effectively being vertically integrated into the supermarket; SMEs therefore lose their autonomy by being absorbed by large corporations. Relating this back to the self-perpetuating cycle of dominant storyline legitimacy, SMEs may be less likely to resist unfavourable sustainable practices suggested by trade associations if their supermarket customer is on the board, serving only to further weaken their position in the supply chain.

If the farmers were treated as employees, there would certainly be an associated improvement with supply chain efficiency and visibility (Guan & Rehme, 2012), as well as improving certain supplier issues given the stronger level of collaboration, such as information sharing (Zaheer & Trkman, 2017). For the retailer, greater efficiency would aid with the sustainable agenda, and greater visibility would make sustainable reporting easier. However, there is the livelihood and lifestyle of the farmer to consider; they may want the autonomy of working for themselves and not as an employee. As Glover & Touboulic (2020) also point out, this imbalanced power dynamic leads to removal of farmers' agency. If farmers do not like the remuneration offered by their employer, they would not be able to seek a new employer in the same way a new customer can be sought. For those farmers who do not sell milk to supermarkets, there may be barriers to knowledge exchange as sustainable efficiencies gained by farmer employees may create a competitive advantage and thus kept internally within the organisation. The power imbalance between SMEs, such as farmers and smaller processors, and supermarkets is already known (Touboulic *et al*, 2014), and such vertical integration may only serve to formalise such a dynamic.

6.7.3 The alternative narrative and future recommendations

Throughout this entire discussion, the voice of the cattle themselves have been suppressed, only being drawn upon when they can be utilised as a sustainable success story. Plant-based milk alternatives are challenging traditional cows' milk, following along the logic of AW that the dairy industry is inherently unsustainable. Whilst cows' milk holds the dominant share in the UK milk market, the share held by plant-based products continues to increase (Mintel, 2019). As an AW report states, "*humans don't need cow's milk to survive*". Such a statement is made based on a common-sense assumption that cows' milk does not primarily exist for human consumption, creating a storyline that directly challenges the existing dominant storyline of sustainable cows' milk.

Whilst it seems the *revolution* desired by AW in beginning, the sustainable future sought by LG is yet to be addressed. On the side of the dairy farmers, it seems difficult for LG to move beyond superficial dealings with trade associations comprised of producers and supermarket: the cycle of legitimacy ensures the dominance of the storyline. Thus, to challenge this storyline, a leader stakeholder that issues broad

142

sustainable guidelines needs creating where there is no duality of stakeholder identity of the board members: a truly independent trade association. Such an organisation would then work with other stakeholders to shape the sustainable storyline, rather than work on behalf of them. Rather than being optional to follow, with the backing of government, such an organisation should act as a statutory authority when it comes to sustainable matters. The truly independent nature of such a body would mean that the funding and governing board of the organisation would be free from representatives of other organisations, or individuals who have a personal stake in the dairy industry. This is not to say input and advice from industry will not be sought and acted on, but that through independence in governing and funding, the duality of stakeholder identity is broken, and the cycle of legitimacy is weakened.

Consider the voluntary code of practice, which was a voluntary code designed in 2013 to create fair pricing mechanisms between buyer and supper, hence addressing an economic sustainability issue of the dairy industry. As the government report states, interpretation of the processors was vital for successful adoption and if not effective, statutory intervention should be considered (Great Britain. Welsh Affairs Committee, 2013). Seven years later and the continual decline of dairy farmers in the industry suggests statutory action does indeed need taking, with an independent trade association best placed for undertaking this action fairly for all stakeholders. Indeed, such an intervention would also answer the call made by Glover & Touboulic (2020) for policymakers to assume greater responsibility in the dairy supply chain. Rather than relying on potentially biased information from external trade associations to make statutory decisions, an independent trade association would be well placed to impartially guide decisions that affect all stakeholders in the dairy industry.

Another recommendation to break the cycle of legitimacy is to challenge the interpretation of the concept on which it relies: the triple bottom line (TBL). When analysing the documents, the focus placed on environmental issues was notable, with social considerations also being acknowledged. Indeed, when considering the purpose of the documents in question, such as the sustainability reports and specific webpages of the supermarkets and processors, the environmental and social issues are discussed independently of economic concerns. In the government documents, economic aspects of sustainability were notably perceived as a precursor for environmental and social issues. If the three aspects of the TBL were considered

equally, then they should be reflected on together and with equal rigour. In reality, this doesn't seem to be the case, with LG exemplifying the underlying issue: the consumer *"help[s] support an industry"* with its environmental practices. Alongside LG's calls for fairer farmer pay, the clear message seems to be that economic considerations remain intrinsically connected with environmental and social factors. The need to acknowledge the interrelationships within the TBL, as well as a desire to challenge the prevailing precedence bestowed to economic factors, leads to the recommendation for the wider dairy industry to embrace an ecologically dominant approach if it truly wishes to be sustainable in the long term, agreeing with Montabon *et al* (2016).

6.8 Chapter 6 conclusion

This study has shown that discourse coalitions between stakeholders in a supply chain context are significant when reinforcing sustainability practices, with different storylines of sustainability existing within stakeholder grey literature, and highlighted some of the techniques utilised by stakeholders to project and sustain power through the dairy supply chain. A dominant traditional development storyline of broad sustainability guidelines set by industry leading associations and government emerged, which are in turn enforced by supermarkets and supported by processors. In moving along this storyline, it becomes more bespoke as it moves from trade association to processor, and ultimately producer. A self-perpetuating cycle of legitimacy in the discourse was identified, powered by a duality of stakeholder identity of those in power, which is used as a means for suppressing resistance to the dominant storyline. The use of this mechanism to solidify power and influence regarding sustainability across the supply chain is a key contribution of this research. The alternative storyline can be an approach to sustainability that places greater emphasis on the struggles faced by farmers, as well as the animal welfare logic that the dairy industry is fundamentally unsustainable

Not only does the discourse transmit the traditional development storyline, but it also reinforces the power held by certain stakeholders in the UK dairy supply chain. This is done through linguistic means, such as quantification and specialist jargon, and rhetorical devices, such as repetition and power-related imagery. Intertextuality is also utilised to further legitimise the dominant storyline. However, trade associations used

as part of this intertextuality were not always independent, due to the duality of stakeholder identity. The level of control these stakeholders have over farmers was likened to vertical supply chain integration, which only further lessens the power held by farmers to resist the dominant storyline. To address this issue, a managerial implication to emerge from this CDA is the recommendation of a truly independent trade association in the dairy industry. Furthermore, such a trade association should be statutory in nature, in order to increase effectiveness and uptake beyond voluntary mechanisms already seen in the UK dairy industry.

A potential limitation of this CDA might be the lack of impartiality in the researchers' voices throughout the application of the critical discourse analysis. However, every effort has been made to clearly state the positionality and views of the researcher in relation to the documents, providing transparency to the reader regarding the conditions under which the analysis took place. Furthermore, the lack of a farmer stakeholder is notable, due to the dearth of available grey literature. Whilst the LG stakeholder was introduced to ensure a general farmer voice was included, a future research recommendation is the comparison of the output of different dairy stakeholders regarding sustainability, including the differing stances of farmers, on a platform where such data is available, such as social media. Additional future research recommendations include the use of critical discourse analysis as a methodological approach to sustainability supply chain management, as well as the utilisation of cultural hegemony, and specifically the discourse coalition concept, as a theoretical lens to understand supply chain power. Due to its focus on power and context in a stakeholder setting, critical discourse analysis facilitated tangible suggestions to improve practice in the dairy supply chain, namely the formation of an independent trade association. The hegemonic focus of discourse coalitions was shown to work alongside the critical discourse analysis, being instrumental in helping to identify and explaining the workings of the supply chain power dynamics, notably the existence of the self-perpetuating cycle of legitimacy.

Ultimately, this CDA has contributed to the existing supply chain literature by demonstrating the important role discourse coalitions play in a supply chain context when influencing sustainable practices, particularly though the identification of the self-perpetuating cycle of dominant storyline legitimacy, as well as highlighting how

discourse can be manipulated by those in powerful positions within a supply chain to control a hegemonic storyline.

Summary of key points
- Grey literature relating to sustainability in the UK dairy industry was analysed through a cultural hegemony lens, and specifically framed by Hajer's discourse coalition concept.   - Many stakeholders in the dairy industry encouraged consideration of multiple perspectives.   - A dominant and alternative storyline for sustainability was identified and defined, characterised by stakeholder identity and their approach to sustainability.   - The dominant storyline prevails at the expense of the alternative due to the self-perpetuating cycle of legitimacy identified through a duality of stakeholder identity.   - To improve equality and negate adverse consequences of a power imbalance, a statutory, truly-independent trade association for the dairy industry is recommended.

.

7

Navigating sustainability within a power-imbalanced supply chain

7.1 Opening Remarks

As was discussed in **Chapter 5**, the interview phase of data collection was designed to answer all three research questions under investigation in this study. Different stakeholders from across the UK dairy industry were spoken to regarding sustainable practices, whose quotations are embedded throughout this chapter, which aims to report the main findings from the interview data. The structure of this chapter is ordered by research question, with each subheading relating to the question being addressed. This division is then further broken down by the themes or logical structures that emerged from the analysis, and each subheading is finished with a key points table that broadly summarises the main narrative for the sake of clarity. Areas of theoretical lens interest are highlighted, and discussed in greater detail in **Chapter 8**. Finally, a concluding section is presented, which draws together the findings from the interviews.

At the heart of this project is the differing views of stakeholders, and this consideration has aided in shaping the structure of these findings. Firstly, to help the reader contextualise the quotations given, the broad stakeholder category of each participant is given. Furthermore, several comparisons of stakeholder views are given throughout this chapter, highlighting similarities and distinctions both within and between different stakeholder groupings. When interviewing participants, it was

noticed that many felt they had a duality of stakeholder identity, such as being a farmer and a representative, or a farmer and a processor. This emphasises the complex reality of the dynamics found within the UK dairy industry. However, to avoid confusion, when this duality was the case, it was decided before the questions through what stakeholder framing the participant would primarily respond.

7.2 Approaches taken to sustainability in the UK dairy supply chain

'Sustainability is defined as something that is a broad thing to achieve. It's all about kind of maintaining the industry and its existence, both now and in the future'

Daniel, Industry Association

'It's kind of multifaceted really, in that I think it's not black or white. I think that there are various threats from everywhere really in the dairy industry.'

Tom, Retail

These two quotes from Daniel and Tom best represent the overall view taken by all stakeholders interviewed in this study; sustainability in the UK dairy supply chain is a broad and multifaceted issue. This is a relevant point to make at the start of this findings section as it demonstrates the wide scope of this study, where attempting to solve a complex problem leads to complex, and sometimes conflicting, solutions. Stakeholder theory's contribution towards the establishment of this broad approach towards sustainability is discussed further in **Section 8.2.1**. When relating the participants' answers to Elkington's (1997) concept of the triple bottom line, an interconnectedness between the economic, social and environmental pillars emerges, making it difficult to isolate one pillar as distinct from the others. This interconnectedness creates the challenge of balancing all three pillars of the triple bottom line in a global marketplace that places importance on economic factors.

'Balancing that economic success for all parties along, whilst mitigating the environmental and social challenges that exist in the whole sector'

Sean, Processor

7.2.1 Economic Sustainability

The importance of considering the economic issues of sustainability is undeniable. Simply put, if there was no consumer demand for milk, then the dairy supply chain would cease to exist. As a demand for dairy produce does exist, it is important for organisations in the dairy supply chain to ensure they are financially viable in the long term, with the ability to weather short term hardships. One way that is mentioned of securing this viability is aiming for efficiency and productivity in operations, which can consequently create additional environmental benefits. Contracts between dairy farmers and purchasers can influence how much money farmers receive at the farmgate for their produce, which in turn can affect how they act towards social and environmental issues. Fairness and sustainability of the contract varied between farmers and processors, with some feeling as though their business development was supported alongside transparent pricing mechanisms, but others experiencing one-sided, restrictive clauses. At either end of the scale, fair contracts were collectively perceived as important for economic sustainability

'So, at the moment, in my view, there is an imbalance of power in the supply chain and, within every milk contract, there is a thing called buyers discretion, which actually allows the buyer to pay you whatever they chose to. And no clear mechanism that relates it back to the market.'

John, Industry Association

A key message to come out of the interviews was the importance that money has in ensuring social and environmental practices; the veneration of economic issues is discussed through a cultural hegemony lens in Section **8.2.2**. This bestowed priority is not only through creating process efficiencies, but also being able to generate enough surplus to invest in improvements on infrastructure. Additional payments and grants for undertaking specific sustainability practices can incentivise farmers to

make such investments, as they have an assurance of greater financial security. A greater chance of financial success might also encourage people to enter the market and share their knowledge and ideas on all pillars of sustainability. Ultimately, in a society that places such importance on economic issues, organisations need to be financially viable as a minimum, but require a surplus to begin enhancing the social and environmental pillars of sustainability.

'As long as we can get the right return for our investment and our money invested, which, you know, that's quite a big debate. But, if that is not there, we will not entice those bright young people back into the industry, which would be a disaster. So, the economy is really, really important'

Andy, Farmer

'if you're in the red, it is harder to invest in the green economy, if you know what I mean'

John, Industry Association

7.2.2 Environmental Sustainability

The second pillar of the triple bottom line to be considered is environment, which is an issue that the dairy industry has the power to behave responsibly toward and promote good practice in. Indeed, being custodians of large areas of land, dairy farmers have the opportunity to help offset emissions by creating carbon sinks through vegetation. Some members of the dairy supply chain feel that when it comes to global emissions and greenhouse gases, blame is unfairly assigned to agriculture, arguing that this is an oversimplification of the more complex problem of how society operates and pollutes.

"We are a genuine source and a sink, so there are opportunities to work there, whereas, you know, the transport sector can't offset their emissions. They can only try and reduce as best they can, but without having a massive impact on how they

150

do things. Whereas, we can look at things in a holistic sense and produce a plan,

which is what we have done."

<div align="right">Josh, Industry Association</div>

"We talk about how they graze and in order to carbon capture, you know, and I think

we tend to polarise, I think… one of the things that is bad about the world nowadays

is we tend to polarise things and we don't look at the grey, you know. We look at the

black and the white, if that makes sense?"

<div align="right">Tom, Retail</div>

Following on from Tom's quote, it would be wrong to neglect being critical of environmental practices found in the dairy industry, with individual successes and failures being found in a multitude of different challenges. For instance, the feed given to ruminants can be tailored to alter emissions produced from digestion, or can be made from responsibly sourced ingredients, with the inclusion of soya producing a contemporary debate. Pollution from the mismanagement of slurry and use of artificial fertilisers are other debates and challenges facing the dairy supply chain on a farm level. The reduction of the supply chain's carbon footprint as an important aim was acknowledged by several stakeholders, seeing the issue as something that the whole industry needs to address. An example of an industry level issue is the amount of travelling a product does from farmgate to consumer, known as food miles. The perception from the interviews is that shorter and more localised supply chains are associated with producing less emissions and being better for the carbon footprint of the industry. However, it was emphasised that the logic of consolidation into larger national units could work for the economic sustainability of the processor. It is the misalignment of such consolidation with factors of environmental sustainability for other stakeholders that highlights the complexity and importance behind balancing different stakeholder sustainability.

"Climate change has kind of gone from something we [as an organisation] always did

to a, kind of, increasingly something that is essential to the whole industry… So, all

the way to the top of businesses, how do they tackle this problem and what do they

do."

Daniel, Industry Association

"At the end of the day, the best food for us is the least processed, so you know, how

can I find the food in my area that doesn't need to be processed, shipped in, flown in,

in order for me to be able to make it part of my diet."

Tracey, Farmer

Another industry level issue that was acknowledged by several participants was the importance of taking a circular economy approach, from manure as fertilizer to the life cycle of plastic. Three participants in particular went beyond the circular economy, and stressed the importance for them to end up with more than they initially began with. Ultimately, what was clear from these discussions is that what constitutes environmental sustainability can vary based on the particular location or region an organisation finds itself in. This suggests that when it comes to evaluating the success of environmental sustainability, a bespoke approach to measurement might be more effective than a blanket standardised set of regulations. Taking a bespoke approach would involve acknowledgement of and flexibility around the unique situation that a particular stakeholder finds themselves in, such as size of organisation and herd, climate, soil quality, farm location, local amenities and diversification activities. This is in contrast to existing assurance schemes and supplier codes of conduct, where a generic, standardised appraisal is undertaken.

"[Success] increasingly depends on the postcode lottery and that's also bad for the

environment because then in the southwest, where it is worth investing because it's

a bit more secure because of more processors and they are encouraging you, where

they want the milk, then that has negative environmental outcomes because there's

too many farms in one area and out in East Anglia, they are crying out for manure to

fertilise the crops. But there isn't any, because nobody is given a milk contract."

Nick, Farmer

7.2.3 Social Sustainability

Responsible behaviour in the dairy industry also extends to the final pillar of the triple bottom line to be considered: social sustainability. As with environmental sustainability, there are several ways in which stakeholders' approach social sustainability, rooted in the perception of behaving ethically and morally. From a human perspective, ensuring fair labour practices and looking after worker welfare are seen as important factors in social sustainability. An example of considering the mental welfare of farmers can be found in proper farm succession planning, where difficulties in communication and planning can lead to an uncertain future for farms and those working on them. Another important aspect of social sustainability that emerged from the interviews was the importance of supporting local communities. Although supporting local businesses might not be the most efficient way of running an organisation, its importance in contributing to the wellbeing and success of local residents is clear. Various approaches were taken in supporting local communities by different stakeholders, with retailers and processors seeing employment of the local workforce and procurement of locally sourced dairy as vital for successful rural communities. However, others saw the success of farmers and their consequent reinvestment in the local economy through procurement of neighbouring services as a means of offering support.

"All the local farms, you've got 3 or 4 people working there… and you stop all those connections with those local suppliers… is it efficient that I have got probably more employees here than most farmers with a farm of our size have? Yeah you could say that is inefficient, but actually, it's keeping a rural community more vibrant and surely that is sustainable."

Tracey, Farmer

"You've created like a sustainable community in the fact that [the farmer] might go out and buy services from other people in the local area. [The farmer] might use local food merchants, local veterinary service. Everything is within a particular locality."

Lucy, Academic

Another key part of social sustainability that emerged from the interviews is the nutritional quality and health value of milk. Coupled with the easy access of buying dairy produce, the importance of milk as a healthy and accessible source of nutrients is emphasised by several stakeholders. On a global scale, milk is seen as a key way to help combat hunger and improve diet. As well as the health of those who consume milk, the health and welfare of the ruminants that produce it is also imperative when ensuring the sustainability of the dairy industry. From health issues around lameness and mastitis, to welfare concerns about shooting bull calves, practices relating to the treatment of animals can have a large impact on both farm efficiency and consumer perceptions.

A key debate to consider here is having fully housed cattle sheds versus pasture systems, with farmers from both sides arguing their case for sustainability. Fully housed systems can control efficiency by managing input and waste, whereas pasture systems afford cattle greater space and the intangible benefits of being outdoors. This debate exemplifies how even within stakeholder groupings, contrasting approaches can be taken towards sustainability. As each farmer their own rationale, this further emphasises the multifaceted nature of sustainability in the dairy industry.

"I think sustainability is obviously about an efficient, working model that can be sold or is acceptable to the consumer, and I think sometimes those… so the dairy industry seems to be polarising a little bit into more, sort of, some would view as intensive but, you know, full housed systems where the health of the animals is very high, but you know there may be compromises made in terms of the welfare of those animals."

Sarah, Assurance Organisation

Of course, some consumers would see the dairy industry as inherently unsustainable, due to perceived exploitation and mistreatment of cattle. The notable rise in vegan alternatives to dairy may be seen as a way for those consumers to behave in a more sustainable way. However, some within the dairy industry see this attitude as highlighting how consumers can oversimplify a problem into a binary

narrative, whereas there are many different factors to consider and balance. Sustainability in the dairy industry can be perceived as a static requirement that can be completed. For instance, farmers that need to fulfil certain criteria to be eligible for a particular grant, or to be part of a milk pool or assurance scheme, could see sustainable practices as means to a financial gain, rather than acknowledging the underlying importance of animal welfare. Consumers may see a 'fair for farmers' logo on a pint of milk, and therefore assume that milk is sustainably produced. However, this notion does not reflect the complex, multifaceted reality faced by many throughout the dairy supply chain, who see sustainability as a dynamic process that will improve and strengthen over time. **Table 7.1** summarises the performance metrics that emerged from the interviews, aligned with their respective sustainability pillar.

Table 7.1: Sustainability metrics emerging from interviews

	Sustainable Pillar		
	Economic	Social	Environmental
Indicators emerging from the interviews	- Contract fairness: - Pricing Transparency - Restrictive Clauses - Efficiency and productivity (yield) - Investments (collaboration)	- Animal Welfare: - Handling (Shooting Calves) - Housing - Lameness - Mastitis - Health and nutrition of produce - Labour - Responsible behaviour: - Succession Planning - Morality - Supporting local community	- Emissions: - Fertiliser (Nitrate pollution) - Slurry Management (Ammonia) - Carbon footprint - Food Miles - Renewable Energy - Feed - Waste Management: - Circularity in supply chain - Plastic - Recycling - Water Management

"Sustainability to my mind is an evolving thing and the problem is people think it is something that we can just do. We realise that artificial fertilisers and burning all this diesel ploughing up fields and releasing carbon is all bad and all wrong, so let's stop that. But that transition is huge."

Steven, Assurance Organisation

Section 7.2 specifically relates to research question 1 in this research: key points that respond to research question one have been drawn out and explicitly stated in **Table 7.2**.

Table 7.2: Research question one key points
- Sustainability as a concept is broad, so bespoke approaches to sustainability are needed for practice.   - Issues can be oversimplified, when they are actually multifaceted. The varying approaches taken between and within stakeholder groupings exemplifies this.   - Sustainability is not static, but a dynamic process.

7.3 Sustainability perception factors in the UK dairy industry

During the analysis of the transcripts, twelve separate factors that can affect sustainability in the UK dairy industry emerged. To help understand the role these issues play in influencing consumer perception, they have been separated out into three tiers: societal, industrial and organisational. This tiered structure between consumer perception and lived sustainability practices is shown in **Figure 7.1**. Note that some themes do not fit wholly into one level, and are therefore seen as overlapping between tiers. Taking a funnel shape, the broader societal themes are at top of the figure, closest to consumer perceptions, which then narrows down through industrial and organisational tiers until the sustainable practices themselves are actualised. The tiered structure came about through the application of stakeholder theory, as mentioned in **Section 8.2.1**. Consumer perceptions were specifically chosen as the end point of the diagram for two reasons: firstly, they are the end user of dairy produce, and secondly, without demand for produce from the consumers, the dairy industry would not exist. The power held by consumers is explored in greater detail in **Section 7.4**.

7.3.1 Societal Tier

7.3.1.1 Education

The societal tier represents issues in wider society that affect the sustainability of the dairy industry, but can still be influenced by stakeholders within the dairy supply chain. On this tier, issues around education and metrics both emerged as key areas of importance when it comes to affecting perception of sustainability practices. Education refers to how the public learn about practices in the dairy industry, and how this knowledge shapes their view of dairy products. The public can gain knowledge through what they are exposed to in the media, from formal education or from family and friends. Focusing on family, several participants mentioned how their consumption practices were influenced by what their parents taught them at a young age. This also applies to schools, where milk can be distributed as a healthy drink for children to consume. If children are exposed to good quality milk and understand the health benefits, this will influence their opinions as they grow into adulthood. However, as one participant mentioned, if children are exposed to a poor-quality dairy, then this might foster a dislike of dairy produce.

Sustainable Hegemony

Consumer Perceptions

Education   Measurements and Metrics

Assurance Schemes   Communication

Price and Value of Dairy Production

Infrastructure   Regulation

Industry Understanding

Collaboration

Internal Structure

Idiosyncrasies

Attitudes and
Behaviour

Lived
Sustainability
Practices

Societal Tier

Industrial Tier

Organisational Tier
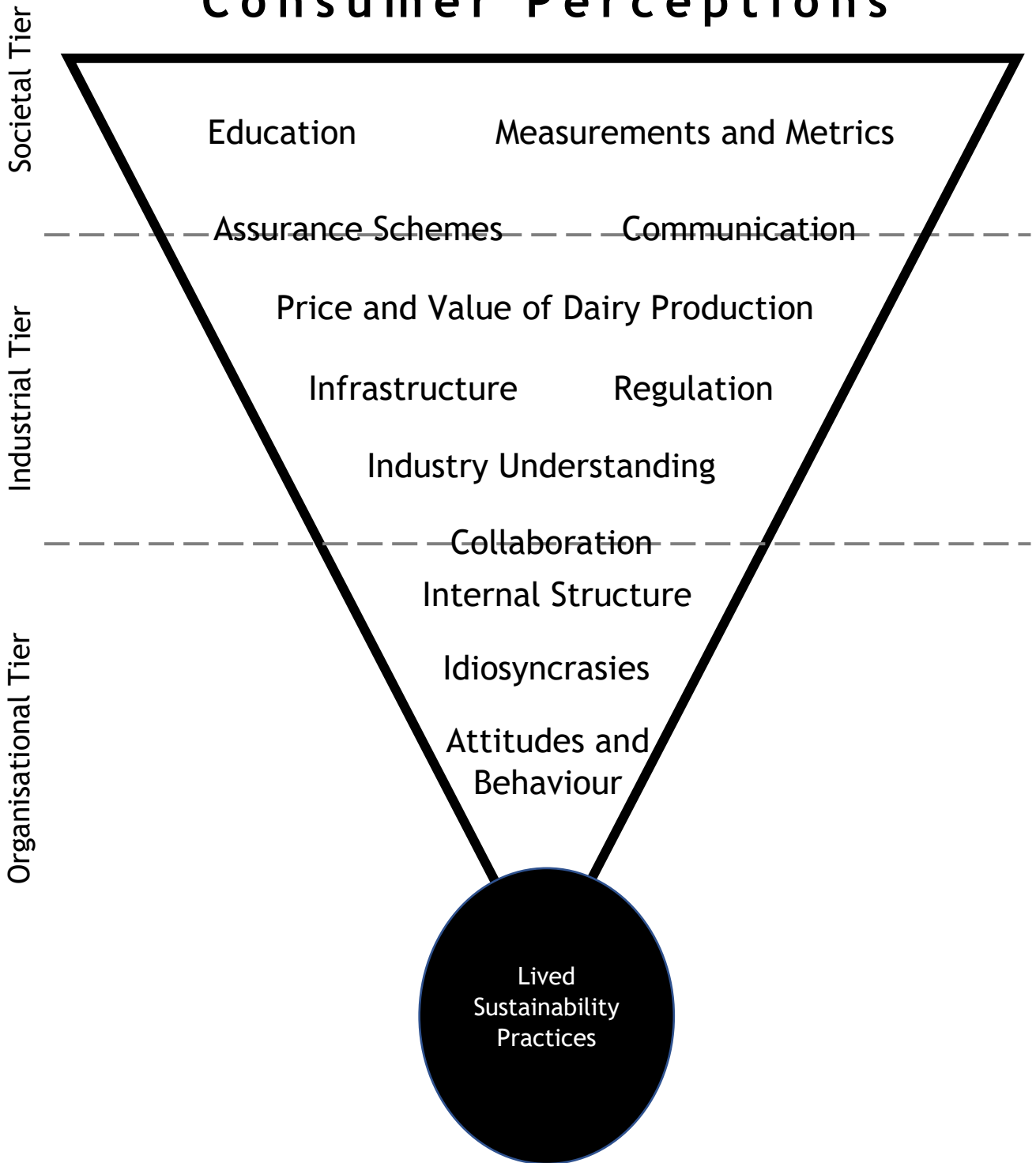
Figure 7.1: A tiered structure of the emerging themes and how they can influence consumer perceptions of dairy industry sustainability

"I still drink milk for my breakfast, I'll have milk on my cereal and I'll have a glass of milk next to it. Well, I suppose it's something I'm used to drinking. It's something that, when you are little, your parents make you drink milk"

Elizabeth, Consumer

"It's always easier to go, oh chocolate milk, strawberry milk, you know, that kind of makes it a little easier for people to look at it and say oh, you know, I'll give you that. Then, all the schools do is then they then go for that UHT milk. And it just tastes bloody awful, so then you're getting kids to think oh, you know, strawberry milk and chocolate milk, it's alright but it doesn't really taste that nice. Well, you try and do strawberry and chocolate milk with fresh milk, well you know, it's a completely different world then."

James, Farmer

There is increasing attention from the public on sustainable practices, with an emphasis on the desire for knowledge to be underpinned by science and evidence. However, the high standards that the public are expecting to see from the dairy industry can seem to be irreconcilable with the low value placed on milk, exemplifying the conflict society faces between behaving sustainably and the importance placed on value for money. The difficulties around resolving this conflict is examined through the cultural hegemony lens in **Section 8.2.2**. However, educating consumers on the nutritional benefits of milk, as well as on the processes that take place in the dairy supply chain, can affect how they value the end product, which in turn will be reflected in the price willing to be paid. Whilst farmer protests are seen as a way of demonstrating issues to the public, these must be carefully planned, as they can cause disruption which may irritate consumers. Oversimplification of issues facing the dairy industry can leave the public seeing imagery of rolling pastures with cattle grazing as sustainable and industrial factory farms as unsustainable. This emphasises the need for the dairy industry to ensure the public are accurately informed and given a holistic understanding of the dairy industry to ensure the deserved value is attributed to dairy produce.

"This is where there is a significant misconception in terms of dairy farming and very large-scale system. What people tend to call factory farms... There's a lot of misconceptions around that, but I don't believe you should jump in one camp or the other… from the environmental perspective. They both have a role and they both can be improved… I mean, the benefit of highly intensive systems is they have a lower carbon and they rely on less pasture for each unit of output."

<div align="right">Nick, Farmer</div>

"I do question whether the approach at the moment of trying to educate the public about what we do and where we're at... I almost think it is… so there is a huge swath of the population that really don't give a damn, you know… they just want cheap food."

<div align="right">Andy, Farmer</div>

7.3.1.2 Metrics

Metrics are also key on the societal level, as they quantify the sustainable practices of the dairy industry, which helps measure impact, facilitate comparison and foster a sense of progress. Effective use of metrics can also motivate organisations to implement sustainable practices, such as measuring natural capital, which can help farmers to appreciate the value of the natural assets they already possess, rather than starting with nothing. Whilst metrics clearly have a role in encouraging sustainability, they are not without their obstacles within the dairy industry. Deciding what metrics to use and how to measure them can be challenging, especially when different stakeholders may have conflicting sustainability agendas. An example of such a potential conflict came from a farmer participant, who felt the metrics used by supermarkets to enhance their sustainable reporting do not publicly capture or promote the sustainable practices undertaken by farmers, creating a perception of greenwashing.

Ensuring the metrics will be accepted as legitimate by the public and ease of measurement are further aspects that require thought when deciding what metrics to

use. External parties could ask for the same data for the same metrics repeatedly, causing those measuring and submitting the data to become frustrated and reach sustainability saturation. Submitting data to one trusted, centralised body might be the way to avoid this frustration and unite choice of metrics.

"There are all the metrics out there being talked about, you know… I don't know if you've ever been to the likes of UK Dairy Day or the Dairy event…. dairy tech event, but if you ever go to them… [the stallholders] will all come up with their own sustainability matrix because they see it as something they can sell on the back of. So, if someone doesn't take the lead and say this is what we're talking about when we talk about sustainability, everybody will come up with their own metrics and we will end up in a mess because you can be sustainable under one person's metrics, but not under another."

Lisa, Assurance Organisation

"Whenever we try to request any information from them on environmental or social metrics, they are 9 times out of 10 being asked this by someone else, and it doesn't serve anyone to have 4 different stakeholders asking for the same information. So, for us, it's all about, I think, an understanding of the synergies that could be built and working out what everyone wants and trying to get as many stakeholders involved in the process together to kind of move everyone forward together."

Daniel, Industry Association

7.3.1.3 Assurance schemes

Bridging the border between the societal and industrial tiers are issues around assurance schemes and communications. Assurance schemes refers to any auditing process where an external body visits a farm and confirms that a predetermined set of standards is being adhered to. Having an external audit can add value to dairy products, as it reassures any concerned consumers that certain standards are being met on farm. As was mentioned with education, any increase in value could be

reflected in a higher price and thus a more economically sustainable future for dairy farmers. In the interviews, participants mentioned that stronger assurance schemes should move away from appearing as a predictable one-off tick box exercise, and should instead capture the improvements made regarding sustainable practices, linking with the evolving and dynamic nature of sustainability discussed in **Section 7.2**. For instance, such schemes could cluster similar organisations together, based on certain characteristics such as size or location, facilitating a more equal and fairer comparison with peers. Indeed, for assurance schemes to become established and be effective, it is important that organisations within the industry accept the standards as fair and legitimate.

"I think it adds value in terms of you know that those farms have been through an inspection regime. And the fact that they have to meet certain standards and they have to do certain things. They might not like doing some of them. But you know that they have to do it and therefore, by virtue of the fact that they have to do it, at least they've thought about it."

Lisa, Assurance Organisation

Assurance schemes are most effective when they are not demanding too much from any organisation. If standards are created that seem pointless or unachievable, then those trying to follow the standards may become demotivated and disinterested in the scheme. This is not to say standards should be easily achievable: it is finding a balance between a manageable and an unreasonable challenge. Having too many assurance schemes can also be detrimental to their effectiveness, as this can lead to duplications or conflicts in standards that can both confuse and frustrate those trying to adhere to them. This confusion could then transfer to the consumers, not knowing which assurance scheme to trust. The resolution here might be found through industry wide collaboration when creating a set of standards. Collaboration within the industry is discussed in greater detail in **Section 7.3.2**.

"You've got hundreds of different schemes for that, which could say… oh, we are net zero already for whatever reason, you know, if we're not all following the same

metrics, than it means nothing and it means that only people with enough money or

enough influence can get that kind of greenwashing done for them"

<div align="right">Tracey, Farmer</div>

7.3.1.4 Communications

When considering communications, issues can be split into between members of the dairy supply chain and between the supply chain and the consumer. Within the supply chain, effective communication can strengthen working relationships, leading to members of the supply chain acting as brand ambassadors for each other. Through this, the story of the process can be passed to the consumer, enhancing value placed in dairy produce. Value can also be added to products through the branding and advertisement of milk. Branding can strengthen the link to the provenance of the produce, which in turn can encourage producers to take more ownership and take more pride in their product. Communication between the supply chain and consumer appears to vary in complexity for different stakeholders; those who have immediate contact with the end consumer can clearly communicate their message, but stakeholders that are further removed from this contact and deal with multiple stakeholders might have to incorporate multiple messages within their own, making communication more complicated. An example of this would be a processor suppling multiple retailers with products of differing specifications.

From a consumer perspective, branding can emphasise the unique selling point of a product, shifting dairy produce from a commodity to a differentiated product in the marketplace. Advertising dairy produce can also be seen as a value-adding exercise, as it can promote the product whilst educating the consumer on the benefits of milk. Whilst some participants embraced the idea of the industry promoting milk and dairy as a whole, others felt this broad grouping only further contributes to the commoditisation of dairy by stifling differentiation.

"Oh, for us, [branding] is a massive opportunity because we can build that

relationship with the consumer and reconnect people to the origin of the food,

because it's very rare that dairy products are traceable to one farm. We have very

regular visitors on the farm, as you can see, we try and harness social media, and at

the end of the day, whenever somebody has got their own name going on the end product, it really focussed the mind and creates a sense of pride in what you are doing. And the fact that is traceable, it makes you accountable so, you know, I've been speaking about the implications for the broader industry, but for individual farms who have found a way to build a direct relationship with consumers, rather than sending all of the milk away to a processing company."

Nick, Farmer

"Let's just promote milk, never mind one farm being different to another. But it's never got us anywhere, you know? Imagine Mercedes and Ford and Vauxhall and Toyota going into a room and deciding they are going to put an advert up of a grey silhouette with a hatchback car and saying we're just going to promote cars. Cars are great. We're never going to survive by doing this and we've been doing this for so long."

Steven, Assurance Organisation

The use of social media was highlighted as an important method of communication between all members of the dairy supply chain with the end consumer. Farmers in particular seem to benefit from social media as it affords them the opportunity to interact with the end consumer directly, educating them on the processes that take place on a dairy farm. Although this education will reach some consumers, social media also conveys biased information and fake news which will inevitably reach others. Farmers that try to speak truthfully on social media can be met by online abuse and threats, which can be distressing and discourages some from using such platforms altogether. This suggests that farmers could benefit from a platform where they can share stories and challenge opinions anonymously, without fear of personal threats or retaliation

"I've got, like, an Instagram account which… I started for that reason, just to educate people on what happens behind the scenes and, the amount of people that have

messaged me, being like 'I didn't know that was why that was like that", or giving a little reason behind that."

<div align="right">Steph, Farmer</div>

"I think the biggest hurdle for us getting our message across is… I'd like to be able to write with anonymity, if you know what I mean? Because it is very difficult for me to have all these stories without me becoming a target myself. That is the truth behind most of the problems, you know what I mean?"

<div align="right">Andy, Farmer</div>

"I was vilified by some and it was quite aggressive at times and I was under attack on twitter. I was almost frightened of going online and say that point."

<div align="right">Steven, Assurance Organisation</div>

7.3.2 Industrial Tier

7.3.2.1 Price and value of dairy production

At the industrial tier, four notable issues were drawn out when considering the perception of sustainability: price and value of dairy production, infrastructure, regulation and industry-wide understanding. When considering the price paid for dairy products, participants pointed out the recent volatility of the farmgate and spot price for dairy can result in lack of financial stability to invest in the long term, and instead encourage focus on the short-term viability of the business. In addition to these price fluctuations, there is a perception that the costs and risks incurred along the dairy supply chain are not fairly distributed between stakeholders. Those in powerful positions are sometimes seen as passing additional costs on to less powerful members of the dairy supply chain, making it more difficult for the latter to have additional money to invest in sustainable activities.

"It is tricky when if the milk price dropped... the milk price has dropped a bit recently, but when farms are under severe financial pressure like that, and the market is down

turning and things, they question why are we focussing on some [future

sustainability] ambition when the here and now is a bit more serious. But actually,

they do appreciate the long term and it's vital to their viability as a business."

<div align="right">Josh, Industry Association</div>

"At the moment, we know at times, processors will go out and do a bad deal in the

marketplace. And then they go 'oh dear, we've done a bad deal. We'll have to drop

our milk prices'. So, that actually wasn't the farmers fault. And that's not even the

market. And we also know there are processors out there… there is some very

efficient processing, there is some very inefficient processing. Well, the farmers that

are supplying the business with the inefficient processing is actually covering the

cost of the inefficient processing, not the processor."

<div align="right">John, Industry Association</div>

Two ways that participants identified to improve the price of milk were addressing issues of quality and value. Quality refers to improving the taste and nutritional quality of the product, which has the potential to differentiate from a commodity and demand a higher price. Value links up with issues previously discussed, relating to the low value consumers place on dairy produce, both in terms of monetary and more abstract factors, such as nutrition and morality, which encourages producers to aim for higher yields when wanting more money. Value as a concept is defined in **Section 1.4** and is conceptually discussed and expanded on in **Section 8.3**. The elasticity of the milk price was discussed, with the suggestion that consumers might be willing to pay more without any change in demand. Making tangible changes that the consumer can directly experience can lead to a high value being placed on dairy produce, with the transition from milk in plastic bottles to glass bottles exemplifying this. Whilst the milk might be the same quality, the packaging allows the consumers to quickly differentiate the product, evoke romanticised imagery of a milkman delivery and recognise the sustainable value.

"Consumers can be pushed quite a lot; they will pay quite a bit more for dairy if they had to. If the supermarket baseline price for milk was 20-30p higher, they would still buy that and that could give the producers a huge additional amount to actually make sure they are covering their costs and being able to invest in a business that is sustainable and high welfare. And I still think that the product demand would still be there, so… I think it's got to come from the middle man that is buying and selling the milk, and the supermarket, to give that dairy product a raise. And, you know, actually bite the bullet and do it."

Sarah, Assurance Association

"I think I worked out, with a glass bottle, that the cheapest milk you could buy in the co-op would be… a £1. So, essentially, a 2 litre. Whereas if you were going to buy [the] glass bottle equivalent, you'd need to buy 4 glass bottles… so that is going to cost you £4. You know, so people are paying £3 more, you know, and this is… you know, milk has got to be sold cheap, milk is a loss leader… well hang on a minute… that goes against all this, you know, got to sell milk cheap to get people through the door, it's now we've got to sell food stuff in reasonable packaging, to get people in the door."

James, Farmer

7.3.2.2 Infrastructure

Infrastructure located around the UK can also contribute towards sustainable practices in the dairy supply chain, with technology providing a visible example of this claim. For instance, renewable energy technologies, such as wind turbines and solar panels, can be installed to provide an observable commitment to environmental sustainability. Government could aid in the provision of infrastructure through subsidy schemes for sustainable behaviours. The importance of having local infrastructure was also emphasised, being linked with the reduction of food miles as

milk has less distance to travel along the supply chain. This can consequently lead to local produce that has a high consumer value. However, as organisations have grown, seeking efficiencies in processes has led to centralisation of infrastructure, causing a decline in local infrastructure and exemplifying a conflict of sustainability between different sized stakeholders. Ensuring infrastructure is in place can go beyond the immediate dairy supply chain, with local authorities and government needing to ensure that adequate and affordable recycling provisions are made. A barrier to installing and maintaining infrastructure is the cost, with the volatility in the dairy market and short-term farm tenancies causing some to be cautious about investing in long term equipment.

"The other thing that I see is I think we are going to have an increase in renewables, so more farmers investing in solar, wind power, whatever. Which again, is quite useful because 1. we've got the space to do it and 2. you can actually have it as a point of use, and dairy farmers, we do use a reasonable amount of electric in order to cool the milk, milk the cows, all those kinds of things. So, I think that's going to be important for a sustainable business."

Matt, Farmer

"The cow does everything. I love this phrase. The cow will go out, will eat its grass and will spread its own shit, if that makes sense? Whereas nowadays, we keep them indoors, we cut the grass, we bring it too it, we then collect its manure and we take that out and we spread that… and all we are doing is driving around in tractors using heavy machinery which has a cost, including environmentally massively because of the carbon use in that, and the cost in terms of putting the farmers out of pocket."

Tom, Retailer

7.3.2.3 Regulation

The third theme to emerge on an industrial level is regulation, with participants exploring the benefits and drawbacks of both mandatory legislation and voluntary

schemes. To enact the most effective governance, it was suggested that the source of any industry wide regulation should come from government. Due to the conflicting agendas of commercial organisations within the dairy supply chain, the government is best placed to provide an influential but impartial role; they have the ability to steer the vision and set the agenda of sustainability. The two primarily types of sustainability regulation the government could provide are incentivisation, through offering financial support like grants, or legislation, where an agenda can be enforced onto all players across the dairy supply chain. To produce effective incentives, a comprehensive understanding of the bespoke, multifaceted and dynamic nature of sustainability is initially required by government, as is discussed in **Section 7.2.3**. Furthermore, participants stressed the need for any mandatory legislation to have enough flexibility built into it to ensure bespoke issues that can be found in different organisations and locations are acknowledged.

"I suppose the things that could accelerate those changes would be things like government policy, so actually if there was grants available. Or if the laws changed to make certain things more… would encourage farmers down a certain route, or stop them doing certain things… There is an element of carrot… if you want to change behaviour to make farm businesses more sustainable, as part of the solution, then you use a carrot and you pay people to improve behaviour, or the market does. Or you use a stick, which is legislation."

Matt, Farmer

The success of voluntary regulation schemes was questioned by some, who cite the Voluntary Code of Practice (VCOP) as an example of ineffective regulation. Whilst some processors adhered to the VCOP in their milk purchase contracts, others just selected practices that worked for them or ignored the VCOP completely. This can result in processors who adopt the VCOP having lower economic returns than those who ignored it, as the latter may have less costs and can consequently undercut and put pressure on the former. Therefore, when it comes to regulation with no economic incentive, mandatory legislation might be the most effective approach when encouraging sustainable practices.

"Back in 2012, I don't know if you've come across the Voluntary Code of Practice for dairy contracts. So, you know, 2012 and we still have these issues. The dairy market was struggling and so, back then, we sort of said, we were calling for mandatory terms, but, you know, government and the rest of the industry were sort of saying well, let's try a voluntary approach first. So, we did. And as we sort of predicted, you know, with a voluntary approach, the good ones who want to do the right thing and the good processors that we deal with, did all the right things. And the ones that tend to do the bad practice kept on doing bad practice."

<div align="right">Josh, Industry Organisation</div>

7.3.2.4 Industry-wide understanding

The final factor that influences how sustainability is perceived in the UK dairy industry is collective industry understanding, concerning how united the supply chain are in their understanding of sustainable practices. The importance of having a holistic understanding of how practices affect the rest of the industry was emphasised here; if one player in the supply chain is unsustainable, then that can affect the perception of the entire industry. Different understandings and agendas of sustainability within the industry can lead to confusion over how best to enact specific polices, which results in the consumer having little clarity on the sustainable practices taking place in the supply chain. One stakeholder mentioned how large retailers have interpreted guidance on responsible soya production in different ways, leaving the processor and farmer to facilitate all these differing demands. Actions could include buying credits, changing feed or additional reporting duties, all of which could increase cost and complexity. If organisations in the dairy industry went beyond an individual level and agreed on a united understanding regarding key issues, then processes could be simplified, decision making could be more informed and sustainable practices could be communicated with greater clarity to consumers.

"If there was a standard, then that would be an industry move. If we are looking at sustainability on our farm, really, it's just going be sustainable for us to keep going.

Whereas, the industry keeps going but we've just got to… there's a responsibility there as a whole, rather than individually, I think."

Steph, Farmer

"The government are sponsoring a round table on responsible soya for the UK. All the retailers are members of it… and one of the commitments was to have a new soy policy in place by this year and be acting on it by the end of this year, with reports and things. And they've all interpreted the requirements slightly differently… and that's a problem. So, you're balancing that for retailers and they've all got their own audit systems, they will have their own feed systems, they will have their own data reporting."

Sean, Processor

"It is that inability to unify people that is so difficult in the farming industry."

Steven, Assurance Organisation

7.3.2.5 Collaboration

On the border between the industrial and organisational level is collaboration, which concerns working together within stakeholder groupings, across the supply chain, with the wider agricultural sector and around the world. Collaborating with similar stakeholders and on a supply chain level can foster knowledge exchange, with effective organisations being able to mentor others, sharing experiences and best practice. Due to the time pressures farmers face, they can have limited freedom in their schedules to attend collaborative events. A criticism was raised that existing collaborative events are not utilised to their fullest potential, and that engaging talks and time to network were important to maximise benefits. This emphasises the importance of the organising stakeholder recognising the expectations and priorities of the attending stakeholders, whilst implementing their own agenda. Some participants would avoid collaborative events entirely, such as discussion groups, as they can have a negative atmosphere due to complaining, resulting in mental health difficulties for the attendees.

171

"We still thought we were bloody good farmers; you know what I mean? But the trouble is if people stay at home and tell themselves what they are doing is good, they will believe that it is good. You know what I mean?"

Andy, Farmer

"Far too few dairy farmers are still involved in discussion groups, where the great work is being done… Farmers generally learn from other farmers, so it's the best way of progressing."

Richard, Industry Association

On a supply chain level, collaboration can encourage transparency, which results in all players along the supply chain being able to communicate the story behind a product to the end user, which can ultimately increase the value. Transparency in processes can also lead to efficiencies and redundancies being identified by other stakeholders, who might be able to offer solutions that can improve both economic and environmental sustainability. A flow of new ideas can also come from collaborating with other industries in the UK agriculture sector and around the world. Different systems might have efficiencies that work well in the UK dairy industry, and reciprocally, best practice from the UK dairy industry might be effective in other industries and countries. Indeed, the UK dairy industry could help set the example for others around the world to follow, as sustainability is a global problem that requires a global effort. However, any minimum standards shared would have to be attainable by others, otherwise any advice given might just be disregarded.

"It is all about the logistics, and the logistics of getting the product to the consumer and that vessel…. whatever that vessel is, whether it is cardboard, plastic or a bag, whatever it may be, making sure that that goes full cycle back again. We reinvent back into the system. We've almost got this constant wheel cycle… and then that requires a lot of work changing people's habits. And, making sure that our customers and their customers carry the same ethos. Because it's all very well, you know, us

doing our piece, but it needs the engagement of everybody, it's a collaborative thing."

<div align="right">Adam, Processor</div>

"Well, we are quite an affluent country, so we do quite well with money. So, we can afford to have a minimum standard... We could have this minimum standard for sustainability, but if we can't pass that throughout the world, then really, are we even achieving anything, apart from making ourselves feel better. So, actually, is this whole thing about self-justification?"

<div align="right">Kevin, Consumer</div>

7.3.3 Organisational Tier

7.3.3.1 Internal Structure

When considering the organisational tier, the three key factors that emerged are attitudes and behaviour, idiosyncrasies, and internal structure. A notable aspect facing stakeholders in the dairy industry is that producers can often be family-run organisations, which may have siblings or different generations working alongside each other. Such relationships can play an important role in passing skills and knowledge on for future generations. However, difficult family dynamics can also hinder progress when it comes to sustainable practices, as personal issues, emotional bonds and family hierarchy can lead to disagreements on how best to improve sustainability. Instances of such family dynamics were found in several stakeholder groupings, including farmers, processors and retailers. Redundant historic practices or rituals might be maintained out of tradition and respect for others in the family. Interpersonal dynamics in larger organisations can also stagnate progress, as the different specialised responsibilities of the management team need balancing alongside the implementation of sustainable activities. If the individual championing sustainability can tailor the benefits to the issues important to other members of the management team, they may have more success in implementation.

"There is lots of family dynamics because his dad didn't want to because they'd always made a profit and always done well. Having zero grazing made for a consistent milk. They knew exactly the cost of their milk, you know, it was very efficient and [he] was like well, I think we can make it better and it was only when his dad finally retired that he could do it."

<div align="right">Tom, Retailer</div>

I think it's messaging internally and externally... So, I can sit in front of [the management team] and say 'climate change is a problem and our contribution to this is generally through electricity and gas, and actually if we can find ways to stop using as much electricity and gas, we can save a lot of money, because we spend £X a year on [them]. So, we can use this in a positive way to achieve something that is a financial benefit. And they get it. So, putting it into those terms in the business, it helps me get things done and it helps change the understanding of why we're doing some of the things. Because we're saving money, and by the way that's going to help us combat climate change and by combatting climate change, we're saving money.

<div align="right">Sean, Processor</div>

7.3.3.2 Idiosyncrasies

The theme of idiosyncrasies is wide ranging, and encompasses farm size, activities, location and lifestyle of the dairy community. The common link is that all these different aspects can differ on an individual level, making some practices feasible when they might not be effective or possible for all, or facing issues that others do not need to consider. For instance, having a larger sized farm can be linked with financial efficiency through economies of scale, but can suffer environmental consequences that smaller farms do not, such as high concentration of slurry. This is not to say that larger farms should be treated more strictly than smaller farms, but there needs to be some flexibility in identifying and addressing areas of sustainable

importance. Farms can also undertake diversifications as a means for adding value and connecting with the end consumer, producing items such as specialised milk or other dairy products. However, some milk purchasing contracts can restrict this diversification by demanding all milk produced be sent to the buyer; a clause that is justified as a mechanism to stop farmers selling milk on the spot market if that brings a higher price than farmgate. Indeed, many participants expressed frustration at the inequitable nature of some contract clauses, taking advantage of unique lifestyle of farmers.

"So, it's no good saying… standards should be more lenient on us because we're a small family farm. But, the guy down the road that's milking 1200 cows and has got 30 staff, you need to be firmer on him. No, we need to be across the board. Everybody to the same standards."

Lisa, Assurance Organisation

"So, that's where the inspiration came to try to further differentiate and properly differentiate the product away from the commodity market. So that we wouldn't have that vulnerability to the price of the commodity cycles."

Nick, Farmer

"There is almost like a pressure in some contracts, whereby if you're producing less than a certain litre-age, you have to, sort of, pay more to get your milk collected, or you have to go onto every other day."

Lucy, Academic

The idiosyncratic nature of location is also important for several reasons when it comes to perception of sustainability. Being labelled as British was seen as a way to help the consumer easily identify and support the provenance of the produce, with the suggestion that a collaboration across all industries in the agricultural sector could enable a pooling of resources and an effective British food promotional campaign. However, the labelling of British Milk as British is not as straightforward as it may seem, with current guidance allowing milk to be labelled as British as long as

it undergoes a substantial change in the UK (Food Standards Agency, 2008), such as pasteurisation. Therefore, British farmers may not then be benefiting from milk labelled as British, even though a consumer may believe they are supporting the UK's agricultural sector.

Buying locally and focussing in on produce with provenance in the nearby community can also increase the perception of sustainability, as money will be kept within the local economy, boosting the wealth of the area. The imagery associated with eating both British and locally can be seen as ways of adding value to the produce. As the retailer participants point out, listening to consumer demand can mean dairy products from other localities and abroad still need to be sourced, due to the protected designation of origin on some items, such as feta and parmesan cheese. However, for these retailers, it is about finding the balance and ensuring local cheeses are sourced where possible. Location of an organisation can also create practical constraints, such as distance from infrastructure and type of terrain. It is thorough consideration of these opportunities and restrictions that ultimately dictates what practices are most sustainable for that particular piece of land.

"[The consumers] know that when they buy our milk, that it is looking after the dry-stone walls and the environment and that. And actually, they get to see, you know, we have the fact that the packaging is produced [locally], the labels are produced [locally], so the money they spend on our milk all stays in our city and benefits the city and keeps people in jobs. You know, I think that has really been the strength of our milk, is that we've got so many different ways that we can explain the value of it"

James, Farmer

"There are a lot of areas that can't be ploughed. We could just leave them and not harvest them at all. But that would then have consequences."

Michael, Vet

"It is [a few] miles of stone track to our farm from the nearest village, so what we don't want to be doing is taking bulk out, so taking animals or taking bulk out, and

bringing bulk in, is very difficult… that also then lends onto well why our cows eat a

negligible quantity of concentrate. And that is because I don't want to be bringing it in

every week along our track, and we can't get anybody to deliver to us, so they get

bugger all, basically, in the parlour."

<div align="right">David, Farmer</div>

7.3.3.3 Attitude and behaviour

The final theme to discuss on the organisational tier is the intrinsic attitude and behaviour exhibited by an organisation. The two qualities identified as important when ensuring the approach to sustainability is as effective as possible along the entire supply chain are trust and honesty. Trust plays a key role both within a supply chain and when dealing with the end consumer. Placing trust in other stakeholders in the dairy industry may improve efficiency and reduce costs, as sensitive information may be more willingly shared. Consumers that trust an organisation might be more likely to believe the positive actions being taken by an organisation regarding sustainability at face value. An example of this is when products are offering by retailers at a premium to pass more money back to the farmers; if it is believed that the money does not make it back to the farmer, then consumers may be unwilling to pay the premium. This example also highlights the importance of behaving honesty, where organisations should be willing to be transparent about mistakes made and challenges faced, as this will increase other stakeholder's understanding of the situation. Within the supply chain, honesty is seen as key for identify issues in processes and sharing solutions to help overcome challenges others in the industry may be facing.

"So, if we're doing open book with them and they can bring some of their expertise in

that efficiency to us, we can look at that. We can show them what the true cost is so

they know where they are. And potentially, that's got the opportunity to go further into

the supply chain with other people as well"

<div align="right">Sean, Processor</div>

"That's how people learn… you learn so much more from a farmer that is prepared to share their shortcomings and their disaster stories and how they turned it around, than you do from a farm visit where everything is wonderful, you know what I mean? But it's getting people prepared to do it and that is why I've always tried to get across, you know. People warm to you if you are prepared to show your faults."

<div align="right">Andy, Farmer</div>

Finally, a behaviour that links well with the dynamic nature of sustainability discussed previously is the merit of being proactive, rather than reactive. Participants discussed this attitude being linked with addressing issues at their core and seeking continuous improvement, both of which can strengthen sustainable practices taken. When trying to behave proactively, some stakeholders are scared to do anything atypical, which can create a hurdle to overcome. This fear of deviating from the norm links is evaluated through the cultural hegemony lens in **Section 8.2.2**. However, it is from those willing to put '*their head above the parapet'* that change and progress regarding sustainability in the dairy industry will come from.

I think we've got to look outside the box a little bit and crack on with it. Be more proactive, perhaps that's my final statement. As an industry, we need to be more proactive and not just sit back and let it all happen.

<div align="right">Andy, Farmer</div>

To be honest, that's what I've said for a long time. I've said we need a revolution in the dairy industry, it's not about skirting around the edges, you know?

<div align="right">Steven, Assurance Organisation</div>

Table 7.3 relates the key findings explored throughout **Section 7.3** to research question 2.

Table 7.3: Research question two key points
- Sustainability perceptions are influenced by factors on a societal, industrial and organisations level.   - Enhancing the perception of value in the product and the supply chain plays a key role in how stakeholders evaluate practices, featuring in several of the identified factors.   - Guidance on sustainability needs to be flexible, as organisations have their own idiosyncratic challenges   - Conflicting agendas of different stakeholders can make it difficult to reach a consensus on sustainable practices.

7.4 Perceptions of power and its importance in ensuring sustainable practices

7.4.1 The Consumer/Retailer Relationship

From the interviews, when asked to compare the power held by different stakeholders in the UK dairy industry, a reverse supply chain of power emerged, with the consumer at the powerful end, and those furthest away from the end consumer at the least powerful end, such as dairy farmers. Stakeholder theory helped facilitate discussion around the power held by different players, as is explored in more detail in **Section 8.2.1**. Of course, the power held over the dairy industry by the consumer appears due to their ability to drive demand for specific products and requirements; without demand for dairy, the dairy industry simply would not exist. Indeed, participants acknowledged that public interest in sustainability has driven organisations to respond and helped shape the agenda on sustainable practices. Consequently, within a supply chain, those in a closer proximity to consumers seem to hold greater power than stakeholders further away, because if they want to sell a product, it should align with consumer desires and expectations. To ensure a product is produced to these specifications, power will be wielded down the supply chain to ensure an appropriate outcome. This is why retailers are seen as being powerful and able to set the agenda for the dairy industry; ultimately, they hold the means of

interaction with consumers, and are responding to expectations whilst trying to make a profit. It should be emphasised that the identification of the consumer as a holder of power is not to suggest a replacement of responsibility on the retailer, but instead to broaden the focus to those who can influence retailers. The choices and habits of consumers can influence the retailers from the other side of the supply chain to those further upstream, adding additional pressure for sustainable change, as illustrated in **Figure 7.2.** As is shown in the diagram, the retailer is where the flow of produce in one direction meets the flow of power in the opposite direction, creating a pressure point at the retailers' supply chain position.

"The consumer has the power. So, if consumers are making a lot of noise about certain issues, or consumer behaviour changes because they, for example, if consumers had a choice between sustainable milk and standard milk, whatever that means, that sustainable milk or climate friendly milk costs a premium, but everybody bought climate friendly milk, then over time, consumers will… that will change behaviour of farmers."
Matt, Farmer

"I think probably the power lies with the consumer, because if the consumer didn't need the product, not just with dairy, but with anything, if the consumer didn't need the product, then everything you mentioned before would stop."

Kevin, Consumer

"The consumers have the power on what they're willing to pay and how the industry reacts. And what they want from the industry, but equally, the closest part of the chain to them is probably the supermarkets, and they are best positioned to influence."

Adam, Processor

180

As the consumer decides the desired specifications of a product, and thus is able to influence the retailer offering, it is important to educate the consumer, so they can make an informed decision and fully appreciate the value held in dairy produce. In this knowledge exchange is power, and it is vital that accurate and non-conflicting material comes from the entire dairy industry, so information is as clear as possible for consumers. An example mentioned by participants that demonstrates the power of knowledge is free range eggs. This case also serves as an illustration of cultural hegemony at work in the food industry, with further discussion on theory given in **Section 8.2.2**. The distressing image of caged hens is in the public consciousness, so this influenced the rise in demand for free range eggs, which in turn influences practiced on an industrial level. This might be the case when consumers are buying eggs, but the same concern is not given to 'invisible eggs' that are used as ingredients in other products. These might well be from caged hens, but as the consumer is not aware of this, the products on offer may remain acceptable to purchase. It is pointed out in the interviews that you do not want to give consumers too much information, as this can overwhelm and complicate understanding. Like the

General Flow of Produce

Upstream pressure | Additional downstream pressure

Producer → Processor → Retailer ← Consumer

General Flow of Power
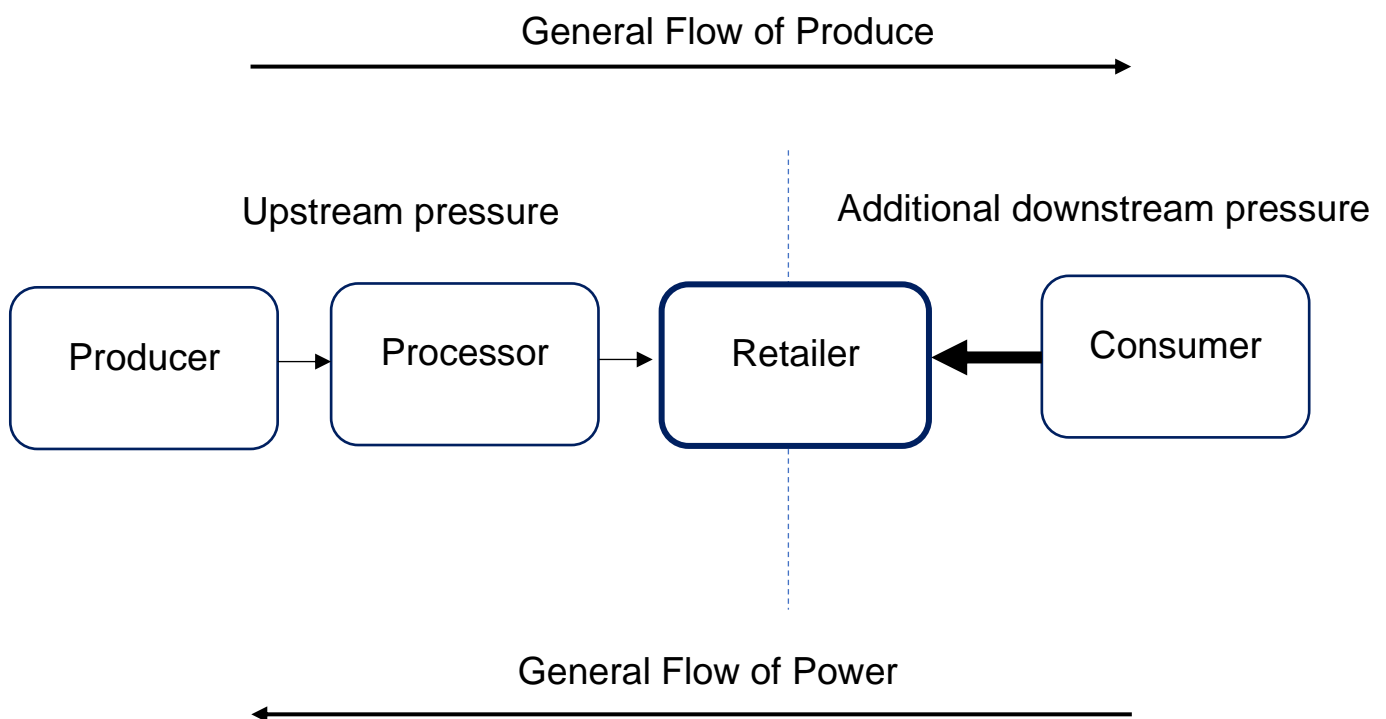
Figure 7.2: The reverse supply chain of power and emphasis of consumer focus increasing pressure on retailer

image of the caged hen, the dairy industry might need a simple unified message that can capture the consumer attention.

"Yeah, it's like when you look at eggs. I mean, eggs, oh there is a box of eggs for 50p, it's like oh, that's because they are all from caged hens. Whereas a normal box of eggs are all free range, you know."

Elizabeth, Consumer

"You can say obviously that the consumers would therefore be the ones who have the power. But I don't think so because I don't think that message is communicated that far. You can't overwhelm, you can't tell the consumers about soil types, because they're not going to listen."

Steph, Farmer

7.4.2 The Loop of Power

Ultimately, it is apparent that the choice made by the consumer is the mechanism they use to exercise their power. If there is a greater demand for a particular product, then supply will rise to meet that demand if possible. If this happens in one particular supermarket brand, then other organisations may follow. The distinction between the attitude of citizens and the attitude of consumers is important to highlight here, as buying habits of consumers do not seem to always accurately reflect the moral values held by the same individuals as citizens. For instance, individuals might care about high animal welfare standards, but still want to buy the cheapest pint of milk they can find. This highlights the need for consumers to truly understand the value of milk, making the need for accurate and clear knowledge transfer even more acute.

"The supermarkets think that is what people want, because that's what they are buying. So… and it is getting the public to understand that… what they chose to buy instore sends a really clear message to the supermarkets of how they want them to act going forward. And if you refuse to buy… you know, people refuse to buy things in plastic, the supermarkets do something about it. If you refuse to buy products that

have got palm oil in because you want to save the orang-utans, the supermarkets then go back to their people and say 'all of a sudden, these palm oil products aren't selling, can you reformulate it?'. You know, and that is where the sustainability comes in. It's educating the public and to make them actually care and drive sustainability."

James, Farmer

"People say like 'oh the most important thing to me…'. If you ask them, like [doing] a questionnaire, if you ask people what the most important thing to them is, it's animal welfare. Then they go into the supermarket and just pick up the cheapest piece of meat they can find. That's just the way it is."

Steph, Farmer

The key role that perception of value holds in the dairy industry was emphasised throughout **Section 7.3** in several different factors and, contrasting this with both resource dependence theory and cultural hegemony, the formation of the hegemonic resource value concept is shaped in **Section 8.2.3**. Indeed, it seems that the intrinsic value held by the dairy produce itself holds some power, as this can influence how much consumers are willing to pay. The commoditisation of milk appears to have taken away the value of provenance and differentiation that can be attached to products, which in turn can discourage motivation in farmers for improving the quality of their product. This loss of motivation coupled with a lack of power can lead to producers feeling as replaceable; a feeling that is compounded through purchasing contracts that can be perceived as unfair. These relationships along the supply chain should not be dismissed as inconsequential, as through fair treatment and support between organisations, power can be strengthened. This might be through collaboration and sharing of resources, or just through cultivation of a genuine willingness for organisations and producers to want to help each other thrive.

"Making sure that our industry critical success factors are that consumers are willing to pay for an added value product, which gives them… you know, it's got to provide them with a niche in order for them to pay."

Adam, Processor

For a farmer, I just don't see how you can be enthusiastic about improving your breed and improving your pasture and improving the quality of your milk if you know that it is going to be powdered."

Tom, Retailer

The size of an organisation can lead to an increase in power, as larger organisations may be able to command greater influence over the industry. A similar effect can happen with a collective or individuals or organisations, as working together and acting in a unified voice can help avoid creating unnecessary obstacles and streamline processes, whilst acknowledging that all parties have a responsibility towards sustainability. Ultimately, this power held by larger organisations, collectives and relationships has the ability to shape what are accepted by the majority as legitimate sustainable practices in the dairy industry. These sustainability practices are then disseminated back to consumers through advertisements and grey literature, such as corporate reports. This therefore adds to consumer knowledge on sustainable practices in the dairy industry, which in turn influences their expectations, closing the loop of power. Within this loop, money can be seen as mechanism through which power is transmitted. The expectations and choices made by consumers are signalled through the money they are willing to spend, and equally, organisations within the supply chain can be incentivised by money to enhance sustainable practices. This loop of power is illustrated in **Figure 7.3**, with the divide representing factors inside and outside of the dairy industry. It is at this divide that the bridge between the dairy supply chain and the general consumer can be seen, through both performance and evaluation of sustainable practices, as well as purchase of product. These factors are shown overlapping the dashed line divide.
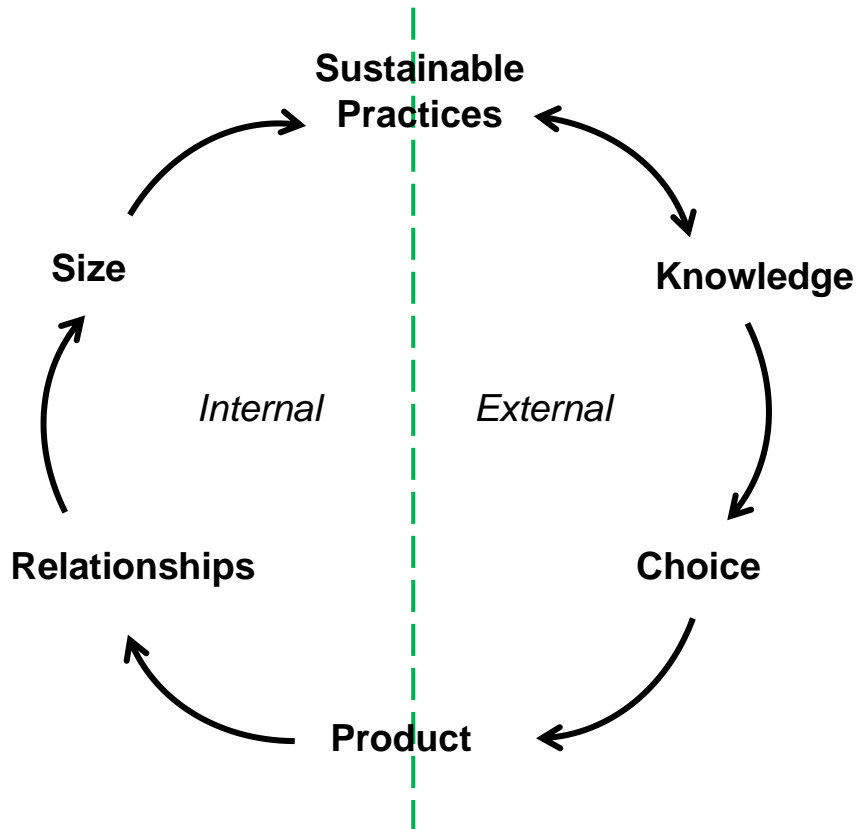
Figure 7.3: The loop of power, both internal and external to the dairy industry

 "Actually, the little people potentially, if they make enough noise, can have power as well. So, ultimately, I would say dairy farmers don't have much power, but it has been proven in the past the if you work together and if there is enough dairy farmers making enough noise, or enough dairy farmers doing the right thing, then that does create a certain amount of power and movement."

Matt, Farmer

"The only way to achieve improvement is if everyone across the whole supply chain and the whole industry is on board with it. So, I think the nature of needing to work together to tackle these issues when there is really not one sole body that can

unilaterally make a decision… and deliver something that works for everyone… is

closer to being sustainable than just one sole actor's opinion on it."

<div align="right">Daniel, Industry Association</div>

"Like I said earlier, the power is in money. So, everyone wants to pay as little as they

can for the best stuff that they can get for that price."

<div align="right">Kevin, Consumer</div>

Findings from the interviews that address how power influences sustainable narratives within the UK dairy industry are summarised in **Table 7.4**.

Table 7.4: Research question three key points

- o Consumers appear to be in a strong position to influence retailers in the dairy supply chain, and can exercise that power through making choices on how they spend their money. However, through an oligopolistic market structure, there is not as much choice as there may seem.
- o The knowledge held by the consumers, which is influenced by existing sustainability practices, influences decision making and value perception
- o Existing sustainability practices in the dairy industry can be shaped by larger organisations, collectives and strong relationships.

7.5 Chapter 7 conclusion

The data gained from the participants across the dairy industry were plentiful, as is reflected in the broad and comprehensive answering of all three research questions. The key points box at the end of each section was given to draw out the skeletal frame of each answer, with the full results providing the richer detail around these comments. The findings to research question one emphasised the need to move away from universal all-encompassing approaches to sustainability, and instead offer flexibility that acknowledges the variety of differing, but equally valid, issues faced by

members in the dairy industry. Sustainability was seen as a concept that was in flux, where the issues faced by stakeholders can be complex to address.

In answering research question two, twelve themes emerged when considering the factors that affect the perception of sustainability within in the UK dairy industry, and were organised in a three-tier structure. As with the findings of research question one, idiosyncrasies faced by different stakeholders and organisations were identified, consequently leading to the formation of conflicting agendas of parties, which highlights the need for balance and compromise along the supply chain. A thread that ran throughout several factors discussed in this section was the importance that perception of value plays in evaluation of sustainable practices.

The ultimate holders of this value perception, the consumers, emerged as being able to influence the power retailers hold over the dairy industry, with the ability to inspire change though the purchasing choices they make. Expectations and willingness to pay of the consumers is shaped by the knowledge they consume, which in turn is partly influenced by sustainable practices currently taking place in the dairy industry. These existing practices are formed from the size of and relationships held by an organisation, with the link to external sustainable knowledge closing the hegemonic loop of power found within the dairy industry.

As has been flagged through the results, **Chapter 8** will take stakeholder theory, cultural hegemony and resource dependence theory, and interpret the results discussed in this chapter through these theoretical lenses, as well as suggest a concept arising from this analysis. A comparison between the results from the interviews and those from the critical discourse analysis is also given, alongside the contrast between the results found and the existing literature.

Summary of key points

- Sustainability within the dairy industry is seen as a broad, multifaceted, dynamic concept.
- 12 factors were identified that affect the evaluation of sustainability from the perspective of different stakeholders, spanning over organisational, industrial and societal considerations.
- Enhancing value of dairy produce appeared as a common theme in several factors, including education, assurance schemes, price, communications and infrastructure.
- Retailers can feel pressure to adopt sustainable practices from upstream and downstream in a supply chain
- The loop of power shows the relationship between internal characteristics, external cognisance and the sustainable practices of a supply chain.

8

Powerful perceptions: a theoretical & conceptual assessment

8.1 Introduction

This chapter links closely with the findings discussed in its results antecedent, but rather than the reporting of results, the focus is now heavily placed on analysis, from which a case for the findings can be formed and strengthened (Thomson, 2015). It is suggested that this analysis is shaped by comparison against existing literature in the field (Hayton, 2015), as well as focusing on how the research questions have been answered and what contributions have been made by undertaking this research (Williams *et al*, 2011). As can be seen from the results chapters, the data that emerged were plentiful and rich, but this only further emphasised the need for a coherent and logical structuring to ensure a meaningful analysis could take place. Therefore, the advice given above was used to set the foundations for this chapter.

To begin with, as has previously taken place with the Critical Discourse Analysis (CDA), the interview results will be considered through the lenses of stakeholder theory and cultural hegemony. Then, due to its relevance with these findings, resource dependence theory will be utilised, and combined with the two other lenses to develop and propose an emerging concept. After this conceptual discussion, proposed answers to each of the three research questions will be sequentially compared against existing literature in the field. As research question one and three were addressed by both the CDA and the interviews, the results from each method

will also be contrasted against each other. Finally, before a summary, an evaluation of the tension between different sustainability approaches relating to growth is given.

8.2 Application of theoretical lens to interview findings

8.2.1 Stakeholder Theory

As was discussed in **Section 4.5**, stakeholder theory was utilised in this project to encourage participants to consider the different perspectives of those affected by a focal organisation's activities, both in the supply chain and beyond in wider society. As Govindan (2018) suggested, stakeholder theory did help in discussing issues faced by different organisations in a broader sustainability context, rather than just problems they faced as individual organisations. Furthermore, by identifying different stakeholders, the varying agendas of those within the dairy industry were highlighted, helping to acknowledge the challenges faced by others, and consequently fostering a deeper understanding and stronger relationships, which are vital when advocating for change (Kaku, 1997). Using the framework suggested in Chapter 3, which is rooted in different stakeholder perceptions, this piece of research would be categorised as a 'resist' approach. The critical voice in this research comes from the perspective of the weaker stakeholders, and it is stated throughout the thesis that existing practices in dairy industry are currently unfair, exploiting those stakeholders in a weaker position.

"We have supplied the supermarkets in the past, but I am jolly glad we are not at the moment because I do feel you are just a name in a catalogue. You are expendable."

Tracey, Farmer

It was through the highlighting of different challenges, consideration of impact on others and inclusion of the broader context that helped create structure to the results gained in the interviews. For instance, consider the answers regarding the different factors affecting sustainability perception, which aimed to address research question two. Any factors that were identified tended to be discussed in relation to specific stakeholders, all with varying relationships to the focal organisation. The hierarchical three tier structure shown in **Figure 7.1** was devised from discerning the general

levels participants related identified factors to: on a personal organisational level, on a dairy industry level or on a wider societal level. Creating this structure was an attempt to illustrate that whilst an organisation has the ability to try and influence all factors, some are easier to address than others; changing organisational attitudes and behaviours can be controlled internally, whereas changing public perception about the legitimacy of certain sustainability metrics is more complex to action.

"It's all about… connecting farmers and consumers because until the consumer has a real understanding of what… they have a perception of what sustainability looks like in their minds, but until they understand what that's going to look like on the ground, it's really difficult."

Steven, Assurance Organisation

From a practical perspective, when questioning about power, identification of the most powerful and least powerful stakeholders created an effective starting point for facilitating conversation on the subject. When analysing, it made for a clearer comparison between the attitudes held by each participant, which aided in the recognition of the power complex relationship between retailers and consumers, as discussed in **Section 7.4.1**. Coupled with their role as end user, this identification provided the rationale for using consumer perceptions on lived sustainability practices as the end lens for **Figure 7.1.** However, relying simply on the identification and comparison of different stakeholders appeared to be a superficial way to consider power dynamics in the dairy industry. Participants tended to discuss broader, and sometimes intangible, mechanisms of power, such as knowledge, relationships and money. Furthermore, categorising participants into one particular stakeholder grouping appears to be an oversimplification of the reality facing the dairy industry. Indeed, several participants identified in multiple stakeholder categories, such as being both a farmer and a retailer, or a processor and a member of an industrial body.

"The money holds the power."

Sarah, Assurance Organisation

Whilst there were some practical limitations in using stakeholder theory, the lens was never intended to be solely used for interpreting outcomes. It was envisioned that power dynamics were going to be discussed in stakeholder terms, but alongside supplementary information, rather than in isolation, to provide a greater depth than stakeholder theory alone can offer. Additionally, stakeholder theory was employed in this project to create a clear structure that could be compared between participants. Ultimately, stakeholder theory provided a foundation for explaining the complexity within the industry and between others in society, just as Bevan and Werhane (2011) suggested it would.

8.2.2 Cultural Hegemony

The effectiveness of applying Cultural Hegemony in a supply chain context has been demonstrated in this study, with the theoretical lens providing insights to all three research questions. These insights are collated and illustrated together in **Figure 8.1**, which illustrates the influences and impacts of hegemonic thinking regarding the dominant sustainability storyline in the UK dairy industry. As can be seen, hegemonic changes can be imposed and come from outside the existing storyline to form new impacts within the dominant approach to thinking. **Figure 8.1** also captures the influences of hegemonic thinking that is found in the present-day dairy industry. Given the factors discussed in Chapter 7, there are several additional influences that would ideally be included in the future to enact positive change, such as incentivising stakeholders and effective regulation and policy (**Section 7.3.2.3**) that acknowledges the multifaceted, bespoke and dynamic nature of sustainability in the dairy industry (**Section 7.2.3**).

In the first instance, when considering the different approaches taken towards sustainability in the dairy industry, most participants emphasised the fundamental importance of sustaining the economic pillar of Elkington's (1997) triple bottom line, before focusing on the social and environmental. Reverence of the economic demonstrates that there still exists a mindset of capitalist and traditional business values, where economic sustainability is a prerequisite for acknowledgement of social and environmental sustainability. The selection of UK based sustainable supply chain studies in **Table 2.1** showed a focus on environmental sustainability,
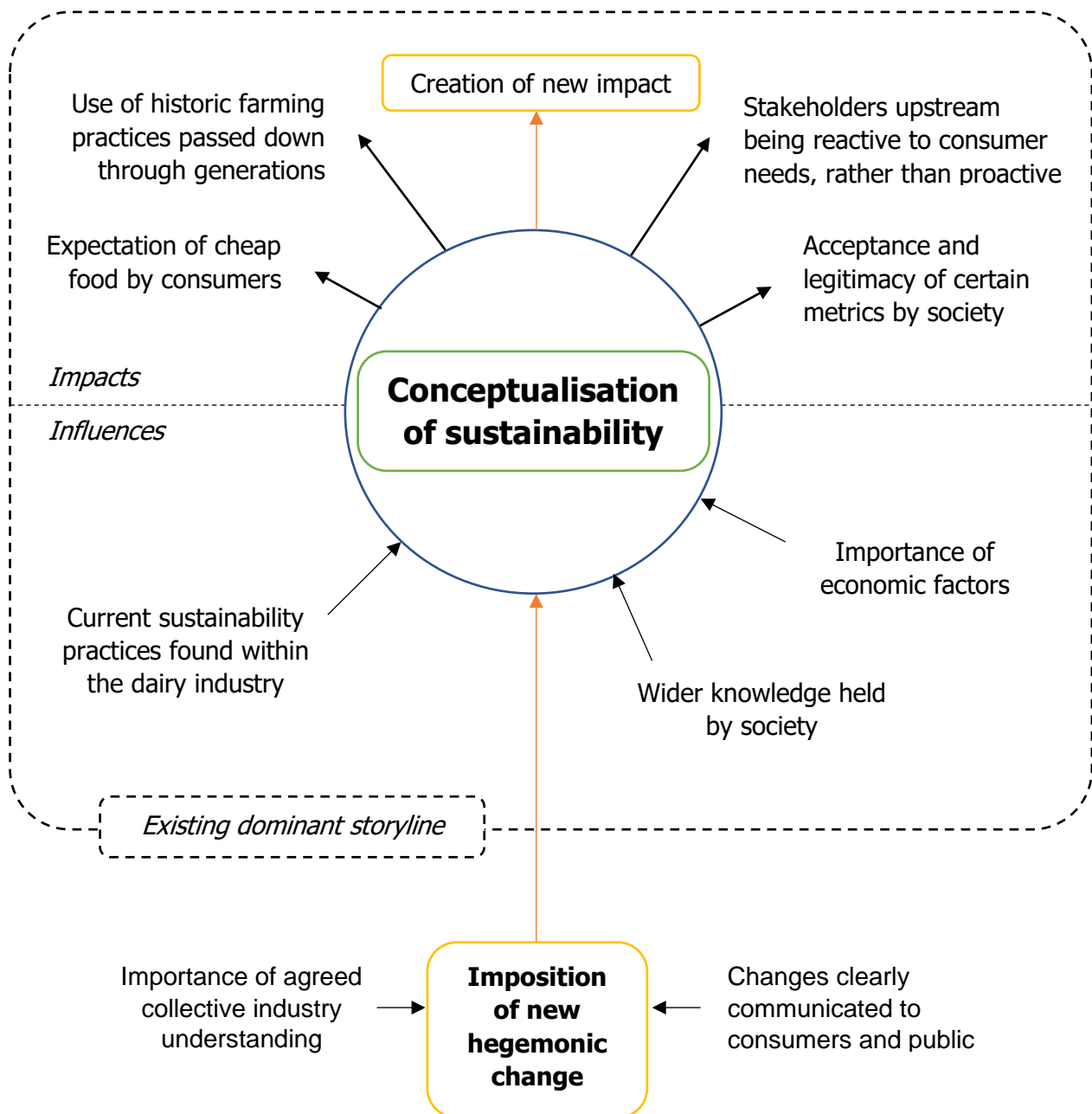
Figure 8.1: The influences, impacts and disruption of hegemonic thinking in the dairy industry

and some participants did indeed acknowledge that environmental factors should be of primary consideration.

"Well, to me, a sustainable diet is what can be grown locally… what are the staples that can be produced sustainably… without damaging biodiversity, water, all of those sustainability outcomes."

Tracey, Farmer

Although this approach may appear legitimate, it remains that the majority emphasised the importance of economic factors in society, highlighting a key complexity of the triple bottom line framework; the integrity of all three pillars is inextricably reliant on the strength of the others. Whilst this creates a difficulty when trying to consider the importance of one pillar in isolation, it remains clear that the economic pillar assumes precedence above social and environmental issues in the contemporary UK dairy industry. This reverence of economic factors is consequently included as an influence in **Figure 8.1**.

"I think [the three pillars of the triple bottom line] are all equally important, apart from the fact that none survives without the other. So, at the end of the day, unless people are consuming milk, then we won't have a dairy industry. And that milk has got to be consumed at a price that creates enough reward for us… for making a sensible living and to reinvest."

Andy, Farmer

When considering research question two, the application of the cultural hegemony lens on the different factors that influence the perception of sustainability demonstrates the influence that perceived common sense and pre-existing expectations can have over sustainable practices. An example of this on a farmer level is the passing down of historic agricultural practices through generations. Whilst these practices might not rationally be the most sustainable or efficient practices, their significance is rooted in the ritualistic and influenced by a dominant group in a farmer's life: their siblings, parents and ancestors.

"I think farming, you know, especially if you're 2nd or 3rd, 4th generation farmer, its skills that have been passed from father to son or daughter, down through the family, and that might not be the right way to do it now."

Sean, Processor

Remaining on an organisational level, the reactive behaviour demonstrated towards sustainability issues shows a fear of taking a risk and being perceived as a deviant in the industry. This stifling of proactivity is the suppression of cultural hegemony in

action. As Ransome (2010) said, power is achieved in cultural hegemony through the ongoing consent of others. The silence and reactiveness of the dairy industry is tacit act of consent for the current norm to continue. Whilst this can seem counterintuitive amidst passionate calls for changes in practices, it reveals the latent power of cultural hegemony held by those in power.

"I think if you look at business, they don't necessarily want to put their head up above the parapets, for fear of it being shot off."

Sean, Processor

On a wider societal level, the impact of cultural hegemony on the dairy industry is apparent, reflected clearly in the expectation held by the British public of cheap food, which in turn affects the low value assigned to milk. Succinctly summarised by one participant: *"Everyone wants to pay as little as they can for the best stuff that they can get for that price"*. The use of milk as a complementary product in cafes and restaurants, such as being something you pour into hot drinks, rather than a drink in its own right, further commoditises and devalues the product. Consequently, as generations reach adulthood without exposure to milk being served as a drink, a norm becomes established in society. Furthermore, the acceptance and legitimatisation of only certain metrics by society, such as carbon footprint, is a manifestation of individuals consenting to an agenda and viewpoint created by those in power. Both the expectation of cheap food and acceptance of certain metrics are presented as impacts of hegemonic thinking in **Figure 8.1**.

"If you started looking at the iron content of food… the environmental impact if you started measuring the greenhouse gas emissions per gram of iron, it's suddenly going to start dropping down… When that's the metric you are using, other foods that you typically assume to be good for the environment suddenly wouldn't be if you're a person who has iron deficiency."

Daniel, Industry Association

In answering research question three, the multifaceted nature of power in the dairy industry was shown, so no one stakeholder was singled out. Due to this, the

conceptualisation of sustainability shown in the centre of **Figure 8.1** refers to the entire UK dairy industry. The retailers and consumers were highlighted as two stakeholders of interest, which links with the worldview element of cultural hegemony in that they appear to be the players who can decide what is seen as acceptable and unacceptable. When considering the loop of power shown in **Figure 7.3**, the link between knowledge and current sustainable practices is illustrated by a double headed arrow. This was purposefully done to emphasise that these elements shape each other, as current sustainability practices will affect the knowledge digested by consumers, and existing knowledge on sustainability will affect sustainable practices undertaken. Drawing on Foucault's link between knowledge and power (Hall, 2001), both current sustainability practices and wider knowledge sit alongside the importance placed on economics as influences over the conceptualisation of sustainability in the UK dairy industry, as shown in **Figure 8.1**.

"We have to deliver what the consumer and the world needs."

Steven, Assurance Organisation

Although a cultural hegemony might seem resolute, it simply acts as a zeitgeist of any particular era, and an imposition of a hegemonic change is possible. Evidence of such a change was brought up by several participants: free range eggs. When once eggs from caged hens were considered the norm, now consumers favour eggs laid from free range eggs. Drawing from the themes discussed in **Chapter 7**, a key element of any imposition appears to be a need for collective industry agreement and understanding on a particular topic, supporting Paulraj *et al*'s (2017) importance placed on moral motivation towards SSCM practices. Furthermore, such agreement should acknowledge the importance of being flexible enough to recognise farm-level idiosyncrasies. Support would have to come from retailers by agreeing to sell the product in their outlets. Furthermore, any new practices would need communicating clearly to the consumer and wider public, ensuring they have an appreciation of the labour behind any new processes, and subsequently the worth of any added-value. Shown in **Figure 8.1** as an influence external to the existing cultural hegemony, imposition of a hegemonic change could happen at any time, creating new impacts and fundamentally changing the conceptualisation of sustainability held by the dairy industry. Such an imposition, brought about individual stakeholders developing

understanding through communication, serves as an example of the molecular changes of a passive revolution (Gramsci, 1971), discussed in **Section 4.4**.

"Over time, the consumer, [through] retailers… have basically dictated that they want to buy free-range eggs, so the majority of eggs in this country now are free-range over a period of time. And that is how behaviour changes the market, and farmers adapt to the market."

Matt, Farmer

8.2.3 Resource Dependence Theory

As was discussed in **Section 4.3**, Resource Dependence Theory (RDT) was emphasised as a useful lens for understanding the role that the flow of resources between organisations has on power dynamics. Simply, as Reimann and Ketchen (2017) put it, the organisations that hold the resources on which others depend on consequently holds a power over those with dependence. This situation can be seen in the dairy industry clearly, across multiple supply chain relationships. For instance, the dairy farmer needs money and an outlet to sell their produce, and a supermarket can provide these. As there are fewer supermarkets than dairy farmers, they hold the limited resources and consequently can wield their power over dairy farmers, potentially influencing division of sustainability risk and value along the supply chain (Touboulic *et al*, 2014).

"I'd say supermarkets have the power... everything is controlled by price."

Steph, Farmer

When considering the relationship between supermarkets and consumers, the consumers combined hold more money than the supermarkets, and so can collectively wield power over the supermarkets through spending choices. Power is not always one way (Davis and Cobb, 2010), and this is definitely true of the complex network of relationships amongst the stakeholders of the dairy industry. The consumers still depend on the supply of food from a supermarket, in terms of affordability, availability and quality, and the supermarkets still rely on dairy farmers for their supply of dairy produce.

"Farmers... are small as individuals, but actually, as a group, they do have an element of power. And it depends on, I think, the structure there in order for them to make or influence those changes"

Matt, Farmer

An alternative lens used when considering power in this study was the concept of cultural hegemony, whose effectiveness at highlighting approaches taken toward and factors that influence sustainability, as well as consideration of power dynamics, was demonstrated in the **Section 8.2.2**. As RDT considers how power is bestowed to an organisation in relation to the resources they hold and the dependency of others on that resource, the logical progression of thought was then how this resource dependant power could link to the maintenance of a hegemony, both within a supply chain and wider society. Indeed, the absence of this powerful hegemonic force in RDT is a shortcoming of the theory, as its inclusion offers an explanation about how those in powerful positions wield their power to maintain dependency and importance attributed to a resource. The identification of this omission came about through the capturing of differing perspectives of stakeholders across the dairy supply chain, illustrating the key role this inclusivity plays in critical engaged research (Touboulic *et al*, 2020).

Consider the dairy farmer and supermarket relationship, with dairy products flowing upstream in the supply chain, and money coming downstream. When contrasted against the scarcity of natural resources, money is in greater abundance than dairy produce, which leads to the consideration of why financial resources incite greater power within a supply chain, and what characteristics of these resources bestows a level of power capable of hegemonic influence? The answer to these questions can be found in the emerging theme from this analysis: value.

8.2.4 Hegemonic Resource Value Concept

Revisiting the supply chain relationship between the dairy farmer and the supermarket highlights the crucial role value appears to play in mediating the power given by resources. The undervaluing of milk, and importance placed on money by society, would explain that, whilst milk may be a finite resource, money has greater value in the supply chain, and as such is the resource that wields the most power in

this context. Similarly, when applying this logic to the relationship between the consumer and the supermarket; if the consumer decreases the value they assign to a product, then there will be an expectation that the price will also decrease, as consumers will be less willing to give up their valuable financial resources. This is not to overshadow the important role played by dependency in this theory; indeed, without a need and want for milk from the consumers, the dairy industry would not exist.

"Sustainability for a commodity industry means that we've got to put value back into the chain and, unfortunately, that means everyone being accountable, being as lean as they can be, but equally, at the point of purchase, there has to be a sustainable cost mechanism."

Adam, Processor

The inclusion of value is complementary to dependency, and provides the clear link with cultural hegemony. Increasing the perception of value held by consumers of the dairy industry could increase the flow of financial resources into the dairy industry, which can benefit all pillars of the triple bottom line. However, consideration of the consumer power alone oversimplified the reality facing the UK dairy industry. When considering the value of financial resources in the supply chain, this just not just specifically mean physical currency, but could mean other types of capital and assets. For instance, the retailers have the financial power to own distribution networks and processing capacities, creating a different, but equally valid, claim to power and control of the dominant hegemonic storyline than the consumers. The value perception of dairy is rooted in the hegemony at any particular era, so influencing this hegemony could consequently influence the value of dairy produce held by consumers. How the dominant hegemony held by a society is related to resource value, which in turn relates to supply chain power, can be stated in principle one of the Hegemonic Resource Value concept (HRV):

1. The holder, or collective holder, of the most valuable resources within a supply chain has greater power and control over the dominant hegemonic storyline, given the perception of relative value and level of dependency held by society.

Breaking down this principle, the holder of the most valuable resources can either be a single entity or group of stakeholders, hence the specified option of a collective is explicitly acknowledged. The value of the resources in a supply chain system is relative to the perception held by society of all resources in any given system, and consequently can vary depending on the supply chain under consideration. The dominant hegemonic storyline relates to the issue under consideration, which is sustainable practices in this project. As explained previously, the level of dependency held by society is essential for the existence of a supply chain, as well as linking with the value attributed to it by consumers and being an essential tenet of RDT, and is therefore stated in principle one.

Relating principle one back to the previous analysis of this study brings up a relationship of interest between two factors: the perception of value and the dominant hegemonic storyline. As was identified in the CDA findings, the hegemony perpetuated by those in powerful positions needs to be legitimised by others to be maintained, with this relationship being referred to as the cycle of legitimacy. The importance of increasing value in improving the sustainability of organisations that hold less power was highlighted in the interview results, suggesting that if an individual or collective wishes to alter the perception of power held by society, then there is a need for a revolution and imposition of a new dominant hegemony. This relationship leads to principle two of the HRV concept:

2. The perception of relative value held by society and the dominant hegemonic storyline are reciprocally linked through a cycle of legitimacy. Therefore, a change in value perception would require an interruption in this cycle by the imposition of a new hegemonic norm.

As discussed in **Section 7.3.2.1**, relative value could be in terms of money or abstractions, such as nutrition and morality. The two principles of HRV are summarised in **Figure 8.2**. Note the bidirectional arrows for the cycle of legitimacy, emphasising how value and dependency can affect the dominant storyline, which in turn has the influence to affect value and dependency. Due to the emergent nature of HRV from the findings of this research project, the links with the study are inherently embedded in both principles. However, a further connection can be made when considering the emphasis this study places on the power held by consumers

when exploring sustainable practices. It is wider society that tacitly agrees to a cultural hegemony and it is their perception of value that can ultimately affect the sustainability of the dairy industry from a triple bottom line perspective.
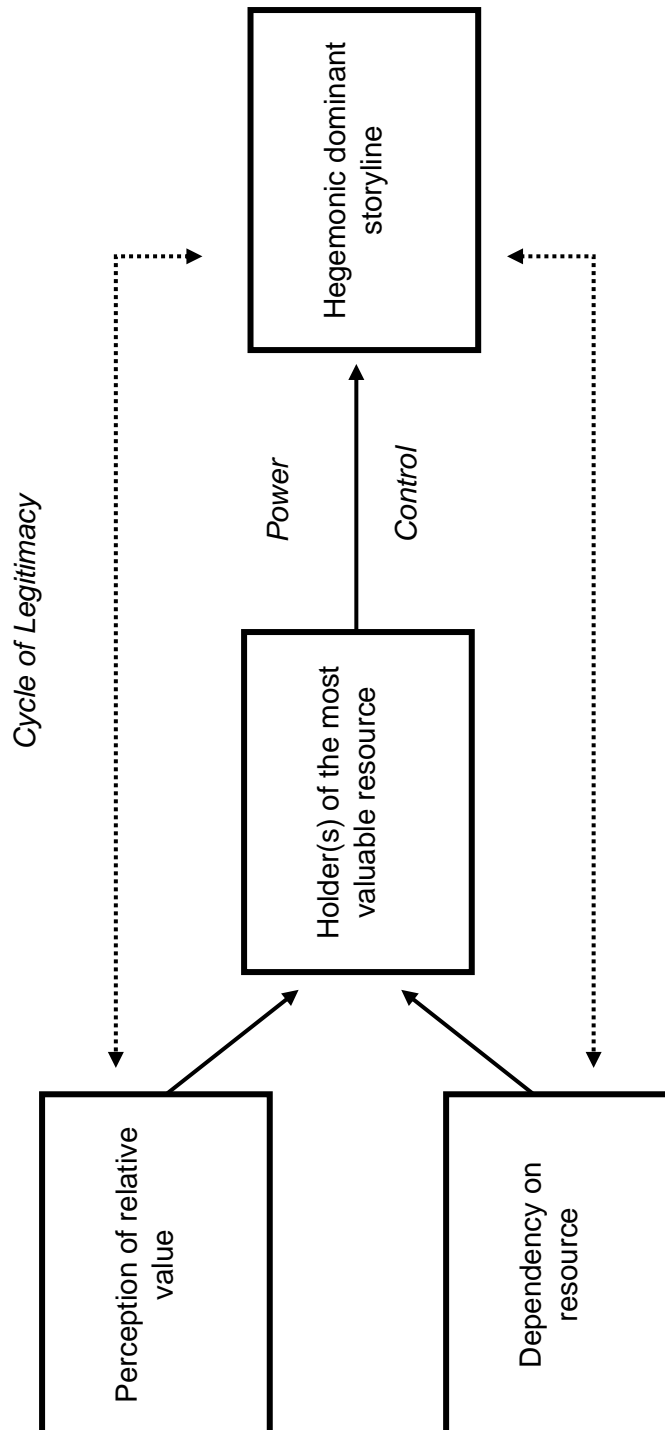
Figure 8.2: The flow of power and control in the Hegemonic Resource Value Concept

8.3 Comparison of Critical Discourse Analysis and Interviews

This section of the discussion serves two purposes: comparison of the results ascertained from the Critical Discourse Analysis (CDA) and the interviews, as well as comparison between the results from the study and previous literature referred to in **Chapter 2**. It should be noted that the CDA was designed to only answer research questions one and three, so **Section 8.3.2** only compares interview findings with previous literature.

8.3.1 Approach to sustainability

When considering the findings of the CDA regarding approaches taken to sustainability, the two focal topics to emerge were the general approach taken to sustainability and the roles of stakeholders, both of which were linked and juxtaposed together. The broad approach taken to sustainability, established through the use of generic terminology in the CDA, was echoed in the interviews. The complexity of balancing the agendas of differing stakeholders whilst addressing a multifaceted issue like sustainability appears to demand a broad understanding in the first instance. On the other end of the scale in the CDA was an emphasis on the need for a bespoke approach to sustainability, which was also reaffirmed in the interviews with calls for flexibility and acknowledgement of idiosyncrasies across the dairy industry: there is no universal, all-encompassing solution that neatly fits the entire industry.

The differing general roles of each stakeholder identified in the CDA, such as leader, enforcer and supporter, reflects the importance of all members of a supply chain have a role in ensuring sustainability of all players. As was mentioned throughout the interviews, one example of bad practice can taint the sustainable image of the entire industry, so the value of working alongside each other is stressed here, rather than in isolation. The revolutionary approach to sustainability and the protester role specifically relates to the interview findings that sustainability is always being changed, which also links with potential imposition of a new cultural hegemony, as discussed in **Section 8.2.2**. This infers that sustainability in the dairy industry is evolving, and should not be seen as a static requirement that can simply be achieved. Instead, a dynamic, multifaceted approach towards measuring sustainability performance is needed.

Chen *et al* (2017) discussed the effective implementation of sustainable practices through collaboration; a sentiment that is reflected in the findings through the importance placed on working together and balancing the agendas of different stakeholders. Furthermore, inadequacies of the existing sustainability policies found in the agri-food sector borne from claims of limited scope (Kalfagianni and Kuik, 2017) are substantiated by the emphasis placed on the multifaceted and broad nature of sustainability by the CDA and interviews. **Section 2.6.4** discussed the turbulent contemporary economic situation facing the UK dairy industry. Coupling this with Leat *et al*'s (2011) assertion that sustainable practices with economic benefits are preferred for implementation, it expectedly follows that, although social and environmental issues are vital when making decisions regarding sustainability, the economic pillar appears to take precedence. As the cultural hegemony lens has highlighted, whilst society places importance on capitalism and relentless growth, cash remains king.

"I think that's the bit where you kind of get barriers, it's just how we as a society operate, isn't it? It's not always… things of sustainability aren't always underpinning everything in the way they probably should be."

Daniel, Industry Association

8.3.2 Factors affecting the perception of sustainability

The factors identified through answering research question two are the bridge between identifying the approach to sustainability and how power can influence sustainable practices. This is due to the identified factors illustrating specific issues that can influence perception of sustainable practices, which can then in turn influence how powerful players wield their authority throughout the dairy supply chain. Whilst it was only the interviews that sought to recognise these factors, the data collected were rich in detail, providing twelve factors affecting the perception of sustainability, categorised over three different levels, as illustrated previously in **Figure 7.1**. The rationale behind categorising themes over three tiers was to demonstrate to the reader that some factors are easier to grasp in an organisation's sphere of control, whereas some factors are harder to influence, demonstrating the power of cultural hegemony held by wider society over the dairy industry.

On this wider societal level, the importance of measurements and metrics was highlighted, corroborating with Sroufe and Melnyk's (2013) discussion around the key role metrics play in value creation, motivation and control in supply chains. The cultural hegemony lens highlighted that society only legitimise a selection of metrics, and could therefore be imposing inherently unfair and counterproductive sustainability measures on the dairy industry, the addressing of which may lead to superficial greenwashing activities, rather than focussing on core issues.

Moving to the industrial level, the concept of circular economy was applied to the dairy industry, signifying the need for bespoke regulations that acknowledge the unique challenges and wastages produced by the dairy industry. It appears that the circular economy approach may produce greater environmental benefits to the dairy industry than a traditional linear approach, supporting the claims made by Nasir *et al* (2017). Wajszczuk (2016) mentioned the logistical challenges faced by agri-food supply chains, such as the perishable nature of food. The shelf life of milk, and its connection to value and quality, was linked in the interview findings of the perception of local produce being more sustainable. If more local infrastructure was in place and food was processed and sold locally, it has the potential to support the local community, have less food miles than a centralised system, and logically could be processed quicker, retaining a fresher quality by the time it reaches the consumer. This suggests that the logistical challenges faced by the dairy industry could create opportunities to increase sustainability on all three pillars of the triple bottom line, if appropriate local infrastructure is in place.

Acting as the bridge between the organisational and industrial level is collaboration, whose significance to sustainability is shown amongst different individuals of the same stakeholder grouping and individuals in other industries (Andersson *et al* ,2005), as well as between players within a supply chain (Ramanathan *et al*, 2014). The findings from the interviews agree with this outlook, with participants lamenting that existing collaborative events are not always utilised to their full potential. This stresses that those in the dairy industry should be aware of the value in collaborative events, and facilitate them to their maximum potential. On an organisational level, the attitude and behaviours exhibited by an organisation were seen as affecting perception of sustainability, including being honest and truthful. These intrinsically moral characteristics link with Paulraj *et al*'s (2017) observations that organisations

that behave morally can outperform those that do not, as well as Bastian and Zentes'
(2013) assertions around the positives of supply chain transparency in the agri-food
sector. Whilst the factors identified from the interviews relate well with existing
literature, they also offer a greater depth into the broad and complex web of factors
facing the UK dairy industry regarding perception of sustainability.

8.3.3 Power and its importance in ensuring sustainable practices

When considering power within the dairy supply chain, the results from the CDA
highlighted the control that can exerted via discourse, through both linguistic and
rhetoric features. The conveyance of the discourse content to the reader illustrates
the important role knowledge has in projecting a sustainable image and influencing
consumer choices made, as was identified in the interview findings. Alongside other
channels of education and wider societal factors, reading about sustainable practices
that already take place in the dairy industry is likely to influence consumer
expectations on future actions, as the discourse may be supportive of any dominant
narrative that prevails. As such, the findings from the CDA offer an example of how
communication from the industry can act as an effective means of knowledge
transfer.

One of the key findings from the CDA was the self-perpetuating cycle of legitimacy,
which captured the transfer of documents from a leader to a supporter, the latter of
which then legitimised the former through their validation of the discursive content. A
clear parallel to this cycle can be made with the loop of power that emerged from
interview data analysis; the loop of power appears to offer an explanation on how the
cycle of legitimacy operates on a wider level. This is illustrated in **Figure 8.3**, with the
hegemonic discourse portion being represented through relationships and size, both
of which are traits that an organisation can internally manage to shape existing
sustainability practices. The legitimacy portion is expressed through knowledge and
choice, which are factors external to an organisation that can validate any existing
sustainable practices. This figure captures the overlap between the loop of power
identified from the interviews in **Figure 7.3** and the hegemonic cycle of legitimacy
from the CDA shown in **Figure 6.4.**

Ultimately, **Figure 8.3** aims to demonstrate the binding role that power plays in the
existence of certain sustainable practices, and thus an existence of a dominant

storyline. However, as was shown earlier in **Figure 8.1**, as identified in the CDA and interview findings, a disruption and imposition of a new sustainable hegemony in this cycle is possible, dependent on the power held by revolutionary stakeholders.

At the end of their paper on power in a supply chain context, Reimann and Ketchen (2017) discuss several avenues for future research on power, including power on an industry scale, types of power and the use of power within a supply chain context. The findings from this study inherently consider power on a dairy industry level, and the CDA highlights the use of discourse and documentation as a means to assert dominance over others in the supply chain and wider industry. The use of power in this research has been focused on whether power has a role in ensuring sustainable practices in the dairy supply chain, which seems to have been confirmed with the results of the study, corroborating with the findings of Touboulic *et al* (2014).
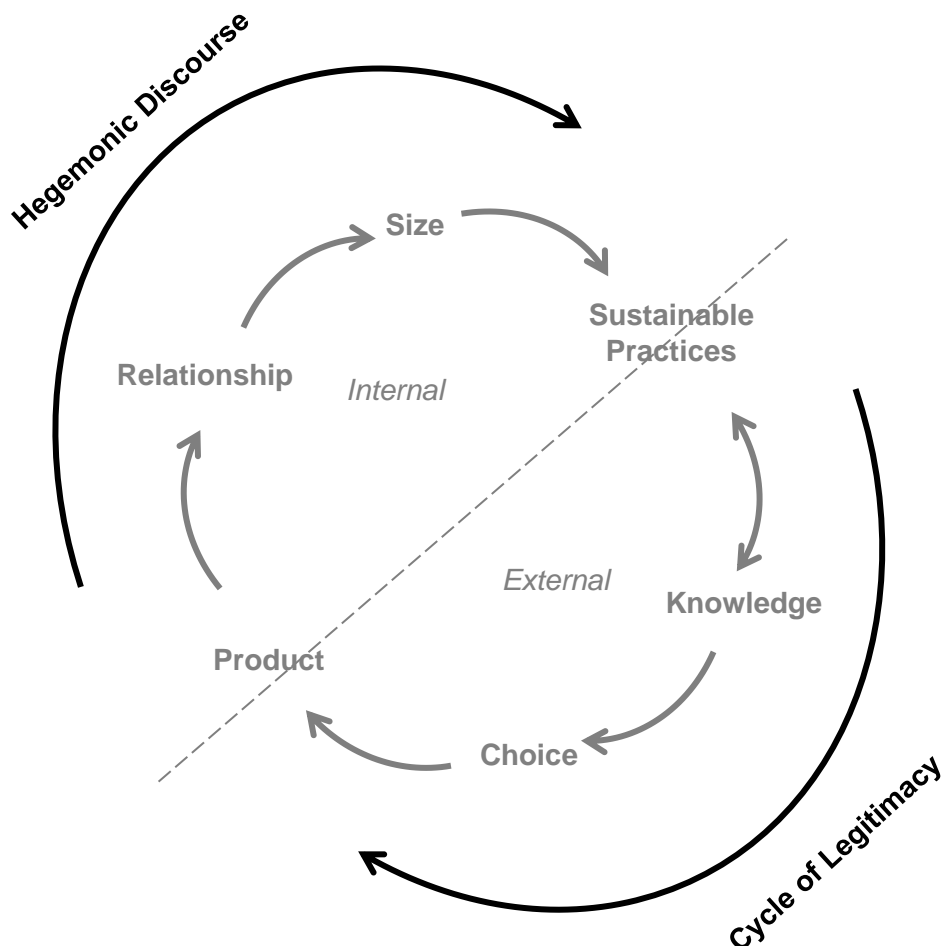
Figure 8.3: The link between the cycle of legitimacy and the loop of power

Existing literature on the dairy industry identifies the supermarket retailers as the dominant player in a supply chain context (Glover *et al*, 2014). The role supermarkets play in facilitating fair distribution of costs and wealth were identified in this study, as well as their broad capacity for interaction with the end consumer. This study does not dispute this fact, but through the application of the cultural hegemony lens, assumes a broader perspective of the situation and acknowledges the role that consumers can play in collectively influencing the actions of the retailers, highlighting the multifaceted nature of power in the dairy industry. As has been echoed throughout this study, it will take a revolution to disrupt the dominant hegemony as it stands. Supermarkets profit from the current state of the industry, and as such should not necessarily be relied on to alter practices to their economic detriment. Instead, this study aims to emphasise the changes that can be brought about either through the empowerment of the consumer, whose choices can influence retailers, or through policy and regulation from a statutory association, as was suggested in **Section 6.7.3**

8.4 Sustainable approaches: a fundamental tension

The division between the dominant and alternative storylines that emerged from the CDA in **Chapter 6** appears to be generally split stakeholder groups, as shown in **Table 6.3**: retailers, larger processors, government and trade associations appeared to align with the dominant storyline, whereas SMEs, farmers, animal welfare groups and lobby groups seemed to associate with the alternative storyline. Superficially, as has been shown throughout this research, economic and social issues, such as fair remuneration and animal welfare, appear to motivate the alternative conceptualisation of sustainability that least powerful stakeholder groups hold. However, what if the rift between storylines and stakeholders comes from a deeper fundamental level; a paradigm tension. A paradigm can be seen as a set of potentially unconscious fundamental assumptions held by an individual or group, which forms the basis of analysis and problem-solving (Rees, 1995). When considering sustainable development in **Section 2.2.1**, Rees (1995) distinguishes between an expansionist and an ecological paradigm. A key distinction between the two paradigms relates to growth: the environment does not constrain economic

growth in an expansionist paradigm, whereas the ecological paradigm sees economic growth as contained within the natural boundaries of a limited ecosphere (Rees, 1995). A similar distinction could be made between the dominant and alternative approach to UK dairy industry sustainability identified in this research.

Consider the dominant sustainable storyline held by powerful stakeholders. They can see unlimited potential of the market, having the ultimate aim of economic growth. Environmental and social sustainability issues are treated independently from economic issues, aligning with Rees' (1995) expansionist view of an economic growth paradigm. This separation and reverence of economic issues over other aspects of sustainability are evidenced from the interviews in the following quotations.

"Environmental sustainability can't work if the business isn't sustainable"

David, Farmer

"If a business isn't [financially] viable, you haven't got a sustainable business."

Lisa, Assurance Organisation

Now consider the alternative sustainable storyline, where precedence is not afforded to economic capital, but considered as intrinsically linked with the environment. Farmers who work with the land are aware of biophysical limitations of their activities, and as such, intense and unlimited economic growth is no longer the aim, which could only result in exacerbating existing sustainable issues (Rees, 1995). Instead, other measurements and metrics could be used to measure success, rather than profit.

"So, it's working forward from what you are given. And I always think ours is landscape tuned farming, so you know, we don't… we look at what is happening on this hill and what… and in a way, that is self-limiting, so you know, we can't grow and grow, because this is our footprint, this is what is right for this footprint."

Tracey, Farmer

I probably share a philosophy with my landlord in that I want to try and leave this place in a better state than I took it on. And it is perhaps something down to this new term natural capital that is being touted about. How much have we degraded natural capital? How much can we restore it?

David Farmer

The alternative sustainable storyline, which has been paired with Rees' (1995) ecological paradigm, further links up with the degrowth concept. Degrowth refers to the reduction of consumption, and subsequent increase in environmental sustainability and well-being; in short, sustainable prosperity without economic growth (Schneider *et al*, 2010). For instance, recent research on degrowth in a food supply chain context suggests there needs to be a reduction of resource use to meet sustainable policy targets (Hoehn *et al*, 2021). A key tenet of the degrowth concept is equality, spanning social, economic and environmental issues (Jarvis, 2019), which appears to be the opposite of the power asymmetry found in the UK dairy industry. As such, tension between stakeholders in the supply chain exist on a fundamental level due to the dominant storyline, that is controlled by powerful stakeholders and rooted in the economic growth paradigm, not fitting in with the alternative approach taken by degrowth organisations. Linking together the position of the stakeholders in the dairy supply chain with the paradigmatic approach taken in this research, it seems that going downstream in the supply chain, as the stakeholder moves further away from the field, they are less likely to embrace the degrowth paradigm, and more likely to subscribe to the economic growth paradigm. This makes sense when considering those being further from the source having less biophysical awareness of the natural limit of the land. This relationship is illustrated in **Figure 8.4,** with stakeholders that physically handle produce shown in rectangles, and other influential stakeholders outside the primary supply chain shown in ovals.

The inclusion of this section in **Chapter 8** was to offer a deeper insight at the intersection between research questions 1 and 2, which respectively relate to the conceptualisation and evaluation of sustainable narratives from different stakeholder perspectives. Whilst the CDA and interviews have provided rich data in response to these questions in previous chapters, this discussion about tensions on a paradigm

level was included to demonstrate how deeply entrenched the fundamental differences of stakeholder worldviews are, emphasising the challenge behind the upheaval of the dominant storyline, as well as providing a rationale behind important emerging evaluative factors, such as price and value of dairy produce. An exploration into what sustainable supply chain practices and policies can be practically implemented to start to encourage meaningful movement towards a degrowth approach within the context of the dairy industry represents a promising idea for future research. Indeed, the degrowth concept could be aligned with and incorporated into the metrics used to measure sustainability in a multifaceted and dynamic way, as discussed in **Section 7.2.3**.
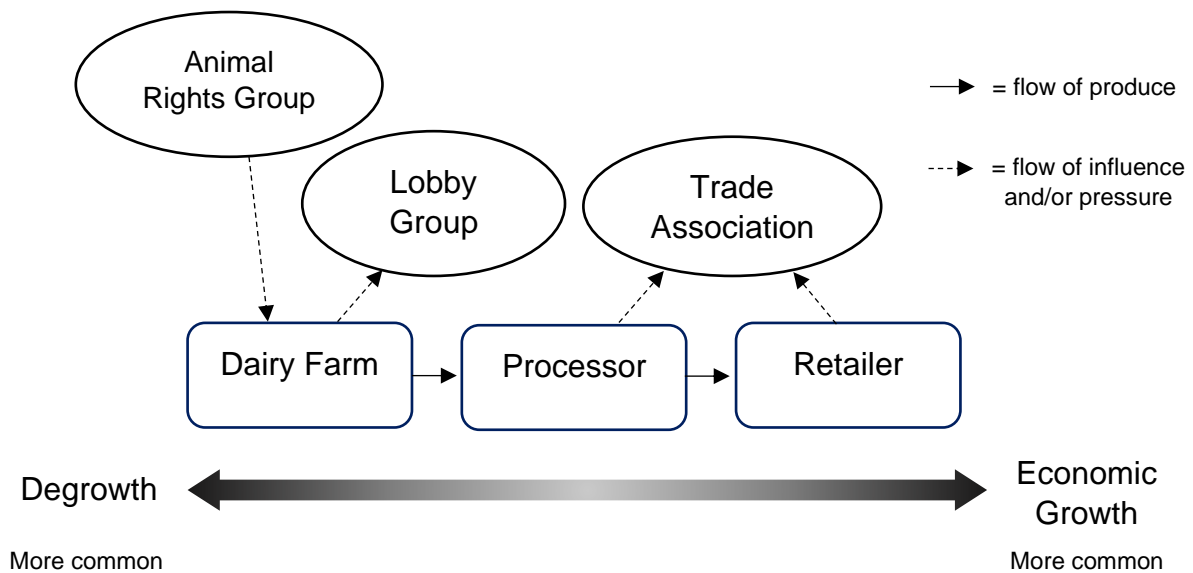
Figure 8.4: Model showing the different growth stakeholder paradigms in the dairy industry

8.5 Chapter 8 conclusion

This discussion chapter began with the use of stakeholder theory, cultural hegemony and resource dependence theory as lenses to analysis and make sense of the interview findings. Stakeholder theory was shown as effective in facilitating participant answers in the interview process, as well as aiding in the structure of analysis in all research questions. Although some practical implementation issues were discussed, stakeholder theory laid a solid foundation for the use of cultural hegemony. The application of cultural hegemony led to a deeper understanding of

how the power held by some stakeholders can influence what is accepted as a legitimate approach to sustainable practices within the dairy industry, and the importance of the implicit support by those in lesser positions of power. Imposition of a new hegemony is possible, but such a revolution needs effective consideration of the factors surrounding perception of sustainable practices.

Resource dependence theory was shown to be relevant to this research, but the application of the theory on the complex web of relationships between stakeholders in the dairy industry seemed unable to fully capture the hegemonic force that has been shown to underlie the power dynamics within the dairy industry. As such, resource dependence theory was blended with stakeholder theory and cultural hegemony to form the hegemonic resource value concept. In addition to theoretical combination, this proposed theory also captures the issues of value that were interwoven throughout the findings of the research questions.

The comparison between the CDA and interviews demonstrated how their respective findings complemented each other, as well as providing a deeper and fuller understanding of the sustainability situation in the dairy industry. An example of this depth can be seen in the relationship between the cycle of legitimacy from the CDA and the loop of power that emerged from the interviews. The findings for each research question were also related to existing literature in the supply chain field, with the majority of claims being congruent with these sources. A notable extension to the literature was found when answering research question three, with the emphasis placed on consumers relationship to retailers and the role they have in ensuring sustainable practices in the dairy supply chain.

Finally, the tension between stakeholder attitudes towards growth was explored, with the dominant and alternative sustainable storyline related to expansionist and ecological paradigms. The degrowth concept was then introduced as an approach to emphasise the fundamental differences between stakeholder worldviews, and was recommended as promising area for future research

Summary of key points

- o Stakeholder theory influenced and shaped interpretation of the findings in this research.
- o The interview results aided in identifying factors that influence and are impacted by the dominant hegemonic storyline, as well as offering insight into how a change in the hegemonic norm can be implemented.
- o Combining the cultural hegemony concept with Resource Dependence Theory led to the proposition of the hegemonic resource value concept. This incorporates the previously identified cycle of legitimacy to explain how perceived value and dependency can be influenced by dominant players though hegemonic norms.
- o The findings of the CDA and the interviews are compared and contrasted in response to each research question. A key link between the loop of power and the cycle of legitimacy is made, exploring the factors behind powerful players that allow them to control sustainable supply chain practices through a self-legitimising cycle.
- o Whilst the dominant sustainable storyline is rooted in an economic growth paradigm, the alternative storyline embraces a degrowth approach.

9

A call for change: concluding remarks

9.1 Structure

In **Chapter 1** of this thesis, an overview was given of the issues facing the UK dairy industry, emphasising the need for a change in what is accepted as the current norm regarding sustainable supply chain behaviour. It is hoped that the data collected throughout this research, and the subsequent analysis, has demonstrated how the current approach to sustainability within the supply chain is conceptualised, how those in powerful positions manage to perpetuate such an approach, and why some stakeholders perceive current practice as inherently unsustainable. In order to clearly understand the output of this research, this chapter will begin by explicitly answering each research question in turn, summarising relevant key contributions as necessary.

After this, further contributions of this research will be explicitly given, from both theoretical and methodological viewpoints. The repercussions of the output of this research also extends to making practical recommendations to the UK dairy sector on how they can strive for a more equitably sustainable future, which are afforded their own section. This project has not been without its limitations, which are also addressed. Finally, a concluding remarks section is given, drawing this thesis to a close by emphasising a call for change in the sustainable practices of the UK dairy industry.

9.2 Contributions relating to the research questions

9.2.1 Research Question 1

How are sustainable narratives conceptualised from a multi-stakeholder perspective in the UK dairy supply chain?

The critical discourse analysis phase of this research aided in the identification of the dominant and alternative storylines of sustainability within the UK dairy industry. Those in powerful positions, and thus able to influence the dominant narrative, appear to align with a vision of sustainability rooted in economic growth, where social and environmental sustainability are isolated, being addressed through the meeting of industry-set goals and standards. The alternative storyline is also identified, generally held by stakeholders in weaker positions, based on an ecological, degrowth approach to sustainability. In this storyline, all stakeholders and outcomes of the supply chain are treated equally and fairly, without precedence given to economic growth.

From the interview participants, consensus on general characteristics spanning both sustainable storylines emerged. Sustainability was perceived as a broad concept, meaning that more bespoke details were needed to operationalise any suggested practices. Issues around sustainability were seen as being treated in an over-simplified manner, when in reality, the concept is multifaceted and complex. It also emerged that sustainability is not a static construct, but evolves over time. As such, a bespoke, multifaceted and dynamic approach to measuring sustainable performance is needed for the future. The next two questions will consider how such an evolution can be influenced for the benefit of all.

9.2.2 Research Question 2

How is sustainability performance evaluated from a multi-stakeholder perspective in UK dairy supply chains?

Sustainability performance was shown to be evaluated through 12 different factors, which were organised into 3 differing levels of scope: organisational, industrial and societal level factors. Issues around education, metrics, assurance schemes and communication were discussed on a societal level, whereas infrastructure, regulation, industry understanding, pricing and collaboration were all identified as

characteristics that affect sustainability practices on an industrial level. Finally, on an organisational level, internal structure, attitude and behaviour, and idiosyncrasies were all mentioned when evaluating sustainable performance. Indeed, due to such idiosyncrasies faced by different organisations and stakeholders throughout the dairy supply chain, it can be difficult to reach a consensus on sustainable practices, with guidance consequently needing to be flexible to accommodate such variation. A commonality between several of the factors that emerged was the perception of dairy product value, and its associated influence in evaluating sustainable performance. This identification of value influenced the formation of the hegemonic resource value concept, discussed in answering research question 3.

9.2.3 Research Question 3

How does power held by multiple stakeholders influence sustainable narratives created within the UK dairy supply chain?

The dominant narrative is perpetuated by those in powerful positions through a self-perpetuating cycle of legitimacy. In answering research question one, it was noted that social and environmental goals were addressed through external industry set standards. Within the dairy industry, a duality of stakeholder identity exists, where powerful stakeholders also sit on trade association boards, tasked with setting these '*external*' targets to be met by the industry, able to exert their influence as necessary. Weaker stakeholders that exist outside this cycle of legitimacy have their alternative sustainable storyline suppressed. Additionally, the critical discourse analysis also showed how power was asserted by stakeholders in documents through linguistic techniques.

This cycle of legitimacy links with the loop of power identified from the interviews, which illustrated how power emanating from consumer knowledge and choice, as well as organisation relationship and size, interacts and affects the sustainable practices of the dairy industry. Whilst large retailers are seen as powerful players in the dairy industry, consumers are in a strong position to influence retailers, exercising their own power through where they choose to spend their money. The theoretical lenses of cultural hegemony and resource dependence theory were related to these findings to create the hegemonic value resource concept. This concept suggests that the value of resources is influenced by the existing hegemonic

narrative and reinforced through the cycle of legitimacy. As such, a hegemonic change would be needed to alter the perception of value, which in this case relates to the sustainability of the dairy sector. **Table 9.1** summarises the key findings relating to each research question.

Table 9.1: The key contributions for each research question

Research Question 1 Sustainable narrative conceptualisation	o Consensus that sustainability in the dairy supply chain is broad, multifaceted and ever-evolving. A dynamic, bespoke approach to measurement is needed. o A dominant storyline based around economic growth was identified, perpetuated by the powerful stakeholders. o An alternative storyline was also noticed, where economic issues are not given precedence.
Research Question 2 Multi-stakeholder performance evaluation	o 12 key factors relating to how sustainability is evaluated by different stakeholders are described. o Consensus between stakeholders on sustainable practices is difficult, due to idiosyncrasies. Identification of the evaluation factors highlight areas which should be focused on to improve sustainable performance in the supply chain.
Research Question 3 The impact of power on sustainable narratives	o Dominance is assured by powerful stakeholders through the cycle of legitimacy, via a duality of stakeholder identity. o Both supply chain organisations, through size and relationships, and consumers, through knowledge and choice, affect the sustainable practices that take place in the UK dairy supply chain.

9.3 Further contributions of the research

9.3.1 Theoretical contributions

The use of the cultural hegemony theoretical lens is novel in the sustainable supply chain field, and has been demonstrated in both the Critical Discourse Analysis (CDA) and interview analysis as an effective theoretical lens to employ. This success partly comes from cultural hegemony's ability to highlight what is prevalent and accepted as common sense in supply chain processes and wider sustainable practices, linking with any dominant consumer expectations. But it is through this identification that suppressed narratives can be explored, as well as why there can be difficulties in implementing new ideas when established philosophies already exist within a supply chain, an industry or in wider society. The cultural hegemony lens particularly aligned with the aims of undertaking a CDA and power dynamic focus of research question three. Future research that aligns with this focus or methodological outlook should strongly consider cultural hegemony as a theoretical lens of choice. Wider still, the usefulness of cultural hegemony could be demonstrated further in future supply chain research applying the lens to different industries and issues other than sustainability.

Additionally, the conceptual development of the Hegemonic Resource Value model (HRV) as a blend of theoretical lenses also provides a potential stream of future research in the supply chain field. HRV developed naturally through the analysis and application of the theoretical lenses, so it felt imperative to formally define the model and explain its features. Further research could focus solely on the development and testing of this concept, with refinement potentially being generated through applications in different supply chain contexts.

The findings from this project also expand on the previous notion that retailers hold the most power in the dairy supply chain, and emphasises the importance of the retailer-consumer relationship when considering power in the dairy industry. This is not to say that retailers do not hold significant power; a backward chain of power was highlighted along the supply chain, with power diminishing as distance increases from the end consumer. Instead, in addition to identifying and adding further academic pressure on large retailers to improve their sustainable practices, future research could explore how best to reach consumers of the dairy industry, and

influence their opinions on sustainability. Ultimately, effective research outcomes that help influence consumer opinions and choices could then add a substantial amount of additional pressure on large retailers, encouraging the implementation of new sustainable practices. The emphasis here is that future research should not supersede focus on the retailer, but should diversify in its focus to ensure effective consideration of all stakeholders that can shape the sustainable agenda of the dairy industry. For instance, policy and regulation can be used for incentivising desirable behaviour in multiple stakeholders, as discussed in **Section 7.3.2.3**.

Finally, the systematic literature review undertaken relating to power in an agri-food sustainable supply chain management context also generated a suggested future research agenda for the supply chain field, with **Section 3.5** giving further detail. Key suggestions to emerge from this review included the use of theoretical lenses, assuming a broad view of sustainability and considering a multi-stakeholder perspective. Whilst these suggestions are for the entire supply chain field, this research has aimed to address all these issues in both scope and analysis.

9.3.2 Methodological Contributions

The use of Critical Discourse Analysis (CDA) within supply chain literature or corporate sustainability literature is seldom found, with McCarthy *et al* (2018) and Higgins and Coffey (2016) respectively representing the small amount of existing relevant literature that has effectively utilised the methodology. Therefore, this study addresses the scarcity of such research by demonstrating how undertaking a CDA in a supply chain context can facilitate an effective in-depth exploration on the use of documents in transmitting power, providing a valuable addition to the existing sparse repository found in the supply chain field. Indeed, in this study, the use of the CDA approach provided deep insights into sustainability discourse that were complementary to the interview's broader findings of the importance of consumer knowledge, as well as conveying the perspective of stakeholders that were difficult to access in an interview format. Due to its effective use in this study, future research into supply chain relationships, power dynamics and interactions between shareholders should consider utilising a CDA approach, which could further illuminate and contextualise the important role discourse plays across supply chains, industries and wider society. A summary of all the additional theoretical and

methodological contributions to emerge from this research can be found in **Table 9.2**.

Table 9.2: Summary of the further theoretical and methodological implications

Finding from the research	Implication
Cultural Hegemony applied successfully to a sustainable supply chain power context	The theory could be drawn on in different industries when dealing with sustainable management, or in a wider supply chain context.
Conceptualisation of the hegemonic resource value model (including the cycle of legitimacy and the loop of power)	This model could be developed and refined in future supply chain research.
In addition to retailers, consumers hold a significant amount of power regarding sustainable behaviour	Future research should consider recommendations for multiple stakeholders when exploring sustainable supply chains, acknowledging the nuance of power dynamics downstream in supply chains.
Gaps highlighted in systematic literature review on sustainable agri-food supply chains and power.	Research going forward should aim to be theoretically informed and assume a broader scope of sustainability. A full list of recommendations can be found in **Section 3.5**.
Critical discourse analysis applied successfully to a supply chain power context	Qualitative research into power amongst stakeholders in the supply chain could draw on the critical discourse methodology employed in this project.

9.4 Practical implications for the dairy sector

There are several practical implications that emerge from this research for the dairy sector, which could be acted upon to enhance understanding of and strengthen sustainable practices. The first relates to the general approach taken towards sustainability, which has been defined from the findings as multifaceted and evolving. Acknowledgement of these characteristics means the industry should be moving away from universal polices that are measured through static checkbox exercises, and instead have flexible guidance that captures both the continual improvement and the idiosyncrasies of each organisation. The implementation of sustainability metrics that capture such a dynamic approach to sustainability would also be a major step towards embracing a more bespoke approach to sustainability. Furthermore, as was mentioned in **Section 7.3.1.3**, an acknowledgement of idiosyncrasy and bespoke factors could be achieved through clustering similar organisations together when contrasting sustainable progress, rather than considering all organisations together. This implication should be particularly noted by those stakeholders that either operate assurance schemes, or have supplier measurement and auditing systems in place. Future research could be undertaken to investigate how to blend the degrowth concept meaningfully with dynamic sustainability metrics for the dairy industry, as mentioned in **Section 8.4**.

Whilst the findings have acknowledged that there are many different stakeholder agendas that need considering and balancing, the industry should strive for a unified understanding of issues related to sustainability. Through this unity comes an increase in both knowledge held by stakeholders and size of allied individuals, both of which can offer the dairy industry greater power over influencing sustainable practices. Furthermore, the avoidance of conflicting standards through unity would facilitate a sense of clarity when communicating issues to consumers; the importance of which has been emphasised in **Section 8.2.2** when considering imposition of a new sustainable hegemony. The existence of a statutory independent trade association for the entire dairy industry would aid in unifying understand on sustainable issues, as suggested in **Section 4.8**.

An issue identified when interacting with consumers is the concern regarding personal or reputational risk, particularly with the rise of social media usage.

Therefore, a resource that may be of use to the dairy industry would be a centralised website where stakeholders of the dairy industry could share anonymised stories and experiences regarding sustainability, as well as having a platform to respond to any consumer concerns anonymously.

Another significant topic for the dairy industry that emerged from the data was the elemental nature of value and how the perception of dairy produce value links with sustainable practices. The implications for the dairy industry here are numerous, such as an emphasis on the importance of the entire supply chain collaborating at all stages to increase value and maximised potential, which can be achieved through sharing both problematic issues and potential solutions. Furthermore, understanding of any added value needs to be communicated to the consumers from the dairy industry, suggesting a potential focus on improving dissemination and educational resources. To reiterate, in the context of this study, value has been seen as a trade-off between perceived benefits and sacrifices, with benefits relating to aspects of quality and high-level abstractions held by individual consumer, and sacrifices relating to monetary and other costs (Zeithaml, 1988). What these benefits and sacrifices are specifically regarding the dairy industry and sustainability remains uncertain, and is a recommended area of future research within the sector. A summary of the practical implications from this research is given in **Table 9.3**.

Table 9.3: Implications for practice in the dairy sector

Finding from the research	Implication
Sustainability is multifaceted and dynamic	Instead of rigid sustainable policies, flexible guidance should be issued and dynamic metrics should be introduced
The lack of consensus on sustainable issues, and the identification of multiple narratives	Influence can come through knowledge. The current existence of conflicting standards can create communication issues, so unity should be sought. An independent statutory trade association for the industry is recommended.

Risk around communication with consumers	A centralised resource of anonymous experiences and stories regarding sustainability could be created.
Emerging importance of value in dairy produce	This could become a priority area for the dairy industry when educating consumers and collaborating with others in the supply chain.

9.5 Research limitations

This project has been entrenched entirely within the dairy industry, covering issues around both commodities and processed, value-added products. Several participants mentioned other non-dairy food supply chains and production lines in their interviews; however, this was usually to contrast and highlight the unique issues faced by the dairy industry. This focus on the idiosyncrasies of the dairy industry means that the findings might not be applicable to other industries, both in the agri-food sector and beyond. The value of this project is not diminished by this level of focus, as the urgent need for a more sustainable dairy industry has been justified throughout this study. However, given the insights gained, there is potential for additional sustainability-focused research in other industries in the agri-food sector, to see either if similar themes emerge, or whether some issues seem to affect particular industries worse than others.

Another limitation of the findings came from the interview phase of the study, as although several attempts at engagement were made, there remains an absence of large supermarkets respondents. Access issues were the primary cause of this limitation, with the reasons given for lack of interest including the timing of the interviews, particularly regarding Brexit and Covid-19, and that they appeared to have a policy of not participating in university-level student studies. Nevertheless, this lack of supermarket respondents is offset by the strong supermarket representation in the CDA phase of the research, ensuring that their approach to sustainability and how it is communicated was captured. Future research opportunities here could consider certain stakeholder's reluctance to discuss sustainability issues, or, if access can be sought, focusing exclusively on the

supermarkets role in ensuring sustainable practices in the wider agri-food industry. Furthermore, as was discussed in **Section 2.6.4**, Covid-19 caused a large-scale disruption in the dairy supply chain. Another pertinent stream of future research could consider the effects of such sudden supply chain disruptions and resilience in relation to power and sustainable practices.

Finally, as was mentioned in the methodology chapter, some readers could perceive the general qualitative approach taken throughout this study as a limitation, owing to the findings being presented through only one interpretation. However, as was argued previously, this instead can be seen as a strength, particularly when there is the belief that the researcher is intrinsically embedded in the research process. However, to further validate the findings in this research, future research could take a multiple case approach in the dairy industry instead of a stakeholder approach, such as the work of Hendry *et al* (2019) and Oglethorpe & Heron (2013) in the UK food sector. Additionally, alternative methods could be employed in a qualitative multi-method approach, such as focus groups and observations.

As discussed in **Section 5.8**, issues regarding sample size were addressed by emphasis being placed on the concept of data saturation in qualitative research, when additional data collection yields little novel insight (Saumure & Given, 2008); this saturation was indeed apparent by the end of data collection phase through the repetition of key points previously raised. Ultimately, any perceived limitation of qualitative research has been addressed through the transparency and honesty around the choices made throughout the research project, ensuring the reader has a firm understanding on the rationale behind any decisions taken.

9.6 A Call for Change

Change is an inevitable part of life. The UK dairy industry is historically no stranger to this, evolving along with industrial and technological developments. However, the industry is facing a new challenge brought about through a rapidly changing world: to become a sustainable industry. This research has aimed to consider issues around sustainability, looking at conceptualisation, evaluation and manipulation of the approaches taken in the UK dairy supply chain, in order to gain a deeper

understanding of the issue and how sustainable practices can be improved and strengthened. So, as this research project draws to a close, one question remains: is the dairy supply chain sustainable?

It depends. Superficially, this answer might seem frustrating, but look a bit deeper, from multiple perspectives, and an opportunity can be seen: a call for change. At present, if a powerful stakeholder in the dairy industry is considered, meeting sustainability targets, rooted in an economic growth paradigm, that have been influenced by the same aforementioned stakeholder, then it appears sustainable development is taking place. If this powerful stakeholder is the only member of the dairy supply chain that a consumer comes into contact with, then through their own lived experience, they understandably might believe this too.

However, this is not the case for all stakeholders, as this research has uncovered. Whilst powerful stakeholders might uphold a vision of sustainability that suits them, other more vulnerable stakeholders are often losing out: farmers, SMEs, animals and ultimately the environment. Before irreversible damage is caused to the industry and beyond, a new equitable approach to sustainable development needs to be embraced. This has been identified in this research through the alternative approach to sustainability found in the dairy industry.

Undertaking a paradigmatic shift in understanding regarding sustainability is not going to be an easy task, as powerful players that benefit from the status quo are naturally going to resist. Indeed, such an understanding will transcend industrial boundaries and involve a societal change. Nevertheless, big changes can come from small incremental steps; it can all add up to a great transformation. This thesis suggests some of these steps, through identification of important factors of focus and recommendations of an overseeing organisation. Sustainability has been shown to be multifaceted in the dairy industry, so a single instant resolution is not going to solve all the issues regarding sustainability. Yet, with each positive change, progress is made towards the end goal of a sustainable future for the world. As consumers change their perception of sustainability, powerful organisations will ultimately follow: failure to do so will risk loss of legitimacy and status. The need to see how those in power maintain and influence the dominant approach to sustainability has been

exposed in this research. By understanding how such mechanisms work, they can be targeted and disrupted by other industry players.

So, instead of asking is the dairy supply chain sustainable, the question should be can the dairy supply chain be sustainable? The findings in this research have suggested that it can indeed be sustainable, but a fundamental shift in understanding is needed for a more equitable future. New hegemonic norms are possible, and required, to secure a sustainable industry. This thesis begins the process by calling for change.

Summary of key points

- o The novel contributions to knowledge in this research include identification of sustainable storylines, factors affecting evaluation and mechanisms of power, such as the cycle of legitimacy.
- o Other contributions come from the successful use of cultural hegemony and critical discourse analysis in the sustainable supply chain management field.
- o Practical implications for the dairy sector include the formation of a new independent trade association representing all industry stakeholders. Priority areas of focus and practice for such an association, such as flexible guidance and anonymous story sharing platforms, were also suggested.
- o Limitations of this research have been identified and addressed
- o The research concludes with a call for change in the sustainable practices of the UK dairy industry

10

References

Ağan, Y., Acar, M., & Neureuther, B. (2018). The importance of supplier development for sustainability. In: Zeimpekis, V., Aktas, E., Bourlakis, M., & Minis, I. (Eds). *Sustainable freight transport.* Springer, Cham, Switzerland. pp. 165-178.

AHDB Dairy. (2021a). *UK and EU cow numbers.* Retrieved from https://ahdb.org.uk/dairy/uk-and-eu-cow-numbers

AHDB Dairy. (2021b). *UK milk yield.* Retrieved from https://ahdb.org.uk/dairy/uk-milk-yield

AHDB Dairy. (2021c). *UK producer numbers.* Retrieved from https://ahdb.org.uk/dairy/uk-producer-numbers

AHDB Dairy. (2021d). *UK dairy trade dashboard.* Retrieved from https://ahdb.org.uk/dairy/trade-dashboard

AHDB Dairy (2021e). *UK farmgate milk prices.* Retrieved from https://ahdb.org.uk/dairy/uk-farmgate-milk-prices

AHDB Dairy. (2021f). *Estimated milk production costs.* Retrieved from https://ahdb.org.uk/estimated-milk-production-costs

AHDB Dairy. (2020). *Dairy Performance Results 2018/19.* Kenilworth, United Kingdom: AHDB Dairy.

AHDB Dairy. (2016a). *Horizon Bitesize: What might Brexit mean for the UK trade in dairy products.* Retrieved from http://www.ahdb.org.uk/brexit/documents/Dairy_bitesize.pdf

AHDB Dairy. (2016b). *Dairy Statistics: An insider's guide 2016.* Retrieved from https://dairy.ahdb.org.uk/resources-library/market-information/dairy-statistics/dairy-statistics-an-insiders-guide-2016/

AHDB Dairy. (2012). *Export opportunities for the UK dairy industry: management summary.* Retrieved from https://dairy.ahdb.org.uk/resources-library/market-information/processing-trade/exports-report-management-summary

Ahi, P., & Searcy, C. (2013). A comparative literature analysis of definitions for green and sustainable supply chain management. *Journal of Cleaner Production, 52*, 329-341. doi: 10.1016/j.jclepro.2013.02.018

Ajwani, D. (2015). *Cow to consumer: Beyond profit for Gujarat Cooperative Milk Marketing Federation*. Retrieved from http://www.forbesindia.com/article/leadership-awards-2015/cow-to-consumer-beyond-profit-for-gujarat-cooperative-milk-marketing-federation/41207/1

Alghababsheh, M., Gallear, D. (2020). Socially sustainable supply chain management and suppliers' social performance: the role of social capital. *Journal of Business Ethics,* In Press. doi: 10.1007/s10551-020-04525-1

Allen, M., Walker, K., & Brady, R. (2012). Sustainability discourse within a supply chain relationship: mapping convergence and divergence. *Journal of Business Communication, 49* (3), 210-236. doi: 10.1177/0021943612446732

Ali, A., Bentley, Y., Cao, G., & Habib, F. (2017). Green supply chain management: food for thought. *International Journal of Logistics Research and Applications, 20* (1), 22-38. doi: 10.1080/13675567.2016.1226788

Alim, A. (2016). *We must scrap the Common Agricultural Policy during Brexit – for the sake of our finances*. Retrieved from http://www.independent.co.uk/voices/we-must-scrap-the-common-agricultural-policy-during-brexit-for-the-sake-of-our-finances-a7229581.html

Alpaslan, C. (2009). Ethical management of crises. *Journal of Corporate Citizenship, 36*, 41-50. doi: 10.9774/GLEAF.4700.2009.wi.00006

Alvesson, M., & Svensson, P. (2008). Interviews. In R. Thorpe & R. Holt, (Eds.), *The SAGE dictionary of qualitative research management.* (pp. 118-120). London, United Kingdom: SAGE.

Amores-Salvadó, J., Castro, G., & Navas-López, J. (2014). Green corporate image: moderating the connection between environmental product innovation and firm performance. *Journal of Cleaner Production, 83*, 356-365. doi: 10.1016/j.jclepro.2014.07.059

Amos, C., Brockhaus, S., Fawcett, A., Fawcett, S., & Knemeyer, A. (2019). Blinded by the light: Analyzing sustainability authenticity, customer service perceptions, and halo effects. *The International Journal of Logistics Management, 30* (1), 117-139. doi: 10.1108/IJLM-12-2017-0344

Anderson, E, & Curry, R. (2016). *Thousands of dairy farms face closure as debts reach crisis levels*. Retrieved from https://www.telegraph.co.uk/business/2016/02/21/thousands-of-dairy-farms-face-closure-as-debts-reach-crisis-leve/

Andersson, H., Larsén, K., Lagerkvist, C., Andersson, C., Blad, F., Samuelsson, J., & Skargren, P. (2005). Farm cooperation to improve sustainability. *Ambio: A Journal of the Human Environment, 34* (4-5), 383-387. doi: 10.1579/0044-7447-34.4.383

Appelbaum, E., & Gaby-Biegle, J. (2020). Split milk: COVID-19 and the dangers of dairy industry consolidation. *Institute for New Economic Thinking, Working Paper 134*. doi: 10.36687/inetwp134

Arla. (2017). *Arla in the UK.* Retrieved from https://www.arlafoods.co.uk/overview/arla-in-the-uk/

Arnott, G., Ferris, C., & O Connell, N. (2017). Review: welfare of dairy cows in continuously housed and pasture-based production systems. *Animal, 11* (2), 261-273. doi: 10.1017/S1751731116001336

Aschemann-Witzel, J., De Hooge, I., Amani, P, Bech-Larsen, T, & Oostindjer, M. (2015). Consumer-related food waste: causes and potential for action. *Sustainability, 7* (6), 6457-6477. doi: 10.3390/su7066457

Atkinson, P., & Coffey, A. (2011). Analysing document realities. In D. Silverman (Ed.), *Qualitative research.* (3rd ed.). London, United Kingdom: SAGE.

Atkinson, R., & Flint, J. (2004). Snowball sampling. In M. Lewis-Beck, A. Bryman & T. Liao, (Eds.), *The SAGE encyclopedia of social science methods research.* (pp. 1044). Thousand Oaks, California: SAGE.

Azevedo, S., & Barros, M. (2017). The application of the triple bottom line approach to sustainability assessment: the case study of the UK automotive supply chain. *Journal of Industrial Engineering and Management, 10* (2), 286-322. doi: 10.3926/jiem.1996

Babbie, E. (2014). *The basics of social research.* (6th ed.). Belmont, California: Wadsworth Cengage Learning.

Baker, S., & Edwards, R. (2012). *How many qualitative interviews is enough.* Southampton, United Kingdom: National Centre for Research Methods.

Bakker, J., & Datta, N. (2018). *The impact of brexit on the UK dairy sector.* Retrieved from http://www.lse.ac.uk/business-and-consultancy/consulting/assets/documents/the-impact-of-brexit-on-the-uk-dairy-sector.pdf

Balch, O. (2014). *China's growing hunger for dairy raises fears over sustainable production.* Retrieved from https://www.theguardian.com/sustainable-business/china-dairy-cows-sustainable-farming-production-asia

Bansal, T. (2010). *Primer: Business Sustainability.* Retrieved from http://nbs.net/wp-content/uploads/Primer_Business_Sustainability.pdf

Bärlund, K. (2004). *Sustainable development – concept and action*, Retrieved from http://www.unece.org/oes/nutshell/2004-2005/focus_sustainable_development.html

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17* (1), 99-120. doi: 10.1177/014920639101700108

Barros, A., & Taylor, S. (2020). Think tanks, business and civil society: the ethics of promoting corporate ideologies. *Journal of Business Ethics, 162*, 505-517. doi: 10.1007/s10551-018-4007-y

Barros, M. (2014). Tools of legitimacy: The case of the petrobras corporate blog. *Organization Studies, 35* (8), 1211-1230. doi: 10.1177/0170840614530914

Barrientos, S., Dolan, C., & Tallontire, A. (2003). A Gendered Value Chain Approach to Codes of Conduct in African Horticulture. *World Development, 31* (9), 1511-1526. doi: 10.1016/S0305-750X(03)00110-4

Bastian, J., & Zentes, J. (2013). Supply chain transparency as a key prerequisite for sustainable agri-food supply chain management. *International Review of Retail, Distribution and Consumer Research, 23* (5), 553-570. doi: 10.1080/09593969.2013.834836

Bates, S., & Pattisson, N. (1997). UK milk prices and farmers' attitudes towards them since market de-regulation. *British Food Journal, 99* (2), 50-56. doi: 10.1108/00070709710165188

Batista, L., Bourlakis, M., Smart, P., & Maull, R. (2018). In search of a circular supply chain archetype: a content-analysis-based literature review. *Production Planning & Control, 29* (6), 438-451. doi: 10.1080/09537287.2017.1343502

Battaglia, M. (2008). Purposive sampling. In P. Lavrakas, (Ed.), *Encyclopedia of survey research methods.* (pp. 645-647). Thousand Oaks, California: SAGE.

Bauwens, T., Hekkert, M., & Kirchherr, J. (2020). Circular futures: what will they look like. *Ecological Economics, 175*, no pagination. doi: 10.1016/j.ecolecon.2020.106703

Bayne, L., Purchase, S., & Tarca, A. (2019). Power and environmental reporting-practice in business networks. *Accounting, Auditing, & Accountability, 32* (2), 632-657. doi: 10.1108/AAAJ-07-2016-2629

Bazzanella, C. (2011). Redundancy, repetition and intensity in discourse. *Language Sciences, 33* (2), 243-254. doi: 10.1016/j.langsci.2010.10.002

BBC. (2015a). *Farmers in fresh protests over supermarket milk prices*. Retrieved from http://www.bbc.co.uk/news/uk-33777075

BBC. (2015b). *First Milk pay to dairy farmers delayed by two weeks*. Retrieved from http://www.bbc.co.uk/news/uk-30771288

BBC. (2015c). *Dairy farmers under pressure over payment delay*. Retrieved from http://www.bbc.co.uk/news/uk-scotland-south-scotland-30729828

Bellamy, K. (2016). *Brexit and the dairy sector*. Retrieved from https://research.rabobank.com/far/en/sectors/dairy/brexit-and-the-dairy-sector.html

Beske, P., Land, A., Seuring, S. (2014). Sustainable supply chain management practices and dynamic capabilities in the food industry: a critical analysis of the literature. *International Journal of Production Economics, 152*, 131-143. doi: 10.1016/j.ijpe.2013.12.026

Beske, P., & Seuring, S. (2014). Putting sustainability into supply chain management. *Supply Chain Management: An International Journal, 19* (3), 322-331. doi: 10.1108/SCM-12-2013-0432

Bevan, D., & Werhane, P. (2011). Stakeholder theory. In M. Painter-Morland, & R. ten Bos (Eds.), *Business ethics and continental philosophy*. (pp. 37-60). Cambridge, United Kingdom: Cambridge University Press.

Bhaskaran, M. (2015). *White poison: why drinking milk could prove fatal for you*. Retrieved from http://indianexpress.com/article/lifestyle/health/white-poison-why-drinking-milk-could-prove-fatal-for-this-generation/

Bird, R., & Soundararajan, V. (2020). The role of precontractual signals in creating sustainable global supply chains. *Journal of Business Ethics, 164* (1), 81-94. doi: 10.1007/s10551-018-4067-z

Birkel, H., & Müller, J. (2021). Potentials of industry 4.0 for supply chain management within the triple bottom line of sustainability – A systematic literature review. *Journal of Cleaner Production, 289,* no pagination. doi: 10.1016/j.jclepro.2020.12561

Black, A. (2016). *Global dairy markets face more volatility*. Retrieved from https://www.fginsight.com/news/news/global-dairy-markets-face-more-volatility-16987

Blaikie, N. (2009). *Designing social research*. (2nd ed.). Cambridge, United Kingdom: Polity Press.

Blok, V. (2018). Technocratic management versus ethical leadership: redefining responsible professionalism in the Agri-food sector in the Anthropocene. *Journal of Agricultural and Environmental Ethics, 31,* 583-591. doi: 10.1007/s10806-018-9747-2

Bloor, M., & Bloor, T. (2007). *The practice of critical discourse analysis: an introduction*. London, United Kingdom: Hodder Education.

Bogetoft, P., & Olesen, H. (2002). Ten rules of thumb in contract design: lessons from Danish agriculture. *European Review of Agricultural Economics, 29* (2), 185-204. doi: 10.1093/eurrag/29.2.185

Boland, M., Cooper, B., & White, J. (2016). Making sustainability tangible: Land O'Lakes and the dairy supply chain. *American Journal of Agricultural Economics, 98* (2), 648-657. doi: 10.1093/ajae/aav062

Boström, M. (2012). A missing pillar: challenges in theorizing and practicing social sustainability: introduction to the special issue. *Sustainability: Science, Practice & Policy,* 8 (1), 3-14. Retrieved from http://sspp.proquest.com

Bourlakis, M., & Weightman, P. (2004). Introduction to the UK Food Supply Chain. In M. Bourlakis & P. Weightman, (Eds.), *Food Supply Chain Management*. (pp. 1-10). Oxford, United Kingdom: Blackwell.

Bowman, A., Froud, J., Johal, S., Leaver, A., & Williams, K. (2013). Opportunist dealing in the UK pig meat supply chain: trader mentalities and alternatives. *Accounting Forum, 37* (4), 300-314. doi: 10.1016/j.accfor.2013.07.001

Breeze, R. (2011). Critical discourse analysis and its critics. *Pragmatics, 21* (4), 493-525. doi: 10.1075/prag.21.4.01bre

Brito, R., & Miguel, P., (2017). Power, governance and value in collaboration: differences between buyer and supplier perspectives. *Journal of Supply Chain Management, 53* (2), 61-87. doi: 10.1111/jscm.12134

Brooks, J., & King, N. (2014). Doing template analysis: evaluating an end-of-life care service. *SAGE Research Methods Cases*, no pagination. doi: 10.4135/97814462730501 3512755

Brundtland Commission. (1987). *Our common future: the world commission on environment and development*. Oxford, United Kingdom: Oxford University Press.

Bryman, A. (2012). *Social research methods.* (4th ed.). Oxford, United Kingdom: Oxford University Press.

Bulman, P. (2015). *Fall in price of milk could force dairy farmers out of business*. Retrieved from https://www.theguardian.com/sustainable-business/2015/jan/14/fall-price-milk-dairy-farmers-out-business

Burch, D., Dixon, J., & Lawrence, G. (2013). Introduction to symposium on the changing role of supermarkets in global supply chains: From seedling to supermarket: Agri-food supply chains in transition. *Agriculture and Human Values, 30* (2), 215-224. doi: 10.1007/s10460-012-9410-x

Business in the Community. (2017). *The Prince's Dairy Initiative.* Retrieved from https://www.bitc.org.uk/programmes/princes-dairy-initiative

Butler, S., & Brignall, M. (2015). *Dairy farmers call for supermarket boycott as milk price falls.* Retrieved from https://www.theguardian.com/business/2015/aug/06/dairy-farmers-call-for-supermarkets-boycott-as-milk-price-falls

Byrne, D. (2016). *Project planner* (online book). SAGE. doi: 10.4135/9781526408556

Cameron, D., & Panovic, I. (2014). *Working with written discourse*. London, United Kingdom: SAGE.

Campbell, P. (2017). *Investment in the UK car industry plummets amid Brexit uncertainty*. Retrieved from https://www.ft.com/content/0c3427b2-5ce1-11e7-9bc8-8055f264aa8b

Caritte, V., Acha, S., & Shah, N. (2015). Enhancing corporate environmental performance through reporting and roadmaps. *Business Strategy and the Environment, 24*, 289-308. doi: 10.1002/bse.1818

Carter, C., & Rogers, D. (2008). A framework of sustainable supply chain management: moving towards new theory. *International Journal of Physical Distribution and Logistics Management, 38* (5), 360-387. doi: 10.1108/09600030810882816

Casciaro, T., & Piskorski, M. (2005). Power imbalance, mutual dependence and constraint absorption: a closer look at resource dependence theory. *Administrative Science Quarterly, 50*, 167-199. doi: 10.2189/asqu.2005.50.2.167

Chae, S., Choi, T., & Hur, D. (2017). Buyer power and supplier relationship commitment: a cognitive evaluation theory perspective. *Journal of Supply Chain Management, 53* (2), 39-60. doi: 10.1111/jscm.12138

Chandler, R. (2014). *Milk prices cut again.* Retrieved from http://www.countryliving.co.uk/news/news/a76/milk-prices-cut-again/

Chen, I., & Kitsis, A. (2017). A research framework of sustainable supply chain management: The role of relational capabilities in driving performance. *The International Journal of Logistics Management, 28* (4), 1454-1478. doi: 10.1108/IJLM-11-2016-0265

Chen, L., Zhao, X., Tang, O., Price, L., Zhang, S., & Zhu, W. (2017). Supply chain collaboration for sustainability: a literature review and future research agenda. *International Journal of Production Economics, 194*, 73-87. doi: 10.1016/j.ijpe.2017.04.005

Chen, S. (2018). Multinational corporate power, influence and responsibility in global supply chains. *Journal of Business Ethics, 148*, 365-374. doi: 10.1007/s10551-016-3033-x

Chicksand, D. (2015). Partnerships: The role that power plays in shaping collaborative buyer–supplier exchanges. *Industrial Marketing Management, 48*, 121-139. doi: 10.1016/j.indmarman.2015.03.019

Chkanikova, O. (2016). Sustainable purchasing in food retailing: Interorganizational relationship management to green product supply. *Business Strategy and the Environment, 25* (7), 478-494. doi: 10.1002/bse.1877

Christopher, M., & Peck, H. (2004). Building the resilient supply chain. *The International Journal of Logistics Management, 15* (2), 1-14. doi: 10.1108/09574090410700275

Ciccullo, F., Cagliano, R., Bartezzaghi, G., Perego, A. (2021). Implementing the circular economy paradigm in the agri-food supply chain: the role of food waste prevention technologies. *Resources, Conservation & Recycling, 164,* 105-114. doi: 10.1016/j.resconrec.2020.105114

Ciulli, F., Kolk, A., & Boe-Lillegraven, S. (2020). Circularity brokers: digital platform organizations and waste recovery in food supply chains. *Journal of Business Ethics, 167* (2), 299-331. doi: 10.1007/s10551-019-04160-5

Clarke, P. (2016). *Nestle offers dairy farmers sustainability bonus.* Retrieved from http://www.fwi.co.uk/business/nestle-offers-dairy-farmers-sustainability-bonus.htm

Clarkson, M. (1995). A stakeholder framework for analysing and evaluating corporate social performance. *The Academy of Management Review, 20* (1), 92-117. doi: 10.2307/258888

Coe, S., & Finlay, J. (2020). *The Agriculture Act 2020.* (House of Commons No. 8702). London: House of Commons.

Collins, C., & Stockton, C. (2018). The central role of theory in qualitative interviewing. *International Journal of Qualitative Methods, 17*, 1-10. doi: 10.1177/1609406918797475

Co-operatives UK. (2016). *The benefits of co-operatives.* Retrieved from https://www.uk.coop/about/benefits-co-operatives

Cordeiro, J., Profumo, G., & Tutore, I. (2020). Board gender diversity and corporate environmental performance: the moderating role of family and dual-class majority ownership structures. *Business Strategy and the Environment, 29*, 1127-1144. doi: 10.1002/bse.2421

Costanza, R., & Daly, H. (1992). Natural capital and sustainable development. *Conservation Biology, 6* (1), 37-46. doi: 10.1046/j.1523-1739.1992.610037.x

Courser, M. (2008). Consent form. In P. Lavrakas, (Ed.), *Encyclopedia of survey research methods.* (pp. 133). Thousand Oaks, California: SAGE.

Cowburn, A. (2016). *Theresa May says 'Brexit means Brexit' and there will be no attempt to remain inside EU.* Retrieved from http://www.independent.co.uk/news/uk/politics/theresa-may-brexit-means-brexit-conservative-leadership-no-attempt-remain-inside-eu-leave-europe-a7130596.html

Cox, A., Chicksand, D., & Palmer, M. (2007). Stairways to heaven or treadmills to oblivion: creating sustainable strategies in red meat supply chains. *British Food Journal, 109* (9), 689-720. doi: 10.1108/00070700710780689

Cranford University. (2002). *Supply Chain Vulnerability: Executive Report.* Retrieved from https://www.cranfield.ac.uk/~/media/images-for-new-website/centres/school-of-management-centres/centre-for-logistics-and-supply-chain-management/old-site-do-not-delete-centre-for-logistics-and-supply-chain-management/vulnerability-report.ashx

Crook, T., & Combs, J. (2007). Sources and consequences of bargaining power in supply chains. *Journal of Operations Management, 25*, 546-555. doi: 10.1016/j.jom.2006.05.008

Crook, T., Craighead, C., & Autry, C, (2017). Hold back or held back: the roles of constraint mitigation and exchange diffusion on power nonuse in buyer-supplier exchanges. *Journal of Supply Chain Management, 53* (2), 10-21. doi: 10.1111/jscm.12135

Dadhich, P., Genovese, A., Kumar, N., & Acquaye, A. (2015). Developing sustainable supply chains in the UK construction industry: a case study. *International Journal of Production Economics, 164*, 271-284. doi: 10.1016/j.ijpe.2014.12.012

Dairy All-Party Parliamentary Group. (2015). *The Sustainable Competitiveness of the UK Dairy Industry.* Retrieved from http://www.dairyuk.org/files/20150303_Dairy_APPG_Report_Final_Web(1).pdf

Dairy Management Inc. (2017). *DMI and the Dairy Checkoff.* Retrieved from https://www.dairy.org/about-dmi

Dairy Sustainability Framework. (2021). *Members.* Retrieved from https://dairysustainabilityframework.org/dsf-membership/members/

Dairy Sustainability Framework. (2017a). *Background.* Retrieved from https://dairysustainabilityframework.org/the-gdaa/background/

Dairy Sustainability Framework. (2017b). *The dairy sustainability framework.* Retrieved from https://dairysustainabilityframework.org/the-gdaa/programmes-of-the-gdaa/the-dairy-sustainability-framework/

Dairy Sustainability Framework. (2015*). Dairy Sustainability Framework: A collaborative approach to sustainability in the global dairy value chain.* Retrieved from https://dairysustainabilityframework.org/wp-content/uploads/2015/09/Dairy-Sustainability-Framework-Brochure-February-2015.pdf

Dairy UK. (2016a). *Dairy UK 2016 annual report.* Retrieved from http://www.dairyuk.org/images/2016_Dairy_UK_Annual_Report.pdf

Dairy UK. (2016b). *United Kingdom: Exporting Dairy to the World.* Retrieved from http://www.dairyuk.org/images/201602_United_Kingdom_Exporting_Dairy_to_the_World.pdf

Dairy UK. (2016c). *Brexit and the future of dairy exports.* Retrieved from http://www.dairyuk.org/images/201611_Brexit_and_the_future_of_dairy_exports.pdf

Dairy UK. (2015a). *Dairy UK welcomes end of EU milk quotas.* Retrieved from http://www.dairyuk.org/media-area/press-releases/item/dairy-uk-welcomes-end-of-eu-milk-quotas

Dairy UK. (2015b). *Dairy Roadmap 2015.* Retrieved from http://www.dairyuk.org/images/documents/publications/2015_Dairy_Roadmap.pdf

Dairy UK. (2014). *Leading the Way: The British Dairy Industry's Sustainable Growth Plan.* Retrieved from http://www.dairyuk.org/images/documents/publications/20140630_Leading_the_Way.pdf

Dairy UK. (2013). *The White Paper 2013: A guide to the UK Dairy Industry.* Retrieved from http://www.dairyuk.org/images/documents/the-white-paper-2013-final-20-june.pdf

Dairy UK, NFU, & AHDB Dairy. (2018). *The UK Dairy Roadmap.* Retrieved from https://www.dairyuk.org/wp-content/uploads/2018/10/The-Dairy-Roadmap-2018.pdf

Dairy UK, NFU, & NFU Scotland. (2012). *Dairy industry code of best practice on contractual relationships.* Retrieved from http://www.dairyuk.org/images/2012_Voluntary_Code_of_Practice.pdf

Daly, H. (1993). Sustainable growth: an impossibility theorem. In: H. Daly & K. Townsend (Eds.), *Valuing the Earth: Economics, Ecology and Ethics.* (pp. 267-274). Cambridge, Massachusetts: The MIT Press.

Dani, S. (2015). *Food supply chain management and logistics: from farm to fork*. London, United Kingdom: Kogan Page.

Dania, W., Xing, K., & Amer, Y. (2018). Collaboration behavioural factors for sustainable agri-food supply chains: A systematic review. *Journal of Cleaner Production, 186*, 851-864. doi: 10.1016/j.jclepro.2018.03.148

Daniel, J. (2012). *Sampling essentials: practical guidelines for making sampling choices.* Thousand Oaks, California: SAGE.

Dauvergne, P. (2018). The global politics of the business of "sustainable" palm oil. *Global Environmental Politics, 18* (2), 34-52. doi: 10.1162/glep_a_00455

David, M., & Sutton, C. (2011*). Social research: an introduction*. (2nd ed.). London, United Kingdom: SAGE.

Davis, G., & Cobb, J. (2010). Resource dependence theory: past and future. *Research in the Sociology of Organizations, 28*, 21-42. doi: :10.1108/S0733-558X(2010)0000028006

Davies, J. (2007). *Report alleges dairy price fixing amongst UK processors and retailers.* Farmers Guardian, 28 September, 14.

Davison, J. (2008). Rhetoric, repetition, reporting and the dot.com era: words, pictures intangibles. *Accounting, Auditing and Accountability Journal, 21* (6), 791-826. doi: 10.1108/09513570810893254

Del Borghi, A., Gallo, M., Strazza, C., & Del Borghi, M. (2014). An evaluation of environmental sustainability in the food industry through life cycle assessment: the case study of tomato products supply chains. *Journal of Cleaner Production, 78*, 121-130. doi: 10.1016/j.jclepro.2014.04.083

Delbufalo, E., & Bastl, M. (2018). Multi-principal collaboration and supplier's compliance with codes-of-conduct. *International Journal of Logistics Management, 29* (4), 1237-1254. doi: 10.1108/IJLM-09-2017-0222

Denzin, N. (2017). *The research act: a theoretical introduction to sociological methods.* Abingdon, United Kingdom: Routledge.

Devin, B., & Richards, C. (2018). Food waste, power and corporate social responsibility in the Australian food supply chain. *Journal of Business Ethics, 150* (1), 199-210. doi: 10.1007/s10551-016-3181-z

Dhingra, S., Gianmarco, O., Sampson, T., & van Reenen, J. (2016). *The consequences of Brexit for UK trade and living standards.* Retrieved from https://cep.lse.ac.uk/pubs/download/brexit02.pdf

DiMaggio, P., & Powell, W. (1983). The iron cage revisited: institutional isomorphism and collective rationality in organizational fields*. American Sociological Review, 48* (2), 147-160. doi: 10.2307/2095101

Donaldson, T., & Preston, L. (1995). The stakeholder theory of the corporation: concepts, evidence and implications. *Academy of Management Review, 20* (1), 65-91. doi: 10.5465/AMR.1995.9503271992

Dong, L., Wang, X., Chan, H., & Manzini, R. (2014). Sustainable food supply chain management. *International Journal of Production Economics, 152*, 1-8. doi: 10.1016/j.ijpe.2014.04.003

Downing, E. (2016). *EU referendum: impact of UK agriculture policy*. (House of Commons No. 7602). London: House of Commons.

Drake, M., & Schlachter, J. (2008). A virtue-ethics analysis of supply chain collaboration. *Journal of Business Ethics, 82* (4), 851-864. doi: 10.1007/s10551-007-9597-8

Dunn, C., & Eble, M. (2015). Giving voice to the silenced: using critical discourse analysis to inform crisis communication theory. *Journal of Business Ethics, 132* (4), 717-735. doi: 10.1007/s10551-014-2315-4

Dyer, J., & Singh, H. (1998). The relational view: cooperative strategies and sources of interorganizational competitive advantage. *Academy of Management Review, 23* (4), 660-679. doi: 10.5465/AMR.1998.1255632

Earthy, S., Cuncev, A., & Cronin, A. (2016). Narrative analysis. In N. Gilbert & P. Stoneman, (Eds.), *Researching social life*. (4th ed.). (pp. 461-484). London, United Kingdom: SAGE.

Economist, The. (2016). *Russia's dairy embargo: war and cheese*. Retrieved from https://www.economist.com/news/europe/21696571-land-where-european-cheese-banned-one-man-dares-make-his-own-war-and-cheese

Economist, The. (2009). *Triple bottom line*. Retrieved from http://www.economist.com/node/14301663

Egan, M. (2019). Sense-making resource efficiency through sustainability reports. *Journal of Business Ethics, 154*, 797-812. doi: 10.1007/s10551-017-3445-2

Eisner, E. (2008). Persistent tensions in arts-based research. In M. Cahnmann-Taylor & R. Siegesmund, (Eds.), Arts-based research in education: foundations for practice. (pp. 16-27). New York City, New York: Routledge.

Elking, I., Paraskevas, J., Grimm, C., Corsi, T., & Steven, A. (2017). Financial dependence, lean inventory strategy and firm performance. *Journal of Supply Chain Management, 53* (2), 22-38. doi: 10.1111/jscm.12136

Elkington, J. (1997). *Cannibals with Forks: the triple bottom line of 21st century business*. Oxford, United Kingdom: Capstone.

Ellen MacArthur Foundation. (2012). *Towards the circular economy: economic and business rationale for an accelerated transition*. Retrieved from http://circularfoundation.org/sites/default/files/tce_report1_2012.pdf

Elliot, J. (2005). *Using narrative in social research*. London, United Kingdom: SAGE.

Else, T. (2015). *Dairy farmers' perspectives on the supply chain sustainability of small UK dairy farms*. (MSc dissertation, University of Sheffield, Sheffield, United Kingdom).

Else, T., Choudhary, S., & Genovese, A. (2022). Uncovering sustainability storylines from dairy supply chain discourse. *Journal of Business Reearch, 142,* 858-874. doi: 10.1016/j.jbusres.2021.12.023

Emerson, R. (1962). Power dependence relations*. American Sociological Review, 27* (1), 30-41. doi: 10.2307/2089716

Emmanuel-Ebikake, O., Roy, R., & Shehab, E. (2014). Supplier sustainability assessment for the UK defence industry*. International Journal of Productivity and Performance Management, 63* (8), 968-990. doi: 10.1108/IJPPM-03-2013-0048

Empson, J. (1998). The history of the milk marketing board 1933-1994: British farmers' greatest commercial enterprise. *International Journal of Dairy Technology, 51* (3), 77-85. doi: 10.1111/j.1471-0307.1998.tb02642.x

EPSRC. (2020). *Framework for Responsible Innovation*. Retrieved from https://epsrc.ukri.org/index.cfm/research/framework/

Esfabodi, A., Zhang, Y., & Watson, G. (2016). Sustainable supply chain management in emerging economies: trade-offs between environmental and cost performance. *International Journal of Production Economics, 181*, 350-366. doi: 10.1016/j.ijpe.2016.02.013

Esin, C., Fathi, M., & Squire, C. (2014). Narrative analysis: the constructionist approach. In U. Flick, (Ed.), *The SAGE handbook of qualitative data analysis.* (pp. 203-216). London, United Kingdom: SAGE.

ESRC. (2015). *ESRC Framework for research ethics.* Retrieved from http://www.esrc.ac.uk/files/funding/guidance-for-applicants/esrc-framework-for-research-ethics-2015/

European Commission. (2021). *Unfair trading practices in the food chain*. Retrieved from https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/market-measures/agri-food-supply-chain/unfair-trading-practices_en

European Commission. (2017a). *CAP at a glance*. Retrieved from https://ec.europa.eu/agriculture/cap-overview_en

European Commission. (2017b). *Annual Production Series of Dairy products.* Retrieved from https://ec.europa.eu/agriculture/sites/agriculture/files/market-observatory/milk/pdf/eu-historical-production-stocks-series_en.pdf

European Commission. (2015). *Frequently asked questions: end of milk quotas*. Retrieved from http://europa.eu/rapid/press-release_MEMO-15-4697_en.htm

European Milk Board. (2012). *Co-operatives: between myth and reality.* Retrieved from http://www.europeanmilkboard.org/fileadmin/Dokumente/Positions_EMB/12-02_Positions/Co-operatives.pdf

European Union. (2018). *How EU decisions are made*. Retrieved from https://europa.eu/european-union/eu-law/decision-making/procedures_en

European Union Committee. (2017). *Brexit: Agriculture*. Retrieved from https://publications.parliament.uk/pa/ld201617/ldselect/ldeucom/169/169.pdf

Eweje, G. (2020). Sustainability discourse: contemporary issues from different perspectives. *Business Strategy and the Environment, 29* (7), 2893-294. doi: 10.1002/bse.2583

Fairclough, N. (2010). *Critical discourse analysis: the critical study of language*. (2nd ed). Abingdon, United Kingdom: Routledge.

Fairclough, N. (2001). Critical discourse analysis as a method in social scientific research. In R. Wodak & M. Meyers, (Eds.), *Methods of Critical Discourse Analysis*. (pp. 121-138). London, United Kingdom: SAGE.

FAO. (2020*). The State of Food and Agriculture 202*0. Retrieved from http://www.fao.org/home/en/

FAO. (2014). *Building a common vision for sustainable food and agriculture*. Retrieved from http://www.fao.org/3/a-i3940e.pdf

FAO. (2009). *How to feed the world in 2050*. Retrieved from http://www.fao.org/fileadmin/templates/wsfs/docs/expert_paper/How_to_Feed_the_World_in_2050.pdf

FAO. (2006). *Livestock's long shadow*. Retrieved from http://www.fao.org/3/a-a0701e.pdf

Farming UK. (2020). *Coronavirus: farmers forced to dump thousands of litres of milk*. Retrieved from https://www.farminguk.com/news/coronavirus-farmers-forced-to-dump-thousands-of-litres-of-milk_55377.html

Farming UK. (2016). *UK dairy industry unsustainable as one in ten farms shut down*. Retrieved from https://www.farminguk.com/News/UK-dairy-industry-unsustainable-as-one-in-ten-farms-shut-down_42445.html

Feder, E. (2014). Power/Knowledge. In: Taylor, D. (ed). *Michel Foucault: Key Concepts*. (pp. 55-70). Abingdon, United Kingdom: Routledge.

Fergus, A., & Rowney, J. (2005). Sustainable development: lost meaning and opportunity. *Journal of Business Ethics, 60* (1), 17-27. doi: 10.1007/s10551-005-2927-9

Fielding, N., & Thomas, H. (2016). Qualitative Interviewing. In N. Gilbert & P. Stoneman (Eds.), *Researching Social Life*. (4th ed.). (pp. 239-358). London, United Kingdom: SAGE.

Filipović, J. (2019). Market-oriented sustainability of Sjenica sheep cheese. *Sustainability, 11* (3), 834. doi: 10.3390/su11030834

First Milk. (2012). *First things first: sustainability report.* Retrieved from http://www.firstmilk.co.uk/userfiles/files/sustainability/FirstThingsFirst_FirstMilk_SR_2012.pdf

Fischer, A., & Pascucci, S. (2017). Institutional incentives in circular economy transition: the case of material use in the Dutch textile industry. *Journal of Cleaner Production, 155*, 17-32. doi: 10.1016/j.jclepro.2016.12.038

Fletcher, G., Greenhill, A., Griffiths, M., Holmes, K., & McLean, R. (2016). Creatively prototyping the future high street. *Production Planning & Control, 27* (6), 477-489. doi: 10.1080/09537287.2016.1147094

Flick, U. (2009). *An introduction to qualitative research.* (4th ed.). London, United Kingdom: SAGE.

Foerstl, K., Azadegan, A., Leppelt, T., & Hartmann, E. (2015). Drivers of supplier sustainability: moving beyond compliance to commitment. *Journal of Supply Chain Management, 51*, 67-92. doi: 10.1111/jscm.12067

Font, X., Tapper, R., Schwartz, K. & Kornilaki, M. (2008). Sustainable supply chain management in tourism. *Business Strategy and the Environment, 17*, 260-271. doi: 10.1002/bse.527

Food Standards Agency. (2019). *Public Attitudes Tracker: Wave 18.* Retrieved from: https://www.food.gov.uk/

Food Standards Agency. (2008). *Country of Origin Labelling Guidance.* Retrieved from https://www.food.gov.uk/

Forssell, S., & Lankoski, L. (2015). The sustainability promise of alternative food networks: An examination through "alternative" characteristics. *Agriculture and Human Values, 32*(1), 63-75. doi: 10.1007/s10460-014-9516-4

Forum for the Future. (2012). *Dairy 2020: A vision and framework for a sustainable UK dairy industry.* Retrieved from https://www.forumforthefuture.org/sites/default/files/project/downloads/dairy-2020-vision-and-framework.pdf

Foucault, M. (1979). *Discipline and punish: the birth of the prison.* New York City, New York: Vintage Books.

Foucault, M. (1978). *The history of sexuality volume 1: An introduction.* New York City, New York: Pantheon Books.

Foucault, M. (1973). Truth and juridical forms. In: Faubion, J. (ed). *Power: Essential works of Foucault 1954-1984: Volume 3.* (pp. 1-89.) London, United Kingdom: Penguin.

Free, C. (2008). Walking the talk: supply chain accounting and trust among UK supermarkets and suppliers. *Accounting, Organisations and Society, 33* (6), 629-662. doi: 10.1016/j.aos.2007.09.001

Freeman, R. (2010). *Strategic management: a stakeholder approach.* Cambridge, United Kingdom: Cambridge University Press.

Freidberg, S. (2020). Assembled but unrehearsed: Corporate food power and the 'dance' of supply chain sustainability. *The Journal of Peasant Studies, 47* (2), 383-400. doi: 10.1080/03066150.2018.1534835

Freidberg, S. (2017). Big food and little data: The slow harvest of corporate food supply chain sustainability initiatives. *Annals of the American Association of Geographers, 107* (6), 1547. doi: 10.1080/24694452.2017.1349522

French, J., & Raven, B. (1959). The bases of social power. In: Cartwright, D. (ed.*), Studies in social power.* (pp. 150–167). Ann Arbor, Michigan: University of Michigan.

Frenken, K. (2014). The evolution of the Dutch dairy industry and the rise of co-operatives: a research note. *Journal of Institutional Economics, 10* (1), 163-174. doi: 10.1017/S1744137413000337

Fu, S., Zhan, Y., Ouyang, J., Ding, Y., Tan, K., & Fu, L. (2020). Power, supply chain integration and quality performance of agricultural products: Evidence from contract farming in China*. Production Planning & Control*, no pagination. doi: 10.1080/09537287.2020.1794074

Fuller, F., Huang, J., Ma, H., & Rozelle, S. (2006). Got milk: the rapid rise of China's dairy sector and its future prospects. *Food Policy, 31,* 201-215. doi: 10.1016/j.foodpol.2006.03.002

Gamboa, G., Kovacic, Z., Di Masso, M., Mingoria, S., Gomiero, T., Rivera-Ferre, M., & Giampietro, M. (2016). The complexity of food systems: defining relevant attributes and indicators for the evaluation of food supply chains in spain. *Sustainability, 8* (6), 515. doi: 10.3390/su8060515

Gardas, B., Raut, R., & Narkhede, B. (2018). Evaluating critical causal factors for post-harvest losses (PHL) in the fruit and vegetables supply chain in India using the DEMATEL approach*. Journal of Cleaner Production, 199*, 47-61. doi: 10.1016/j.jclepro.2018.07.153

Gardiner, B. (2015). *How Growth in Dairy Is Affecting the Environment*. Retrieved from https://www.nytimes.com/2015/05/04/business/energy-environment/how-growth-in-dairy-is-affecting-the-environment.html

Garnett, T. (2013). Food sustainability: problems, perspectives and solutions. *Proceedings of the Nutrition Society, 72* (1), 29-39. doi: 10.1017/S0029665112002947

Geissdoerfer, M., Savaget, P., Bocken, N., & Hultink, E. (2017). The circular economy – a new sustainability paradigm. *Journal of Cleaner Production, 143*, 757-768. doi: 10.1016/j.jclepro.2016.12.048

Genovese, A., Acquaye, A., Figueroa, A., & Koh, S. (2017). Sustainable supply chain management and the transition towards a circular economy: evidence and some applications*. Omega, 66*, 344-357. doi: 10.1016/j.omega.2015.05.015

Genovese, A., Morris, J., Koh, S. C. L., & Acquaye, A. (2020). An investigation into design and performance of supply chains for public procurement projects. *Production Planning & Control,* no pagination. doi: 10.1080/09537287.2020.183793

Genovese, A., & Pansera, M. (2020). The circular economy at a crossroads: technocratic eco-modernism or convivial technology for social revolution. *Capitalism, Nature, Socialism*, no pagination. doi: 10.1080/10455752.2020.1763414

Giannakis, M., & Papadopoulos, T. (2016). Supply chain sustainability: a risk management approach. *International Journal of Production Economics, 171* (4), 455-470. doi: 10.1016/j.ijpe.2015.06.032

Gillham, B. (2000). *Developing a Questionnaire.* London, UK: Continuum

Gimenez, C., & Sierra, V. (2013). Sustainable supply chains: governance mechanisms to greening suppliers. *Journal of Business Ethics, 116* (1), 189-203. doi: 10.1007/s10551-012-1458-4

Gioia, D., Corley, K., & Hamilton, A. (2013). Seeking qualitative rigor in inductive research: notes on the gioia methodology. *Organizational Research Methods, 16* (1), 15-31. doi: 10.1177/1094428112452151

Glavas, A., & Mish, J. (2015). Resources and capabilities of triple bottom line firms: going over old or breaking new ground. *Journal of Business Ethics, 127* (3), 623-642. doi: 10.1007/s10551-014-2067-1

Glavič, P., & Lukman, R. (2007). Review of sustainability terms and their definitions. *Journal of Cleaner Production, 15* (18), 1875-1885. doi: 10.1016/j.jclepro.2006.12.006

Global Reporting Initiative. (2017). *GRI at a glance.* Retrieved from https://www.globalreporting.org/information/news-and-press-center/press-resources/Pages/default.aspx

Glover, J. (2020). The dark side of sustainable dairy supply chains. *International Journal of Operations & Production Management, 40* (12), 1801-1827. doi: 10.1108/IJOPM-05-2019-0394

Glover, J. (2011). Where has all the cream gone: How sustainable is the English dairy supply chain. *Proceedings of the Agricultural Economics Society 85th Annual Conference.* Retrieved from http://purl.umn.edu/108940

Glover, J., Champion, D., Daniels, K., & Dainty, A. (2014). An institutional theory perspective on sustainable practices across the dairy supply chain. *International Journal of Production Economics, 152,* 102-111. doi: 10.1016/j.ijpe.2013.12.027

Glover, J., & Reay, T. (2015). Sustaining the family business with minimal financial rewards: how do family farms continue. *Family Business Review, 28* (2), 163-177. doi: 10.1177/0894486513511814

Glover, J., & Touboulic, A. (2020). Tales from the countryside: unpacking 'passing the environmental buck' as hypocritical practice in the food supply chain. *Journal of Business Research, 121*, 33-46. doi: 10.1016/j.jbusres.2020.06.066

Gokarn, S., & Kuthambalayan, T. (2017). Analysis of challenges inhibiting the reduction of waste in food supply chain. *Journal of Cleaner Production, 168*, 595-604. doi: 10.1016/j.jclepro.2017.09.028

Gopal, P., & Thakkar, J. (2015). Sustainable supply chain practices: an empirical investigation on Indian automobile industry. *Production Planning & Control, 27* (1), 49-64. doi: 10.1080/09537287.2015.1060368

Gopalakrishnan, K., Yusuf, Y., Musa, A., & Ambursa, H. (2012). Sustainable supply chain management: a case study of british aerospace (Bae) systems. *International Journal of Production Economics, 140* (1), 193-203. doi: 10.1016/j.ijpe.2012.01.00

Gouda, S., & Saranga, H. (2018). Sustainable supply chains for supply chain sustainability: impact of sustainability efforts on supply chain risk. *International Journal of Production Research, 56* (17), 5820-5835. doi: 10.1080/00207543.2018.1456695

Govindan, K. (2018). Sustainable consumption and production in the food supply chain: a conceptual framework. *International Journal of Production Economics, 195,* 419-431. doi: 10.1016/j.ijpe.2017.03.003

Govindan, K., Azevedo, S., Carvalho, H., & Cruz-Machado, V. (2014). Impact of supply chain sustainability practices on sustainability. *Journal of Cleaner Production, 85*, 212-225. doi: 10.1016/j.jclepro.2014.05.068

Grabs, J., & Carodenuto, S. (2021). Traders as sustainability governance actors in global food supply chains: A research agenda. *Business Strategy and the Environment, 30* (2), 1314-1332. doi: 10.1002/bse.2686

Graham, P. (2018). Ethics in critical discourse analysis. *Ethics in critical discourse studies, 15*, 186-203. doi: 10.1080/17405904.2017.1421243

Graham, S. (2020). The influence of external and internal stakeholder pressures on the implementation of upstream environmental supply chain practices. *Business & Society, 59* (2), 351-383. doi: 10.1177/0007650317745636

Gramsci, A. (1971). *Selections from the Prison notebooks of Antonio Gramsci: edited and translated by Quintin Hoare and Geoffrey Nowell Smith.* London, United Kingdom: Lawrence & Wishart.

Gray, D. (2014). *Doing research in the real world.* (3rd ed.). London, United Kingdom: SAGE.

Gray, L. (2012). *Dairy farmers are being skimmed alive.* Retrieved from http://www.telegraph.co.uk/news/earth/agriculture/farming/9408891/Dairy-farmers-are-being-skimmed-alive.html

Great Britain. BEIS. (2020). *2018 UK Greenhouse Gas Emissions, Final Figures.* London: Department for Business, Energy & Industrial Strategy.

Great Britain. DEFRA. (2020a). *Defra Statistics: Agriculture Facts. England Regional Profiles.* London: Department for Environment, Food & Rural Affairs.

Great Britain. DEFRA (2020b). *Farming for the future: Policy and progress update February 2020*. London: Department for Environment, Food & Rural Affairs.

Great Britain. DEFRA. (2020c). *Food Statistics in your pocket: Summary*. Retrieved from https://www.gov.uk/government/statistics/food-statistics-pocketbook/food-statistics-in-your-pocket-summary#gross-value-added-of-the-uk-agri-food-sector-2018

Great Britain. DEFRA. (2020d). Farming is changing. Retrieved from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/939683/farming-changing.pdf

Great Britain. DEFRA (2019). *Farm Accounts in England: Results from the Farm Business Survey*. London: Department for Environment, Food & Rural Affairs.

Great Britain. DEFRA. (2016). *British food and farming at a glance.* Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/515048/food-farming-stats-release-07apr16.pdf

Great Britain. Environment, Food and Rural Affairs Committee. (2020*). COVID-19 and food supply.* HC 263, 2019-21. London: By the authority of the House of Commons.

Great Britain. Welsh Affairs Committee. (2013). *The voluntary code of practice in the dairy sector*. HC 155, 2012-13. London: By the authority of the House of Commons.

Griffin, A., & May, V. (2012). Narrative analysis and interpretive phenomenological analysis. In C. Seale, (Ed.), *Researching society and culture.* (3rd ed). (pp. 441-458). London, United Kingdom: SAGE.

Grimm, J., Hofstetter, J., & Sarkis, J. (2016). Exploring sub-suppliers' compliance with corporate sustainability standards. *Journal of Cleaner Production, 112*, 1971-1984. doi: 10.1016/j.jclepro.2014.11.036

Grivins, M., Tisenkopfs, T., Stojanovic, Z., & Ristic, B. (2016). A comparative analysis of the social performance of global and local berry supply chains. *Sustainability, 8* (6), 532. doi: 10.3390/su8060532

Grunow, M., & van der Vorst, J. (2010). Food production and supply chain management. *OR Spectrum, 32* (4), 861-862. doi: 10.1007/s00291-010-0222-3

Gualandris, J., & Kalchschmidt, M. (2016). Developing environmental and social performance: the role of suppliers' sustainability and buyer-supplier trust. *International Journal of Production Research, 54* (8), 2470-2486. doi: 10.1080/00207543.2015.1106018

Guan, W., & Rehme, J. (2012). Vertical integration in supply chains: driving forces and consequences for a manufacturer's downstream integration*. Supply Chain Management: An International Journal, 17* (2), 187-201. doi: 10.1108/13598541211212915

Guerrero, A., Jones, N., Ross, H., Virah-Sawmy, M., & Biggs, D. (2021). What influences and inhibits reduction of deforestation in the soy supply chain? A mental

model perspective. *Environmental Science & Policy, 115*, 125-132. doi: 10.1016/j.envsci.2020.10.016

Guinee, J., Heijungs, R., Huppes, G., Zamagni, A., Masoni, P., Buonamici, R., Ekvall, T., & Rydberg, T. (2011). Life cycle assessment: past, present and future. *Environmental Science and Technology, 45* (1), 90-96. doi: 10.1021/es101316v

Ha-Brookshire, J. (2017). Toward moral responsibility theories of corporate sustainability and sustainable supply chain. *Journal of Business Ethics, 145*, 227-237. doi: 10.1007/s10551-015-2847-2

Hajer, M. (2005). Coalitions, practices, and meaning in environmental politics: from acid rain to BSE. In: Howarth, D., Torfing, J. (Eds*.). Discourse Theory in European Politics*. Hampshire, United Kingdom: Palgrave Macmillan. pp. 297–315.

Hajer, M. (1995). *The politics of environmental discourse; ecological modernization and the policy process*. (2nd ed.). Oxford, United Kingdom: Oxford University Press.

Hall, S. (2001). Foucault: power, knowledge and discourse. In M. Wetherall, S Taylor, & S. Yates (Eds.), *Discourse theory and practice: a reader.* (pp. 72-81). London, United Kingdom: SAGE.

Harangozo, G., Csutora, M., & Kocsis, T. (2018). How big is big enough: toward a sustainable future by examining alternatives to the conventional economic growth paradigm. *Sustainable Development, 26* (2), 172-181. doi: 10.1002/sd.1728

Harvey, F. (2021a). *Fewer, bigger, more intensive: EU vows to stem drastic loss of small farms*. Retrieved from https://www.theguardian.com/environment/2021/may/24/fewer-bigger-more-intensive-eu-vows-to-stem-drastic-loss-of-small-farms

Harvey, F. (2021b). *Prince Charles: small-scale family farms must be at heart of sustainable future*. Retrieved from https://www.theguardian.com/environment/2021/may/23/prince-charles-small-scale-family-farms-must-be-at-heart-of-sustainable-future

Hatanaka, M. (2020). Technocratic and deliberative governance for sustainability: rethinking the roles of experts, consumers and producers. *Agriculture and Human Values, 37,* 793-804. doi: 10.1007/s10460-019-10012-9

He, Q., Ghobadian, A., & Gallear, D. (2013). Knowledge acquisition in supply chain partnerships: the role of power. *International Journal of Production Economics, 141* (2), 605-618. doi: 10.1016/j.ijpe.2012.09.019

Hendry, L., Stevenson, M., MacBryde, J., Ball, P., Sayed, M., & Liu, L. (2019). Local food supply chain resilience to constitutional change: the Brexit effect. *International Journal of Operations & Production Management, 39* (3), 429-453. doi: 10.1108/IJOPM-03-2018-0184

Higgins, C., & Coffey, B. (2016). Improving how sustainability reports drive change: a critical discourse analysis. *Journal of Cleaner Production, 136* (A), 18-29. doi: 10.1016/j.jclepro.2016.01.101

Hoehn, D. *et al.* (2021). Introducing a degrowth approach to the circular economy policies of food production, and food loss and waste management: towards a circular bioeconomy. *Sustainability, 13* (6), no pagination. doi: 10.3390/su13063379

Hoejmose, S., Brammer, S., & Millington, A. (2012). An empirical examination of the relationship between business strategy and socially responsible supply chain management. *International Journal of Operations and Production Management, 33* (5), 589-621. doi: 10.1108/01443571311322733

Hoejmose, S., Grosvold, J., & Millington, A. (2013). Socially responsible supply chains: power asymmetries and joint dependence. *Supply Chain Management: An International Journal, 18* (3), 277-291. doi: 10.1108/SCM-01-2012-0033

Holmes, L. (2004). Guidance for ensuring confidentiality and the protection of data. In S. Becker, A. Bryman & H. Ferguson, (Eds.), *Understanding research for social policy and social work.* (pp. 88-90). Bristol, United Kingdom: Policy Press.

Holstein, J., & Gubrium, J. (2003). In-person versus telephone interviewing. In J. Holstein & J. Gubrium, (Eds.), *Inside interviewing.* (pp. 174-193). Thousand Oaks, California: SAGE.

Hooks, T., McCarthy, O., Power, C., & Macken-Walsh, Á. (2017). A co-operative business approach in a values-based supply chain: A case study of a beef co-operative. *Journal of Co-operative Organization and Management, 5* (2), 65-72. doi: 10.1016/j.jcom.2017.10.001

Hopwood, B., Mellor, M., & O'Brien, G. (2005). Sustainable development: mapping different approaches. *Sustainable development, 13* (1), 38-52. doi: 10.1002/sd.244

Hsu, V., Lai, G., & Liang, G. (2019). Agricultural Partnership for Dairy Farming. *Production and Operations Management, 28* (12), 3042-3059. doi: 10.1111/poms.12992

Huo, B., Flynn, B., & Zhao, X. (2017). Supply chain power configurations and their relationship with performance. *Journal of Supply Chain Management, 53* (2), 88-111. doi: 10.1111/jscm.12139

Hurworth, R. (2005). Interpretivism. In S. Mathison, (Ed.), *Encyclopedia of evaluation.* (pp. 210). Thousand Oaks, California: SAGE Publications.

Hussain, N., Rigoni, U., & Orij, R. (2018). Corporate governance and sustainability performance: analysis of triple bottom line performance. *Journal of Business Ethics, 149* (2), 411-432. doi: 10.1007/s10551-016-3099-5

Huq, F., & Stevenson, M. (2020). Implementing socially sustainable practices in challenging institutional contexts: building theory from seven developing country supplier cases. *Journal of Business Ethics, 161* (2), 415-442. doi: 10.1007/s10551-018-3951-x

Ilbery, B., & Maye, D. (2005). Food supply chains and sustainability: evidence from specialist food producers in the Scottish/English borders. *Land Use Policy, 22* (4), 331-344. doi: 10.1016/j.landusepol.2004.06.002

Imran, S., Alam, K., Beaumont, N. (2014). Reinterpreting the definition of sustainable development for a more ecocentric reorientation. *Sustainable Development, 22* (2), 134-144. doi: 10.1002/sd.537

Innovation Center for US Dairy. (2017*). Sustainability Community commitment: About.* Retrieved from https://www.usdairy.com/sustainability/community-commitment/about

Innovation Center for US Dairy. (2016). *US Dairy 2016 Sustainability Report.* Retrieved from https://www.usdairy.com/sustainability/reporting/us-dairy-sustainability-report

International Monetary Fund. (2017). *World Economic Outlook April 2017: Gaining momentum.* Retrieved from https://www.imf.org/~/media/Files/Publications/WEO/2017/April/pdf/text.ashx

Isaksson, R., Johansson, P., & Fischer, K. (2010). Detecting supply chain innovation potential for sustainable development. *Journal of Business Ethics, 97* (3), 425-442. doi: 10.1007/s10551-010-0516-z

Israel, M., & Hay, I. (2006). *Research ethics for social scientists.* London, United Kingdom: SAGE.

Ives, P. (2004). *Language and hegemony in Gramsci.* London, United Kingdom: Pluto Press.

Jabareen, Y. (2008). A new conceptual framework for sustainable development. *Environment, Development and Sustainability, 10* (2), 179-192. doi: 10.1007/s10668-006-9058-z

Jacobi, J., & Llanque, A. (2018). "When we stand up, they have to negotiate with Us": Power relations in and between an agroindustrial and an indigenous food system in Bolivia. *Sustainability, 10* (11), 4001. doi: 10.3390/su10114001

Janker, J., & Mann, S. (2020). Understanding the social dimension of sustainability in agriculture: a critical review of sustainability assessment tools. *Environment, Development and Sustainability, 22,* 1671-1691. doi: 10.1007/s10668-018-0282-0

Jarvis, H. (2019). Sharing, togetherness and intentional degrowth. *Progress in Human Geography, 43* (2), 256-275. doi: 10.1177/0309132517746519

Jenkins, R. (2002). *Foundations of Sociology.* Basingstoke, United Kingdom: Palgrave Macmillan.

Jenson, M., & Meckling, W. (1976). Theory of the firm: managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics, 3,* 305-360. doi: 10.1016/0304-405X(76)90026-X

Jesson, J., & Lacey, F. (2006). How to do (or not to do) a critical literature review. *Pharmacy Education, 6* (2), 139-148. doi: 10.1080/15602210600616218

Jesson, J., Matheson, L, & Lacey, F. (2011). *Doing your literature review: traditional and systematic techniques.* London, United Kingdom: SAGE.

Jeurissen, R. (2000). Book reviews: John Elkington, cannibals with forks: the triple bottom line of 21st century business. *Journal of Business Ethics, 23* (2), 229-231. doi: 10.1023/A:1006129603978

Johnson, M. (2016). *The Devil is in the Derogation*. Retrieved from https://research.rabobank.com/far/en/sectors/dairy/The_Devil_is_in_the_Derogation.html

Kalfagianni, A., & Kuik, O. (2017). Seeking optimality in climate change agri-food policies: stakeholder perspectives from Western Europe*. Climate Policy, 17*, S72-S92. doi: 10.1080/14693062.2016.1244508

Kauppi, K. (2013). Extending the use of institutional theory in operations and supply chain management research. *International Journal of Operations & Production Management, 33* (10), 1318-1345. doi: 10.1108/IJOPM-10-2011-0364

Keller, R. (2013). *Doing discourse research: an introduction for social scientists*. London, United Kingdom: SAGE

Kim, Y., & Davis, G. (2016). Challenges for global supply chain sustainability: evidence from conflict mineral reports. *Academy of Management Journal,* 59 (6), 1896-1916. doi: 10.5465/amj.2015.0770

King, N. (2012). Using templates in the thematic analysis of text. In C. Cassell & G. Symon, (Eds.), *Essential guide to qualitative methods in organisational research*. (pp. 256-270). London, United Kingdom: SAGE.

King, N., & Brooks, J. (2017). *Template analysis for business and management students*. London, United Kingdom: SAGE.

Ko, S., Lautala, P., & Handler, R. (2018). Securing the feedstock procurement for bioenergy products: A literature review on the biomass transportation and logistics. *Journal of Cleaner Production, 200*, 205-218. doi: 10.1016/j.jclepro.2018.07.241

Koning, N. (2012). Netherlands: Brief history of co-operatives in the dairy sector since 1890 and their significance for farmers' incomes. In European Milk Board (Ed.), *Co-operatives: between myth and reality*. (pp. 12-17). Hamm, Germany: European Milk Board.

Kourula, A., & Delalieux, G. (2016). The micro-level foundations and dynamics of political corporate social responsibility: hegemony and passive revolution through civil society. *Journal of Business Ethics, 135* (4), 769-785. doi: 10.1007/s10551-014-2499-7

Krause, D., Vachon, S., & Klassen, R. (2009). Special topic on sustainable supply chain management: introduction and reflections on the role of purchasing management. *Journal of Supply Chain Management, 45* (4), 18-25. doi: 10.1111/j.1745-493X.2009.03173.x

Keller, E., Milà I Canals, L., King, H., Lee, J., & Clift, R. (2013). Agri-food certification schemes: how do they address greenhouse gas emissions? *Greenhouse Gas Measurement & Management, 3* (3-4), 85-106. doi: 10.1080/20430779.2013.840200

Khalid, R., & Seuring, S. (2019). Analyzing base-of-the-pyramid research from a (sustainable) supply chain perspective. *Journal of Business Ethics, 155* (3), 663-686. doi: 10.1007/s10551-017-3474-x

Kietäväinen, A. (2014). Narrated Agency and Identity of Settlement Farmers in the Changing Circumstances of Modern Society. *Sociologia Ruralis, 54* (1), 57-70.

Koufteros, X., & Lu, G. (2017). Food supply chain safety and security: a concern of global importance. *Journal of Marketing Channels, 24* (3-4), 111-114. doi: 10.1080/1046669X.2017.1393227

Kourula, A., & Delalieux, G. (2016). The micro-level foundations and dynamics of political corporate social responsibility: hegemony and passive revolution through civil society. *Journal of Business Ethics, 135* (4), 769-785. doi: 10.1007/s10551-014-2499-7

Kvale, S. (2009). *InterViews: learning the craft of qualitative research interviewing.* (2nd ed.). Thousand Oaks, California: SAGE.

Lavie, D. (2006). The competitive advantage of interconnected firms: an extension of the resource-based view. *Academy of Management Review, 31* (3), 638-658. doi: 10.5465/AMR.2006.21318922

Lawrence, F. (2007). *Why british dairy farming is in crisis.* Retrieved from https://www.theguardian.com/uk/2007/apr/24/foodanddrink.food

Leat, P., & Revoredo-Giha, C. (2013). Risk and resilience in agri-food supply chains: the case of the ASDA PorkLink supply chain in Scotland. *Supply Chain Management: An International Journal, 18* (2), 219-231. doi: 10.1108/13598541311318845

Leat, P., Lamprinopoulou-Kranis, C., Revoredo-Giha, C., & Kupiec-Teahan, B. (2011a). Agri-food supply chains and sustainability-related issues: evidence from across the Scottish agri-food economy. *Proceedings of the Agricultural Economics Society 85th Annual Conference.* Retrieved from http://purl.umn.edu/108952

Leat, P., Revoredo-Giha, C., & Lamprinopoulou, C. (2011b). Scotland's food and drink policy discussion: Sustainability issues in the food supply chain. *Sustainability, 3* (4), 605-631. doi: 10.3390/su3040605

Lechuga, V. (2012). Exploring culture from a distance: the utility of telephone interviews in qualitative research. *International Journal of Qualitative Studies in Education, 25* (3), 251-268. doi: 10.1080/09518398.2010.529853

Lee, R. (1993). *Doing research on sensitive topics.* London, United Kingdom: SAGE

Levine, M. (2003). *A Branded World: Adventures in Public Relations and the Creation of Superbrands.* Hoboken, New Jersey: John Wiley and Sons.

Levy, D., Reinecke, J., & Manning, S. (2016). The political dynamics of sustainable coffee: contested value regimes and the transformation of sustainability. *Journal of Management Studies, 53* (3), 364-401. doi: 10.1111/joms.12144

Levy, D., Spicer, A. (2013). Contested imaginaries and the cultural political economy of climate change, *Organization, 20*, 659–78. doi: 10.1177/1350508413489816

Li, D., Wang, X., Chan, H., & Manzini, R. (2014). Sustainable food supply chain management. *International Journal of Production Economics, 152*, 1-8. doi: 10.1016/j.ijpe.2014.04.003

Li, S., & Lin, B. (2006). Accessing information sharing and information quality in supply chain management. *Decision Support Systems, 42* (3), 1641-1656. doi: 10.1016/j.dss.2006.02.011

Li, Z., Xu, Y., Deng, F., & Liang, X. (2018). Impacts of power structure on sustainable supply chain management. *Sustainability, 10*, 55. doi: 10.3390/su10010055

Linton, J., Klassen, R., & Jayaraman, V. (2007). Sustainable supply chains: an introduction. *Journal of Operations Management, 25*, 1075-1082. doi: 10.1016/j.jom.2007.01.012

Locke, T. (2004). *Critical Discourse Analysis*. London, United Kingdom: Continuum.

Longley Farm. (2017). *Longley Farm*. Retrieved from http://longleyfarm.com/longley-farm

Longoni, A., & Cagliano, R. (2018). Sustainable innovativeness and the triple bottom line: the role of organizational time perspective. *Journal of Business Ethics, 151* (4), 1097-1120. doi: 10.1007/s10551-016-3239-y

Lu, J., Yu, D., Mahmoudian, F., Nazari, J., & Herremans, I. (2020). Board interlocks and greenhouse gas emissions. *Business Strategy and the Environment*, advanced online publication. doi: 10.1002/bse.2611

Ludin, N., Bakri, M., Kamaruddin, N., Sopian, K., Deraman, M., Hamid, N., Asim, N., & Othman, M. (2014). Malaysian oil palm plantation sector: Exploiting renewable energy toward sustainability production. *Journal of Cleaner Production, 65*, 9-15. doi: 10.1016/j.jclepro.2013.11.063

Lynch, R. (2014). Foucault's theory of power. In: Taylor, D. (ed). *Michel Foucault: Key Concepts.* (pp. 13-26). Abingdon, United Kingdom: Routledge.

Madichie, N., & Yamoah, F. (2017). Revisiting the European horsemeat scandal: the role of power asymmetry in the food supply chain crisis. *Thunderbird International Business Review, 59* (6), 663-675. doi: 10.1002/tie.21841

Maestrini, V., Luzzini, D., Maccarrone, P., & Caniato, F. (2017). Supply chain performance measurement systems: A systematic review and research agenda. International *Journal of Production Economics, 183*, 299-315. doi: 10.1016/j.ijpe.2016.11.005

Magnin, C. (2016). *Toward a circular economy in food*. Retrieved from http://www.mckinsey.com/business-functions/sustainability-and-resource-productivity/our-insights/toward-a-circular-economy-in-food

Maitlis, S. (2005). The social processes of organizational sensemaking. *Academy of Management Journal, 48* (1), 21-49. doi: 10.5465/AMJ.2005.15993111

Maitlis, S., & Lawrence, T. (2007). Triggers and Enablers of Sensegiving in Organizations. *Academy of Management Journal, 50* (1), 57-84. doi: 10.5465/AMJ.2007.24160971

Mamillo, D. (2014). The effect of organisation culture and uncertainty in supply chain management: the Albanian beer industry. *Theory, Methodology, Practice, 10* (2), 49-57. Retrieved from http://tmp.gtk.uni-miskolc.hu/

Mani, V., Gunasekaran, A., Papadopoulos, T., Hazen, B., & Dubey, R. (2016). Supply chain social sustainability for developing nations: evidence from India. *Resources, Conservation & Recycling, 111*, 42-52. doi: 10.1016/j.resconrec.2016.04.003

Manning, L., & Soon, J. (2016). Building strategic resilience in the food supply chain. *British Food Journal, 118* (6), 1477-1493. doi: 10.1108/BFJ-10-2015-0350

MarketLine. (2017a). *Dairy in the United Kingdom: June 2017.* Retrieved from https://store.marketline.com/report/ohmf0002--dairy-in-the-united-kingdom/

MarketLine. (2017b). *Dairy in the Netherlands: June 2017.* Retrieved from https://store.marketline.com/report/ohme9999--dairy-in-the-netherlands/

MarketLine. (2017c). *Dairy in India: June 2017.* Retrieved from https://store.marketline.com/report/ohme9989--dairy-in-india/

Marshall, C. (2015). *Milk: end of EU quota heightens UK farmers' fears.* Retrieved from http://www.bbc.co.uk/news/uk-32136218

Marshall, D., McCarthy, L., Claudy, M., & McGrath, P. (2019). Piggy in the middle: how direct customer power affects first-tier suppliers adoption of socially responsible procurement practices and performance. *Journal of Business Ethics, 154*, 1081-1102. doi: 10.1007/s10551-016-3387-0

Martinez-Jurado, P., & Moyano-Fuentes, J. (2014). Lean management, supply chain management and sustainability: a literature review. *Journal of Cleaner Production, 85*, 134-150. doi: 10.1016/j.jclepro.2013.09.042

Mason, J. (2018). *Qualitative researching.* (3rd ed.). London, United Kingdom: SAGE.

Matthews, L., Power, D., Touboulic, A., & Leonardo, M. (2015). Building bridges: toward alternative theory of sustainable supply chain management. *Journal of Supply Chain Management, 52* (1), 82-94. doi: 10.1111/jscm.12097

May, T. (2011). *Social research: issues, methods and process.* (4th ed.). Maidenhead, United Kingdom: Open University Press.

McCarthy, L. (2017). Empowering women through corporate social responsibility: a feminist Foucauldian critique. *Business Ethics Quarterly, 27* (4), 603-631. doi: 10.1017/beq.2017.28

McCarthy, L., Touboulic, A., & Matthews, L. (2018). Voiceless but empowered farmers in corporate supply chains: Contradictory imagery and instrumental approach to empowerment. *Organization, 25* (5), 609-635. doi: 10.1177/1350508418763265

McKenna, B. (2017). *A guide to understanding the dairy dispute between the U.S. and Canada*. Retrieved from https://www.theglobeandmail.com/report-on-business/a-guide-to-understanding-the-dairy-dispute-between-the-us-andcanada/article34802291/

Meixell, M., & Luoma, P. (2015). Stakeholder pressure in sustainable supply chain management: a systematic literature review. *International Journal of Physical Distribution and Logistics Management, 45* (1/2), 69-89. doi: 10.1108/IJPDLM-05-2013-0155

Mena, C., Terry, L., Williams, A., & Ellram, L. (2014). Causes of waste across multi-tier supply networks: cases in the UK food sector. *International Journal of Production Economics, 152*, 144-158. doi: 10.1016/j.ijpe.2014.03.012

Mendick, R. (2015). *Sour truth behind Morrisons' For Farmers milk*. Retrieved from http://www.telegraph.co.uk/news/earth/agriculture/farming/11996395/Sour-truth-behind-Morrisons-For-Farmers-milk.html

Mentzer, J. (2004). *Fundamentals of supply chain management: twelve drivers of competitive advantage*. Thousand Oaks, California: SAGE.

Meqdadi, O., Johnsen, T., & Johnsen, R. (2019). Power and diffusion of sustainability in supply networks: findings from four in-depth case studies. *Journal of Business Ethics, 159* (4), 1089-1110. doi: 10.1007/s10551-018-3835-0

Meqdadi, O., Johnsen, T., & Johnsen, R. (2017). The role of power and trust in spreading sustainability initiatives across supply networks: A case study in the bio-chemical industry. *Industrial Marketing Management, 62*, 61-76. doi: 10.1016/j.indmarman.2016.06.006

Merriott, D. (2016). Factors associated with the farmer suicide crisis in India. *Journal of Epidemiology and Global Health, 6* (4), 217-227. doi: 10.1016/j.jegh.2016.03.003

Mills, S. (2004). *Discourse*. London, United Kingdom: Routledge.

Milne, M., & Gray, R. (2013). W(h)ither ecology: the triple bottom line, the global reporting initiative, and corporate sustainability reporting. *Journal of Business Ethics, 118* (1), 13-29. doi: 10.1007/s10551-012-1543-8

Mintel. (2019). *Added value in dairy drinks, milk and cream – UK April 2019*. Retrieved from https://academic.mintel.com

Mitchell, R., Agle, B., & Wood, D. (1997). Toward a theory of stakeholder identification and salience: defining the principle of who and what really counts. *Academy of Management Review, 22* (4), 853-886. doi: 10.5465/AMR.1997.9711022105

Mokhtar, A., Genovese, A., Brint, A., & Kumar, N. (2019). Improving reverse supply chain performance: The role of supply chain leadership and governance mechanisms. *Journal of Cleaner Production, 216*, 42-55. doi: 10.1016/j.jclepro.2019.01.045

Montabon, F., Pagell, M., Wu, Z. (2016). Making sustainability sustainable. *The Journal of Supply Chain Management, 52* (2), 11-27. doi: 10.1111/jscm.12103

Moog, S., Spicer, A., & Böhm, S. (2015). The politics of multi-stakeholder initiatives: the crisis of the Forest Stewardship Council. *Journal of Business Ethics, 128*, 469-493. doi: 10.1007/s10551-013-2033-3

Moon, K., & Blackman, D. (2014). A guide to understanding social science research for natural scientists. *Conservation Biology, 28* (5), 1167-1177. doi: 10.1111/cobi.12326

Morali, O., & Searcy, C. (2013). A review of sustainable supply chain management practices in Canada. *Journal of Business Ethics, 117*, 635-658. doi: 10.1007/s10551-012-1539-4

Morgan, A. (2010). Discourse analysis: an overview for the neophyte researcher. *Journal of Health and Social Care Improvement, May 2010*, 1-7.

Morgan, D. (2008). Sample size. In L. Given (Ed.), *The SAGE encyclopedia of qualitative research methods.* (pp. 798). Thousand Oaks, California: SAGE.

Morias, D., & Silvestre, B. (2018). Advancing social sustainability in supply chain management: Lessons from multiple case studies in an emerging economy. *Journal of Cleaner Production, 199*, 222-235. doi: 10.1016/j.jclepro.2018.07.097

Morrisons Farming. (2017). *Milk for Farmers: About Our For Farmers Brand.* Retrieved from https://www.morrisons-farming.com/how-we-work/milk-for-farmers

Müller. (2017). *Being Sustainable.* Retrieved from https://www.muller.co.uk/about-mueller/being-sustainable.html

Mulvany, L., & Skerritt, J. (2017). *U.S. Dairy Industry Appeals to Trump as Canada Curbs Buying.* Retrieved from https://www.bloomberg.com/news/articles/2017-04-06/u-s-dairy-industry-appeals-to-trump-as-canada-curbs-purchases

Murcott, A. (1997). *The PhD: some informal notes.* (School of Health and Social Care, South Bank University, London, United Kingdom).

Murphy, J., & Adair, P. (2013). Sustainable supply chain management in the food sector. *Food Science and Technology, 27* (1), 37-40. Retrieved from http://fstjournal.org/

Nascimento, C., Santos, P., Pereira-Filho, E., & Rocha, F. (2017). Recent advances in determination of milk adulterants. *Food Chemistry, 221*, 1232-1244. doi: 10.1016/j.foodchem.2016.11.034

Nasir, M., Genovese, A., Acquaye, A., Koh, S., & Yamoah, F. (2017). Comparing linear and circular supply chains: a case study from the construction industry.

International Journal of Production Economics, 183 (B), 443-457. doi: 10.1016/j.ijpe.2016.06.008

Neimark, B., Osterhoudt, S., Alter, H., & Gradinar, A. (2019). A new sustainability model for measuring changes in power and access in global commodity chains: Through a smallholder lens. *Palgrave Communications, 5* (1), 1-11. doi: 10.1057/s41599-018-0199-0

Nesadurai, H. (2018). New constellations of social power: States and transnational private governance of palm oil sustainability in Southeast Asia. *Journal of Contemporary Asia, 48* (2), 204-229. doi: 10.1080/00472336.2017.1390145

Nestlé. (2017). *Palm Oil.* Retrieved from http://www.nestle.com/csv/communities/responsible-sourcing/palm-oil

Neville, S. (2015). *Supermarkets surrender to farmers after milk price protest.* Retrieved from http://www.independent.co.uk/news/business/news/supermarkets-surrender-to-farmers-after-milk-price-protest-10456920.html

NFU. (2015a). *Gap widens between farmgate and retail milk price.* Retrieved from https://www.nfuonline.com/sectors/dairy/dairy-news/gap-widens-between-farmgate-and-retail-milk-price/

NFU. (2015b). *Milk price message reaching shoppers.* Retrieved from https://www.nfuonline.com/sectors/dairy/dairy-news/milk-price-message-reaching-shoppers/

NFU. (2013). *Compete to Grow: a vision and strategy for the British dairy industry.* Retrieved from https://www.nfuonline.com/assets/12502

Noaks, L., & Wincup, E. (2004). *Criminological research.* London, United Kingdom: SAGE.

Notarnicola, B., Sala, S., Anton, A., McLaren, S., Saouter, E, & Sonesson, U. (2017). The role of life cycle assessment in supporting sustainable agri-food systems: A review of the challenges. *Journal of Cleaner Production, 140*, 399-409. doi: 10.1016/j.jclepro.2016.06.071

Nyaga, G., Lynch, D., Marshall, D., & Ambrose, E. (2013). Power asymmetry, adaption and collaboration in dyadic relationships involving a powerful partner*. Journal of Supply Chain Management, 49* (3), 42-65. doi: 10.1111/jscm.12011

O' Riordan, T. (2012). On social sustainability in a world of limits facing prolonged austerity. Sustainability: *Science, Practice and Policy, 8* (1), 1-2. Retrieved from http://sspp.proquest.com

OECD. (2017). *OECD-FAO Agricultural Outlook 2017-2026.* Retrieved from http://dx.doi.org/10.1787/agr_outlook-2017-11-en

Oglethorpe, D., & Heron, G. (2013). Testing the theory of constraints in UK local food supply chains. *International Journal of Operations & Production Management, 33* (10), 1346-1367. doi: 10.1108/IJOPM-05-2011-0192

Oliver, P. (2006). Purposive sampling. In V. Jupp, (Ed.), *The SAGE dictionary of social research methods.* (pp. 245). London, United Kingdom: SAGE.

Oosterveer, P. (2015). Promoting sustainable palm oil: Viewed from a global networks and flows perspective*. Journal of Cleaner Production, 107*, 146-153. doi: 10.1016/j.jclepro.2014.01.019

Paciarotti, C., & Torregiani, F. (2021). The logistics of the short food supply chain: A literature review. *Sustainable Production and Consumption, 26*, 428-442. doi: 10.1016/j.spc.2020.10.002

Packer, H., Swartz, W., Ota, Y., & Bailey, M. (2019). Corporate social responsibility (CSR) practices of the largest seafood suppliers in the wild capture fisheries sector: From vision to action. *Sustainability, 11* (8), 2254. doi: 10.3390/su11082254

Paloviita, A. (2010). Consumers' sustainability perceptions of the supply chain of locally produced food*. Sustainability, 2* (6), 1492-1509. doi: 10.3390/su2061492

Pant, R., Prakash, G., & Farooquie, J. (2015). A framework for traceability and transparency in the dairy supply chain networks. *Procedia: Social and Behavioural Sciences, 189*, 385-394. doi: 10.1016/j.sbspro.2015.03.235

Parcell, E., & Baker, B. (2017). Narrative analysis. In M. Allen, (Ed.), *The SAGE encyclopedia of communication research methods*. (pp. 1069-1072). Thousand Oaks, California: SAGE.

Park-Poaps, H., & Rees, K. (2010). Stakeholder forces of socially responsible supply chain management orientation. *Journal of Business Ethics, 92* (2), 305-322. doi: 10.1007/s10551-009-0156-3

Patankar, M., Patwardhan, A., & Verbong, G. (2010). A promising niche: waste to energy project in the Indian dairy sector. *Environmental Science and Policy, 13* (4), 282-290. doi: 10.1016/j.envsci.2010.04.003

Patton, M. (2015). *Qualitative research and evaluation methods*. 4th ed. SAGE, London, UK.

Paulraj, A., & Chen, I. (2007). Environmental uncertainty and strategic supply management: a resource dependence perspective and performance implications. *Journal of Supply Chain Management, 43* (3), 29-42. doi: 10.1111/j.1745-493X.2007.00033.x

Paulraj, A., Chen, I., & Blome, C. (2017). Motives and performance outcomes of sustainable supply chain management practices: a multi-theoretical perspective. *Journal of Business Ethics, 145* (2), 239-258. doi: 10.1007/s10551-015-2857-0

Payne, G., & Payne, J. (2004). *Key concepts in social research*. London, United Kingdom: SAGE.

Pettit, T., Fiksel, J., & Croxton, K. (2010). Ensuring supply chain resilience: development of a conceptual framework. *Journal of Business Logistics, 31* (1), 1-21. doi: 10.1002/j.2158-1592.2010.tb00125.x

Pfeffer, J., & Salancik, G. (1978). *The external control of organisations: a resource dependence perspective*. New York City, New York: Harper and Row Publishers.

Phillipov, M., & Gale, F. (2020). Celebrity chefs, consumption politics and food labelling: Exploring the contradictions. *Journal of Consumer Culture, 20* (4), 400-418. doi: 10.1177/1469540518773831

Polk. D. (2017). Symbolic Interactionism. In M. Allen (Ed*.), The SAGE encyclopedia of communication research methods*. (pp. 1739-1743). Thousand Oaks, California: SAGE.

Ponomarov, S., & Holcomb, M. (2009). Understanding the concept of supply chain resilience. *The International Journal of Logistics Management, 20* (1), 124-143. doi: 10.1108/09574090910954873

Prior, L. (2011). Using Documents in Social Research. In D. Silverman (Ed.), *Qualitative research.* (3rd ed.). London, United Kingdom: SAGE.

Punjabi, M. (2009). India: increasing demand challenges in the dairy sector. In Food and Agriculture Organisation of the United Nations (Ed*.), Smallholder dairy development: lessons learned in Asia.* (pp. 44-62). Rome, Italy: Food and Agriculture Organisation of the United Nations.

Qu, S., & Dumay, J. (2011). The qualitative research interview. *Qualitative Research in Accounting & Management, 8* (3), 238-264. doi: 10.1108/11766091111162070

Quiédeville, S., Bassene, J., Lançon, F., Chabrol, D., & Moustier, P. (2018). Systemic sustainability of the French organic rice and PGI einkorn value chains: A preliminary assessment based on network analysis. *Sustainability, 10* (7), 2344. doi: 10.3390/su10072344

Rajeev, A., Pati, r., Padhi, S., & Govindan, K. (2017). Evolution of sustainability in supply chain management: a literature review. *Journal of Cleaner Production, 162*, 299-314. doi: 10.1016/j.jclepro.2017.05.026

Ramanathan, U., Bentley, Y., & Pang, G. (2014). The role of collaboration in the UK green supply chains: an exploratory study of the perspectives of suppliers, logistics and retailers. *International Journal of Cleaner Production, 70,* 231-241. doi: 10.1016/j.jclepro.2014.02.026

Ransome, P. (2010). *Social theory for beginners.* Bristol, United Kingdom: Policy Press.

Ranta, V., Aarikka-Stenroos, L., Ritala, P., & Mäkinen, S. (2018). Exploring institutional drivers and barriers of the circular economy: a cross-regional comparison of China, the US and Europe. *Resources, Conversation & Recycling, 135,* 70-82. doi: 10.1016/j.resconrec.2017.08.017

Rappaport, J. (1995). Empowerment meets narrative: listening to stories and creating settings. *American Journal of Community Psychology, 23* (5), 795-807. doi: 10.1007/BF02506992

Rees, W. (1995). Achieving sustainability: reform or transformation. *Journal of Planning Literature, 9* (4), 343–361. doi: 10.1177/088541229500900402

Reeves, S., Albert, M., Kuper, A., & Hodges, B. (2008). Why use theories in qualitative research. *British Medical Journal, 337* (7670), 631-634. doi: 10.1136/bmj.a949

Reimann, F., & Ketchen, D. (2017). Power in supply chain management. *Journal of Supply Chain Management, 53* (2), 3-9. doi: 10.1111/jscm.12140

Reissman, C. (2008). Narrative analysis. In L. Given, (Ed.), *The SAGE encyclopaedia of qualitative research methods*. (pp. 539-540). Thousand Oaks, California: SAGE.

Repar, L., Onakuse, S., Bogue, J., & Afonso, A. (2017). Optimising contract design in modern food supply chains: The case of paprika sector in central Malawi. *Journal of Agriculture and Rural Development in the Tropics and Subtropics, 118* (1), 113-127.

Ringsberg, H. (2014). Perspectives on food traceability: a systematic literature review. *Supply Chain Management: An International Journal, 19* (5-6), 558-576. doi: 10.1108/SCM-01-2014-0026

Roberts, D., & Allen, K. (2017). *UK manufacturers say Brexit uncertainty will force them to make cuts.* Retrieved from https://www.theguardian.com/politics/2017/jul/04/uk-manufacturers-brexit-cuts-business

Robertson, J. (2017). *After Brexit: What happens next for the UK's farmers*. Retrieved from http://www.bbc.co.uk/news/business-38510423

Rodriguez, J., Molnar, J., Fazio, R., Sydnor, E., & Lowe, M. (2009). Barriers to adoption of sustainable agriculture practices: change agent perspective. *Renewable Agriculture and Food Systems, 24* (1), 60-710. doi: 10.1017/S1742170508002421

Rossignoli, C., & Moruzzo, R. (2014). Retail power and private standards in the agri-food chain. *Agroecology and Sustainable Food Systems, 38* (9), 1108-1124. doi: 10.1080/21683565.2014.925530

Roy, V., Charan, P., Schoenherr, T., & Sahay, B. (2018). Ensuring supplier participation toward addressing sustainability-oriented objectives of the mid-day meal supply chain: Insights from The Akshaya Patra Foundation. *International Journal of Logistics Management, 29* (1), 456-475.

Saam, N. (2007). Asymmetry in information versus asymmetry in power: implicit assumptions of agency theory. *The Journal of Socio-Economics, 36* (6), 825-840. doi: 10.1016/j.socec.2007.01.018

Salkind, N. (2012). *Exploring research*. (8th ed.). Upper Saddle River, New Jersey: Pearson Education.

Santagata, R., Ripa, M., Genovese, A., & Ulgiati, S. (2021). Food waste recovery pathways: Challenges and opportunities for an emerging bio-based circular

economy: a systematic review and an assessment. *Journal of Cleaner Production, 286*, no pagination. doi: 10.1016/j.jclepro.2020.125490

Sarkis, J., Zhu, Q., & Lai, K. (2011). An organizational theoretic review of green supply chain management literature. *International Journal of Production Economics, 130* (1), 1-15. doi: 10.1016/j.ijpe.2010.11.010

Saumure, K., & Given, L. (2008). Data Saturation. In L. Given (Ed.), *The SAGE encyclopedia of qualitative research methods*. (pp. 196). Thousand Oaks, California: SAGE.

Saunders, L., Tate, W., Zsidisin, G., & Miemczyk, J. (2019). The influence of network exchange brokers on sustainable initiatives in organizational networks. *Journal of Business Ethics, 154* (3), 849-868. doi: 10.1007/s10551-017-3436-3

Saunders, M., Philip, L., & Thornhill, A. (2009). *Research methods for business students*. (5th ed.). Harlow, United Kingdom: Pearson Education.

Sayers, M., & Trebeck, K. (2015). *The UK Doughnut: a framework for environmental sustainability and social justice.* Oxford, United Kingdom: Oxfam.

Schneider, F., Kallis, G., & Martinez-Alier, J. (2010). Crisis or opportunity: economic degrowth for social equity and ecological sustainability. Introduction to this special issue. *Journal of Cleaner Production, 18* (6), 511-518. doi: 10.1016/j.jclepro.2010.01.014

Schnittfeld, N., & Busch, T. (2016). Sustainable management within supply chains: a resource dependence view. *Business Strategy and the Environment, 25*, 337-354. doi: 10.1002/bse.1876

Schreiber, J. (2008). Pilot study. In L. Given, (Ed.), *The SAGE encyclopedia of qualitative research methods*. (pp. 625-626). Thousand Oaks, California: SAGE.

Segovia-Villarreal, M., Florez-Lopez, R., & Manuel Ramon-Jeronimo, J. (2019). Berry Supply Chain Management: An Empirical Approach. *Sustainability, 11* (10), 2862. doi: 10.3390/su11102862

Seuring, S., & Müller, M. (2008). From a literature review to a conceptual framework for sustainable supply chain management. *Journal of Cleaner Production, 16* (15), 1699-1710. doi: 10.1016/j.jclepro.2008.04.020

Shafer, W. (2006). Social Paradigms and attitudes toward environmental accountability. *Journal of Business Ethics, 65*, 121-147. doi: 10.1007/s10551-005-4606-2

Sharma, Y., Mangla, S., Patil, P., & Liu, S. (2019). When challenges impede progress: for circular economy-driven sustainability practices in food supply chain. *Management Decision, 57* (4), 995-1017. doi: 10.1108/MD-09-2018-1056

Shashi, Cerchione, R., Singh, R., Centobelli, P., & Shabani, A. (2018). Food cold chain management: From a structured literature review to a conceptual framework and research agenda. *International Journal of Logistics Management, 29* (3), 792-821. doi: 10.1108/IJLM-01-2017-0007

Shepherd, C., Monroig, O., & Tocher, D. (2017). Future availability of raw materials for salmon feeds and supply chain implications: the case of Scottish farmed salmon. *Aquaculture, 467*, 49-62. doi: 10.1016/j.aquaculture.2016.08.021

Shokri, A., Oglethorpe, D., & Nabhani, F. (2014). Evaluating sustainability in the UK fast food supply chain: review of dimensions, awareness and practice. *Journal of Manufacturing Technology Management, 25* (8), 1224-1244. doi: 10.1108/JMTM-04-2013-0031

Sieber, J., & Tolich, M. (2013). *Planning ethically responsible research*. (2nd ed.). Thousand Oaks, California: SAGE.

Siegle, L. (2009). *What's the environmental impact of milk*. Retrieved from https://www.theguardian.com/environment/2009/aug/07/milk-environmental-impact

Siltaoja, M., & Vehkaperä, M. (2010). Constructing illegitimacy: cartels and cartel agreements in finnish business media from critical discourse perspective. *Journal of Business Ethics, 92* (4), 493-511. doi: 10.1007/s10551-009-0169-y

Silverman, D. (2014). *Interpreting qualitative data*. (5th ed.). London, United Kingdom: SAGE.

Silverman, D. (2013). *Doing qualitative research*. (4th ed.). London, United Kingdom: SAGE.

Singer, M., & Donoso, P. (2008). Upstream or downstream in the value chain. *Journal of Business Research, 61* (6), 669-677. doi: 10.1016/j.jbusres.2007.06.043

Skilton, P, & Robinson, J. (2009). Traceability and normal accident theory: how does supply network complexity influence the traceability of adverse events. *Journal of Supply Chain Management, 45* (3), 40-53. doi: 10.1111/j.1745-493X.2009.03170.x

Smart, B. (1985). *Michel Foucault.* Routledge, New York City, NY.

Smit, A., Driessen, P., & Glasbergen, P. (2008). Constraints on the conversion to sustainable production: The case of the Dutch potato chain. *Business Strategy and the Environment, 17* (6), 369-381. doi: 10.1002/bse.554

Spina, G., Caniato, F., Luzzini, D., & Ronchi, S. (2013). Past, present and future trends of purchasing and supply management: an extensive literature review. *Industrial Marketing Management, 42,* 1202-1212. doi: 10.1016/j.indmarman.2013.04.001

Sroufe, R., & Melnyk, S. (2013*). Developing sustainable supply chains to drive value: management issues, insights, concepts, and tools*. New York City, New York: Business Expert Press.

Stewart, R., & Niero, M. (2018). Circular economy in corporate sustainability strategies: a review of corporate sustainability reports in the fast-moving consumer goods sector. *Business Strategy and the Environment, 27* (7), 1005-1022. doi: 10.1002/bse.2048

Tabacek, K. (2010). *Nestlé stars in smear campaign over Indonesian palm oil*. Retrieved from https://www.theguardian.com/sustainable-business/nestle-indonesian-palm-oil

Tallontire, A., Dolan, C., Smith, S., & Barrientos, S. (2005). Reaching the marginalised? Gender value chains and ethical trade in African horticulture. *Development in Practice, 15* (3-4), 559-571. doi: 10.1080/09614520500075771

Tate, W., Ellram, L., & Kirchoff, J. (2010). Corporate social responsibility reports: a thematic analysis related to supply chain management. *Journal of Supply Chain Management, 46* (1), 19-44. doi: 10.1111/j.1745-493x.2009.03184.x

Taverner, C. (2016). *Dairy farmers should forget about Russia ban end*. Retrieved from http://www.fwi.co.uk/business/dairy-farmers-should-forget-about-russia-ban-end.htm

Taverner, C. (2015). *11 amazing facts about dairy farming in India*. Retrieved from http://www.fwi.co.uk/business/11-amazing-facts-dairy-farming-india.htm

Taylor, C. (2014). Biopower. In: Taylor, D. (ed). *Michel Foucault: Key Concepts*. (pp. 41-54). Abingdon, United Kingdom: Routledge.

Taylor, D. (1987). Growth and structural change in the English dairy industry. *The Agricultural History Review, 35* (1), 47-64. Retrieved from: https://www.bahs.org.uk/

Taylor, D. (1974). The English dairy industry 1860-1930: The need for a reassessment. *The Agricultural History Review, 22* (2), 153-159. Retrieved from: https://www.bahs.org.uk/

Teh, D., & Corbitt, B. (2015). Building sustainability strategy in business. *Journal of Business Strategy, 36* (6), 39-46. doi: 10.1108/JBS-08-2014-0099

Tesco. (2016). *Our Fair for Farmers Guarantee*. Retrieved from https://www.tescoplc.com/news/blogs/topics/tesco-fair-for-farmers-guarantee-farming/

Testa, R., Di Trapani, A., Sgroi, F., & Tudisca, S. (2014). Economic sustainability of Italian greenhouse cherry tomato. *Sustainability, 6* (11), 7967-7981. doi: 10.3390/su6117967

Thapa Karki, S., Bennett, A., & Mishra, J. (2020). Reducing food waste and food insecurity in the UK: The architecture of surplus food distribution supply chain in addressing the sustainable development goals (Goal 2 and Goal 12.3) at a city level. *Industrial Marketing Management, 93,* 563-577. doi: 10.1016/j.indmarman.2020.09.019

This is Dairy Farming. (2017). *From farm to fridge*. Retrieved from http://www.thisisdairyfarming.com/discover/dairy-produce/from-farm-to-fridge/

Thissen, M., van Oort, F., McCann, P., Ortega-Argilés, R., & Husby, T. (2020). The implications of Brexit for UK and EU regional competitiveness. *Economic Geography, 96* (5), 397-421. doi: 10.1080/00130095.2020.1820862

Thompson, P. (2007). Agricultural sustainability: what it is and what it is not. *International Journal of Agricultural Sustainability, 5* (1), 5-16. doi: 10.1080/14735903.2007.9684809

Thorsøe, M. *et al.* (2020). Responding to change: farming system resilience in a liberalized and volatile European dairy market. *Land Use Policy, 99*, no pagination. doi: 10.1016/j.landusepol.2020.105029

Tidy, M., Wang, X., & Hall, M. (2016). The role of supplier relationship management in reducing greenhouse gas emissions from food supply chains: supplier engagement in the UK supermarket sector. *Journal of Cleaner Production, 112* (4), 3294-3305. doi: 10.1016/j.jclepro.2015.10.065

Titscher, S., Meyer, M., Wodak, R., & Vetter, E. (2000). *Methods of Text and Discourse Analysis.* London, United Kingdom: SAGE.

Touboulic, A., Chicksand, D., & Walker, H. (2014). Managing imbalanced supply chain relationships for sustainability: a power perspective*. Decision Sciences, 45* (4), 577-619. doi: 10.1111/deci.12087

Touboulic, A., McCarthy, L., & Matthews, L. (2020). Re-imagining supply chain challenges through critical engaged research. *Journal of Supply Chain Management, 56* (2), 36-51. doi: 10.1111/jscm.12226

Touboulic, A., & Walker, H. (2016). A relational, transformative and engaged approach to sustainable supply chain management: The potential of action research. *Human Relations, 69* (2), 301-343. doi: 10.1177/0018726715583364

Touboulic, A., & Walker, H. (2015). Theories in sustainable supply chain management: a structured literature review. *International Journal of Physical Distribution & Logistics Management, 45* (1/2), 16-42. doi: 10.1108/IJPDLM-05-2013-0106

Toulmin, C. (2014). Securing a future for smallholder farmers in an era of climate change. In P. Hazell & A. Rahman, (Eds.), *New Directions for Smallholder Agriculture.* (pp. 457-481). Oxford, United Kingdom: Oxford University Press.

Trienekens, J., Wognum, P., Beulens, A., & van der Vorst, J. (2012). Transparency in complex dynamic food supply chains. *Advanced Engineering Informatics, 26* (1), 55-65. doi: 10.1016/j.aei.2011.07.007

Tsolakis, N., Keramydas, C., Toka, A., Aidonis, D., & Iakovou, E. (2014). Agrifood supply chain management: a comprehensive hierarchical decision-making framework and a critical taxonomy. *Biosystems Engineering, 120*, 47-64. doi: 10.1016/j.biosystemseng.2013.10.014

Turker, D., & Altuntas, C. (2014). Sustainable supply chain management in the fast fashion industry. *European Management Journal, 32* (5), 837-849. doi: 10.1016/j.emj.2014.02.001

Uberoi, E. (2020). *UK Dairy Industry Statistics.* (House of Commons Briefing Paper No. 2721). London: House of Commons.

UK Government. (2017). *Brexit.* Retrieved from
https://www.gov.uk/government/policies/brexit

UK Government. (2016a). *The Future of the Natural Environment after the EU Referendum.* Retrieved from
https://publications.parliament.uk/pa/cm201617/cmselect/cmenvaud/599/59903.htm

UK Government. (2016b*). UK Dairy Industry: Current Issues and Challenges.* Retrieved from
http://researchbriefings.parliament.uk/ResearchBriefing/Summary/CBP-7564

United Nations (2020). *The sustainable development goals report 2020.* Retrieved from https://unstats.un.org/home/

United Nations. (2017). *World population prospects.* Retrieved from
https://esa.un.org/unpd/wpp/Publications/Files/WPP2017_KeyFindings.pdf

United Nations. (2015a). *The millennium development goals report 2015.* Retrieved from
https://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf

United Nations. (2015b). *Transforming our world: the 2030 agenda for sustainable development.* Retrieved from
https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf

United States Department of Agriculture. (2010). *Overview of the United States Dairy Industry.* Retrieved from
http://usda.mannlib.cornell.edu/usda/current/USDairyIndus/USDairyIndus-09-22-2010.pdf

Utgård, J. (2018). Retail chains' corporate social responsibility communication. *Journal of Business Ethics, 147*, 385-400. doi: 10.1007/s10551-015-2952-2

Vaara, E., & Tienari, J. (2010). Critical Discourse Analysis. In A. Mills, G. Durepos & E. Wiebe (Eds*.), Encyclopedia of Case Study Research.* (pp. 245-247). Thousand Oaks, California: SAGE.

Vaara, E., & Tienari, J. (2008). A Discursive Perspective on Legitimation Strategies in Multinational Corporations. *The Academy of Management Review, 33* (4), 985-993. doi: 10.5465/AMR.2008.34422019

Valiante, M. (1989). Forging future options. *Queen's Quarterly, 96* (1), 23-35. Retrieved from http://www.queensu.ca/quarterly/index.html

van Berkum, S., Jongeneel, R., Vrolijk, H., van Leeuwen, M., & Jager, J. (2016). *Implications of a UK exit from the EU for British Agriculture.* LEI Wageningen UR.

van Dijk, T. (1986). *Racism in the press.* London, United Kingdom: Arnold.

van Leeuwen, T. (2008). *Discourse and practice: new tools for critical discourse analysis.* Oxford, United Kingdom: Oxford University Press.

van Marrewijk, M. (2003). Concepts and definitions of CSR and corporate sustainability: between agency and communion. *Journal of Business Ethics, 44* (2), 95-105. doi: 10.1023/A:1023331212247

von Keyserlingk, M., Martin, N., Kebreab, E., Knowlton, K., Grant, R., Stephenson, M., Sniffen, C., Harner, J., Wright, A., & Smith, S. (2013). Invited review: Sustainability of the US dairy industry. *Journal of Dairy Science, 96* (9), 5405-5425. doi: 10.3168/jds.2012-6354

Vurro, C., Russo, A., & Perrini, F. (2009). Shaping sustainable value chains: network determinants of supply chain governance models. *Journal of Business Ethics, 90* (S4), 607-621. doi: 10.1007/s10551-010-0595-x

Waitrose. (2017a). *We're doing the right thing by farmers*. Retrieved from http://www.waitrose.com/home/inspiration/about_waitrose/the_waitrose_way/working_with_farmers.html

Waitrose. (2017b). *Surplus food and food waste disposal*. Retrieved from http://www.waitrose.com/home/inspiration/about_waitrose/the_waitrose_way/food_waste.html

Wajszczuk, K. (2016). The role and importance of logistics in agri-food supply chains: an overview of empirical findings. *Logistics and Transport, 30* (2), 47-56. Retrieved from http://system.logistics-and-transport.eu

Walker, H., Di Sisto, L., & McBain, D. (2008). Drivers and barriers to environmental supply chain management practices: Lessons from the public and private sectors. *Journal of Purchasing and Supply Management, 14* (1), 69-85. doi: 10.1016/j.pursup.2008.01.007

Walshaw, M. (2012). *Getting to grips with doctoral research*. London, United Kingdom: Palgrave Macmillan.

Wang, Q. *et al.* (2020). Impacts of the COVID-19 pandemic on the dairy industry: lessons from China and the United States and policy implications. *Journal of Integrative Agriculture, 19* (12), 2903-2915. doi: 10.1016/S2095-3119(20)63443-8

Wang, X. (2019). The national ecological accounting and auditing scheme as an instrument of institutional reform in china: a discourse analysis. *Journal of Business Ethics, 154* (3), 587-603. doi: 10.1007/s10551-016-3401-6

Ward, H., & Westlake, D. (2004). Managing confidentiality. In S. Becker, A. Bryman & H. Ferguson, (Eds.), *Understanding research for social policy and social work*. (pp. 84-92). Bristol, United Kingdom: Policy Press.

Ward, K., Gott, M., & Hoare, K. (2015). Participants views of telephone interviews within a grounded theory study. *Journal of Advanced Nursing, 71* (12), 2775-2785. doi: 10.1111/jan.12748

Weick, K. (1995). *Sensemaking in Organsiations*. Thousand Oaks, California: SAGE.

White, M. (2013). Sustainability: I know it when I see it. *Ecological Economics, 86*, 213-217. doi: 10.1016/j.ecolecon.2012.12.020

Wilbey, R. (2017). Dairy technology: a UK perspective on its past, present and future. *International Journal of Dairy Technology, 70* (4), 459-468. doi: 10.1111/1471-0307.12460

Wilcox, B. (1992). Defining sustainable development. *Environmental Science & Technology, 26* (10), 1902. doi: 10.1021/es00034a605

Wiles, R. (2013). *What are qualitative research ethics.* London, United Kingdom: Bloomsbury Academic.

Wiles, R., Coffey, A., Robinson, J., & Heath, S. (2012). Anonymisation and visual images: issues of respect, voice and protection. *International Journal of Social Research Methodology, 15* (1), 41-53. doi: 10.1080/13645579.2011.564423

Wilhelm, M., Blome, C., Bhakoo, V., & Paulraj, A. (2016). Sustainability in multi-tier supply chains: Understanding the double agency role of the first-tier supplier. *Journal of Operations Management, 41* (1), 42-60. doi: 10.1016/j.jom.2015.11.001

Williams, C. (2013). *Management.* (7th ed.). Mason, Ohio: South-Western Cengage Learning.

Winkler, I. (2011). The representation of social actors in corporate codes of ethics. How code language positions internal actors. *Journal of Business Ethics, 101* (4), 653-665. doi: 10.1007/s10551-011-0762-8

Wodak, R. (2001). What is CDA about: a summary of its history, important concepts and its developments. In R. Wodak & M. Meyers, (Eds.), *Methods of Critical Discourse Analysis.* (pp. 1-13). London, United Kingdom: SAGE.

Wognum, P., Bremmers, H., Trienekens, J., van der Vorst, J., & Bloemhof, J. (2011). Systems for sustainability and transparency of food supply chains: current status and challenges. *Advanced Engineering Informatics, 25* (1), 65-76. doi: 10.1016/j.aei.2010.06.001

Wolf, J. (2014). The relationship between sustainable supply chain management, stakeholder pressure and corporate sustainability performance. *Journal of Business Ethics, 119* (3), 317-328. doi: 10.1007/s10551-012-1603-0

Wolf, J. (2011). Sustainable supply chain management integration: a qualitative analysis of the german manufacturing industry. *Journal of Business Ethics, 102* (2), 221-235. doi: 10.1007/s10551-011-0806-0

World Commission on Environment and Development. (1987). *Our Common Future.* Oxford, United Kingdom: Oxford University Press.

WRAP. (2019). *WRAP Annual Review: April 2018 – March 2019.* Banbury, United Kingdom: WRAP.

Wu, J. (2015). Differentiated customer pressures and environmental policies in china *Business Strategy and the Environment, 24*, 175-189. doi: 10.1002/bse.1812

Wu, J., Santoso, C., Roan, J. (2017). Key factors for truly sustainable supply chain management. *The International Journal of Logistics Management, 28* (4), 1196-1217. doi: 10.1108/IJLM-07-2014-0103

Yakovleva, N. (2007). Measuring the sustainability of the food supply chain: a case study of the UK. *Journal of Environmental Policy & Planning, 9* (1), 75-100. doi: 10.1080/15239080701255005

Yates, J. (2017). *Dutch dairy cull agreed by EU*. Retrieved from http://www.fwi.co.uk/business/dutch-dairy-cull-plan-agreed-eu.htm

Yawar, S, & Seuring, S. (2017). Management of social issues in supply chains: a literature review exploring social issues, actions and performance outcomes. *Journal of Business Ethics, 141* (3), 621-643. doi: 10.1007/s10551-015-2719-9

Yin, R. (2018). *Case study research and applications: design and methods*. (6th ed.). Thousand Oaks, California: SAGE.

Yun, G., Yalcin, M., Hales, D., & Kwon, H. (2019). Interactions in sustainable supply chain management: a framework review. *The International Journal of Logistics Management, 30* (1), 140-173. doi: 10.1108/IJLM-05-2017-0112

Zaheer, N., & Trkman, P. (2017). An information sharing theory perspective on willingness to share information in supply chains. *International Journal of Logistics Management, 28* (2), 417-443. doi: 10.1108/IJLM-09-2015-0158

Zeithaml, V. (1988). Consumer perceptions of price, quality and value: a means-end model and synthesis of evidence. *Journal of Marketing, 52* (3), 2-22. doi: 10.1177/002224298805200302

Zorzini, M., Hendry, L., Huq, F., & Stevenson, M. (2015). Socially responsible sourcing: reviewing the literature and its use of theory. *International Journal of Operations & Production Management, 35* (1), 60-109. doi: 10.1108/IJOPM-07-2013-0355

Zu, X., & Kaynak, H. (2012). An agency theory perspective on supply chain quality management. *International Journal of operations & production management, 32* (4), 423-446. doi: 10.1108/01443571211223086

ZuivelNL. (2016*). Dutch dairy in figures 2016*. Retrieved from http://www.zuivelnl.org/wp-content/uploads/2017/06/Dutch-dairy-in-figures-2016.pdf

Appendix A: Literature Review Search Strategies and Keywords

Section 2.2 Sustainability and supply chain management: Search Strategy

Scope of search	Sustainable practices in supply chains
Location	United Kingdom
Time	Since the Brundtland Commission in 1987
Sources	Academic journals and grey literature
Consideration of different perspectives	The triple bottom line. Cover all aspects.
Overall aim of section	Demonstrate the importance of sustainability in supply chain management.
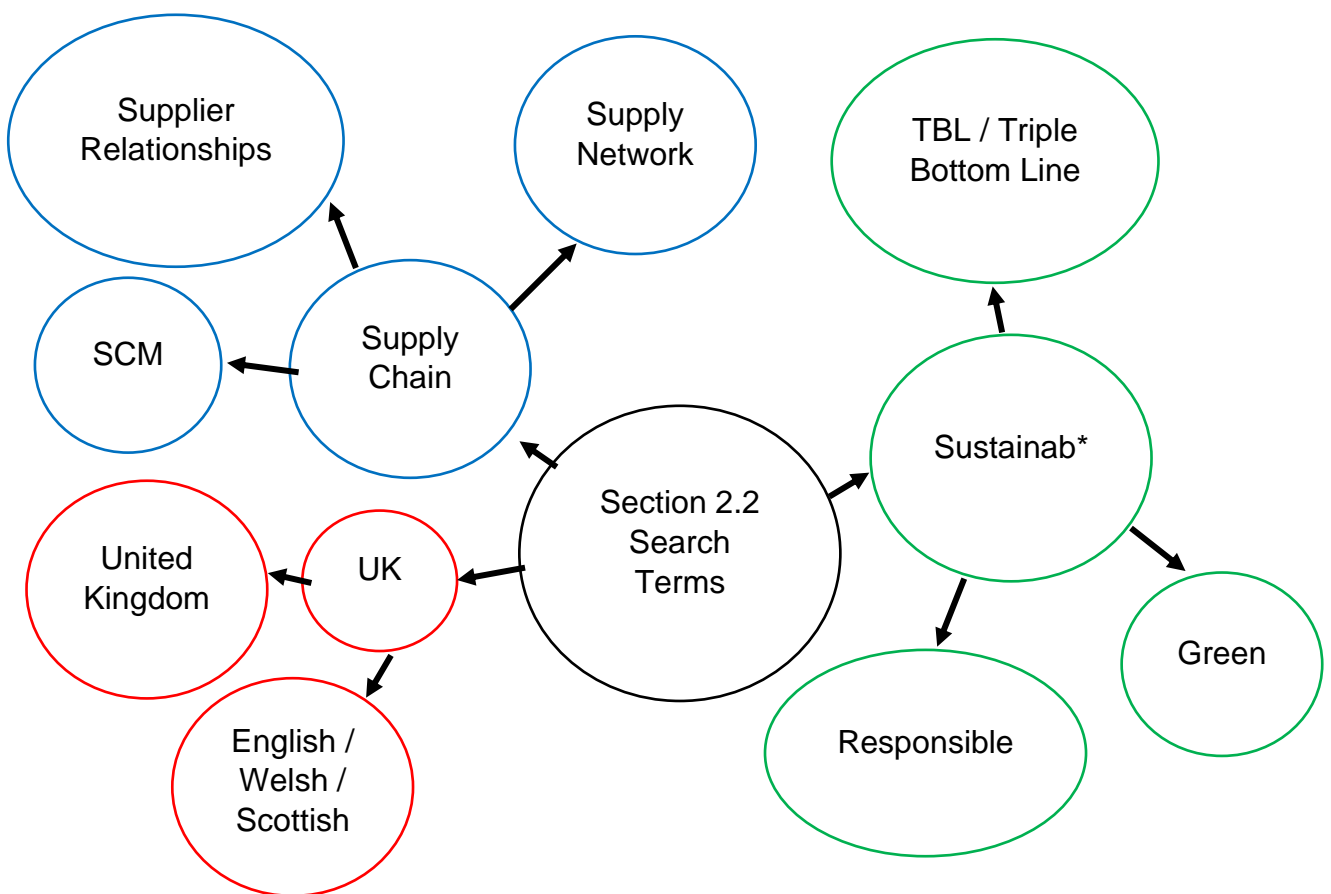
Section 2.3 Sustainability in UK food supply chains: Search Strategy

Scope of search	Sustainable practices in food/agri-food supply chains
Location	United Kingdom
Time	Since the Brundtland Commission in 1987
Sources	Academic journals and grey literature
Consideration of different perspectives	The triple bottom line. Cover all aspects
Overall aim of section	Demonstrate what the food supply chain is and why it is important to study. Identify distinction between food and agri-food supply chains.
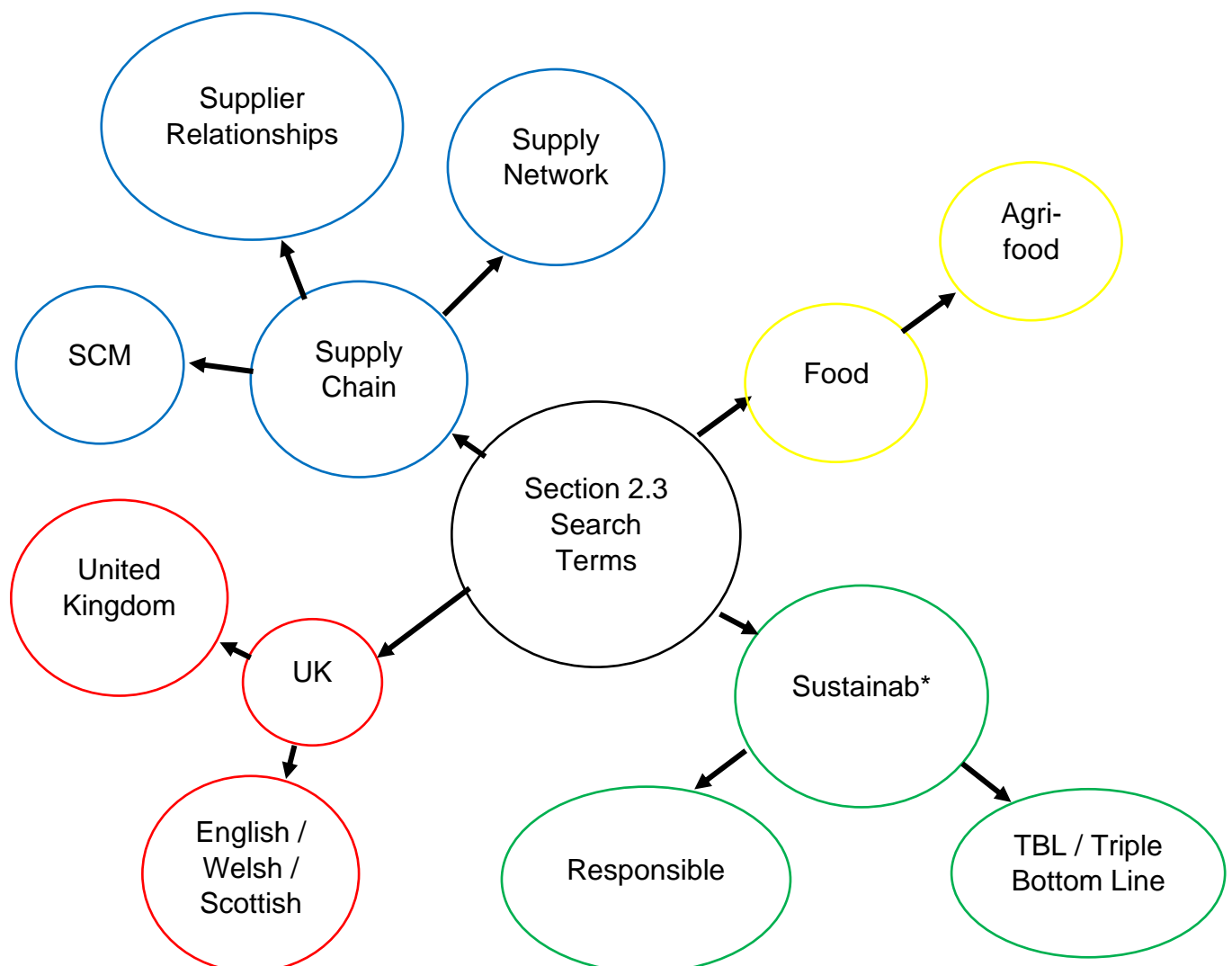
Section 2.4 UK dairy supply chain sustainability: Search Strategy

Scope of search	The current UK dairy industry situation from a supply chain perspective
Location	United Kingdom
Time	Since the Brundtland Commission
Sources	Academic journals and grey literature
Consideration of different perspectives	Cover all aspects of the TBL. Explore issues unique to certain stakeholders
Overall aim of section	Explain the current dairy crisis and the implications for supply chain management. Discuss any existing sustainability practices.
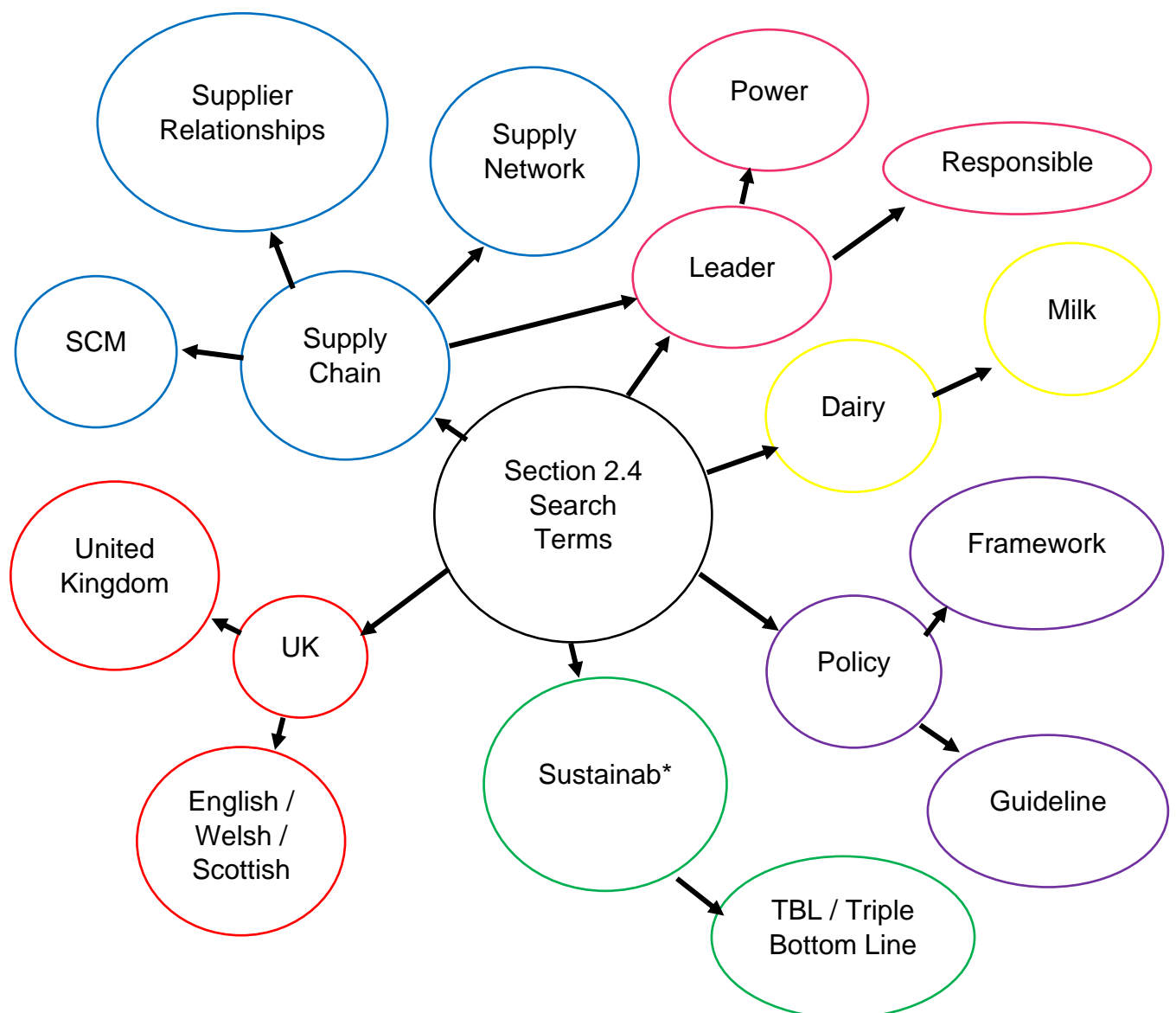
Appendix B: A Selection of UK Dairy Supply Chain Configurations
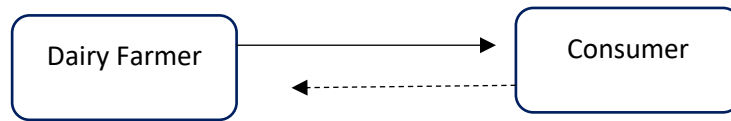
The simplest dairy supply chain configuration would just involve a dairy farmer and consumer. In this instance, the dairy farmer would process the dairy produce and sell it directly to the consumer. The dashed arrow represents the reverse logistics of milk bottle collection by the dairy farmer.

A dairy farmer might process their own milk and create their own branded products, but not sell them directly to the consumer. A retailer would act as an intermediary here between the farmer and the consumer.
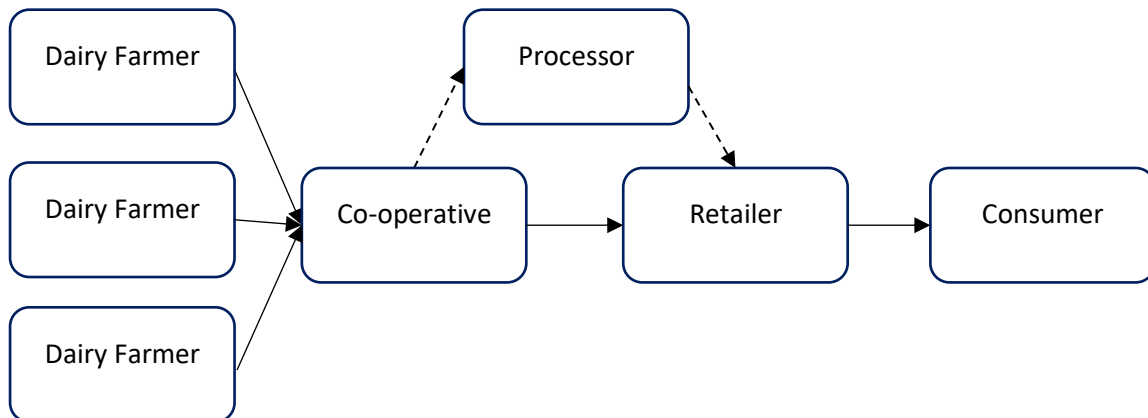
Dairy farmers can join together to form a co-operative. A co-operative might process their own products to be sold straight to retailers. If not, a processor will be required.
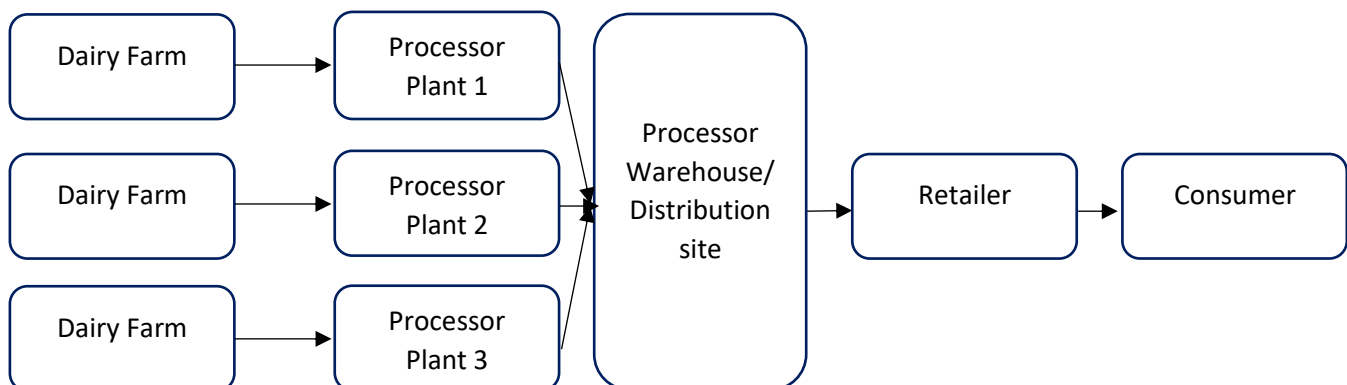
A large nation-wide processor may have several sites all over the country. This could introduce further complexity to the supply chain configuration.

Appendix C: Interview Schedule

Set up recording equipment before beginning phone call and ensure scrap paper and pen are at hand to take notes

Start of phone call.
Check the participant has read the participant information sheet, ask if they have any questions and check they have consented.
 	
Key points to run over:
   - Your identity will remain anonymous – only I will know that
   - You can withdraw at any point, and if you do not want to answer something, just say so. You do not need a reason.
   - This interview will be recorded. I am not recording yet, but will tell you when I start to record and when I stop.
 	
Final check – a good space where you will not be interrupted. Happy to proceed. \<record\>

Just to start the interview, please could you tell me about your occupation and what your role is in the dairy industry?
What would be your ideal vision of a sustainable future for the dairy industry? How would a sustainable dairy industry look to you? Does this draw on your own experience? Tell me what happened. Researcher prompts: What is standing in the way of this future today? Can those issues be resolved? How? What is being done well at the moment? Is anything happening that will get to this future faster?
How do you think power is spread in the dairy industry? **How do you perceive power in the dairy industry?** Does this draw on your own experience? Tell me what happened. Researcher prompts: What is the role of this power in sustainable dairy practices? Who has this power? To what degree is this power significant in ensuring sustainable practices? Can this power be overcome?
\<stop recording\> Thank participant for their time! Debrief: Explain what happens next. Thank participant again.

Appendix D: Initial Interview Analysis Template

A priori themes from CDA and theoretical lenses

1. Approach towards sustainability practices
    1.1. Broad approach to sustainability
        1.1.1. Use of vague language/terms
        1.1.2. Frameworks
    1.2. Bespoke approach to sustainability
        1.2.1. Importance of location
        1.2.2. Importance of external accreditation
    1.3. Revolutionary approach to sustainability
        1.3.1. Animal rights group
        1.3.2. Farmers
2. Role of stakeholder
    2.1. Leader
    2.2. Enforcer
    2.3. Supporter
    2.4. Protester
3. Cycle of legitimacy
    3.1. Duality of stakeholder identity
4. Power through discourse
    4.1. Science imagery and quantification
    4.2. Rhetoric devices
    4.3. Intertextuality
5. Vertical integration of farmers into supply chain
6. Cultural Hegemony
    6.1. Common sense
    6.2. Bourgeoisie
    6.3. Proletariat
7. Stakeholder Theory
    7.1. Rational level: labelling of stakeholder
    7.2. Process level: planning for stakeholders
    7.3. Transactional level: interaction with stakeholder

Appendix E: Final Interview Analysis Template

RQ1: 1. How are sustainable narratives conceptualised from a multi-stakeholder perspective in the UK dairy supply chain?

1. **Approaches to sustainability**
   1.1 Broad/ Multifaceted/ Complex
       1.1.1   As a process
           1.1.1.1 Acknowledging faults and always evolving
           1.1.1.2 Farming cycle length
           1.1.1.3 Being able to continue and carry on
           1.1.1.4 Importance of supplier transparency
   1.2 Simple/ Easy
   1.3 Social Sustainability
       1.3.1   Responsible
           1.3.1.1 differentiation between individual and industry level
           1.3.1.2 need to be flexible, but hold everyone to the same level of account
       1.3.2   Moralistic
           1.3.2.1 Doing the right thing
           1.3.2.2 Good practices
       1.3.3   Nutritional/health
           1.3.3.1 Rise of alternatives (veganism)
           1.3.3.2 Links with value
           1.3.3.3 Price compared to alternatives
       1.3.4   Labour
       1.3.5   Long Term Succession Planning
       1.3.6   Technology
       1.3.7   Animal Health and Welfare Issues
           1.3.7.1 Lameness
           1.3.7.2 Shooting Bull Calves
           1.3.7.3 Mastitis
           1.3.7.4 Fully housed vs Pasture systems
           1.3.7.5 Reputational Issues
           1.3.7.6 Good health vs Good Welfare
   1.4 Economic sustainability
       1.4.1   Importance of money to behave sustainably
       1.4.2   Contract transparency
       1.4.3   Efficiency/Productivity
           1.4.3.1 cultural hegemony: semantics rooted in the economic
       1.4.4   Yield to meet the domestic/export market
       1.4.5   Viable farm
       1.4.6   Supply and Demand
   1.5 Environmental sustainability
       1.5.1   Plastic
       1.5.2   Feed
       1.5.3   Emissions
       1.5.4   Food Waste

   1.5.5 Food Miles

   1.5.6 Carbon footprint (frustration with – moving on from)

     1.5.6.1 Renewable energy

   1.5.7 Ammonia/ Slurry management

   1.5.8 Water management

   1.5.9 Circular Economy

     1.5.9.1 beyond circular economy: gives out more than damages

     1.5.9.2 Only fits with current paradigm

   1.5.10 Synonymous with assurance schemes

   1.5.11 Idiosyncratic based on location

     1.5.11.1   Natural Capital

  1.6 The industry can never be sustainable

   1.6.1 industrialisation of nature

RQ2: 2.How is sustainability performance evaluated from a multi-stakeholder perspective in UK dairy supply chains?

2. Education

  2.1 Duality of stakeholder identity

  2.2 Projected imagery (free range eggs)

  2.3 from family

   2.3.1 leads to irrationality

   2.3.2 history teaches us sustainable ways

  2.4 Public Perception of dairy

   2.4.1 importance of evidence in narratives

   2.4.2 importance of consumer in ensuring there is a market for dairy

   2.4.3 more attention on sustainable practices

   2.4.4 Public demonstrations

     2.4.4.1 need for a wider opinion shift

   2.4.5 Public expectations

     2.4.5.1 Public imagery on farm (factory vs fields)

   2.4.6 Complementary food (not in own right)

  2.5 Value given to product (commoditisation)

     2.5.1.1 Wastage

  2.6 Voluntary knowledge exchange

3. Measurements and Metrics

  3.1 quantification importance

  3.2 difficulties in deciding metrics

   3.2.1 Stakeholder conflicts

   3.2.2 cultural hegemony RE what measurements are accepted.

   3.2.3 inherently difficult to capture accurate measurements

  3.3 replication of requirements, leading to frustration (sustainability saturation)

  3.4 Storage of collected data

  3.5 Natural Capital

4. Assurance Schemes

  4.1 tick box exercise (one off visit)

  4.2 danger of demanding too much (sustainability saturation)

4.3 Confusion
4.4 Value
    4.4.1   Value adding
    4.4.2   Value promotion
4.5 importance of acceptance within dairy industry
    4.5.1   reputational issues

5.   Communications
5.1 Anonymity
    5.1.1   when assessing existing sustainable practices
5.2 Importance of Social Media
    5.2.1   Educating consumers
    5.2.2   Reputational issues
    5.2.3   Behind the scenes on farm
    5.2.4   interaction with consumers
        5.2.4.1 changing perception of farm imagery
    5.2.5   Negatives of social media
        5.2.5.1 sharing of biased information/fake news
        5.2.5.2 Online abuse
5.3 Importance of advertising milk
    5.3.1   Value adding
    5.3.2   Memorable advertising
5.4 importance of maintaining sustainable narrative
5.5 relationship with supply chain
    5.5.1   act as brand ambassadors
5.6 Branding products
    5.6.1   increase demand to address oversupply
5.7 Fostering of connections along the supply chain

6.   Infrastructure
6.1 cost
    6.1.1   cultural hegemony: undervaluing of food in society
6.2 importance for collecting data
6.3 importance for ensuring circular economy
    6.3.1   wider responsibility than the immediate supply chain. Government?
6.4 importance of technology
6.5 Location
    6.5.1   importance of local infrastructure

7.   Price and value of dairy productions
7.1 which stakeholder takes the extra cost?
    7.1.1   Personal sacrifice of farmers
7.2 issues of value
    7.2.1   elasticity of dairy produce
7.3 Farmgate price fluctuations
7.4 Quality
7.5 Plastics
    7.5.1   swap to glass

11.2   Family run businesses – cultural challenges.

11.3   Different benefits needed for internal/external audiences

12. Attitude and Characteristics

12.1   Proactive (rather than reactive)

    12.1.1   reactive to popularity of certain sustainable activities

    12.1.2   cultural hegemony: scared of doing something different

    12.1.3   continuous improvement

12.2   importance of trust

    12.2.1   open book accounting

12.3   importance of honesty

    12.3.1   owning up to mistakes/negatives

13. Idiosyncrasies

13.1   Importance of Location

    13.1.1   Supporting Local Communities

    13.1.2   British Produce

        13.1.2.1   Collaboration beyond the dairy industry into wider agriculture

    13.1.3   Imagery

        13.1.3.1   fictitious supermarket brands

    13.1.4   Weather systems

    13.1.5   Terrain

13.2   Farm idiosyncrasies

    13.2.1   size of farm

        13.2.1.1   linked with value of product (growth not always right)

    13.2.2   location of farm

    13.2.3   specific local sustainable activities

    13.2.4   Farm diversification

        13.2.4.1   Difficult to diversify due to contracts

13.3   Idiosyncrasies of dairy sector

    13.3.1   manufacture of product

    13.3.2   contracts

    13.3.3   lifestyle of farmer

RQ3: 3. How does power held by different stakeholders influence sustainable narratives created within the UK dairy supply chain?

14. Power

14.1   Shared industry ownership (unity) is power

    14.1.1   Importance of trust

    14.1.2   power in a unified voice

        14.1.2.1   not everyone has to be leader (importance of support)

    14.1.3   working together

    14.1.4   avoids creating unnecessary hurdles

    14.1.5   Sustainability important from everyone to ensure SC sustainability

14.2   Knowledge is power

    14.2.1   credibility of source of sustainable practices – rooted in practical experience

    14.2.2   **Invisible ingredients out of sight (free range eggs)**

    14.2.3   Reputational issues (supermarkets getting caught out)

14.3   Size is power

    14.3.1   importance of cooperatives

    14.3.2   Resource constraints (money and time)

    14.3.3   importance of size of player

    14.3.4   Retailers have the power to set agendas

        14.3.4.1   importance of smaller retailers

    14.3.5   Importance of 'shouting the loudest'

    14.3.6   Supply and demand importance

14.4   Relationships are power

    14.4.1   farmers are replaceable, but necessary – lack of genuine relationships

    14.4.2   smaller retailers offering support

    14.4.3   Unfair contracts

        14.4.3.1   Buyer's discretion

14.5   Money is power

    14.5.1   incentivisation

        14.5.1.1   Processors

    14.5.2   cutting corners

    14.5.3   USP of powerful players – may create extra work to differentiate self

    14.5.4   Food is expected to be cheap

    14.5.5   Quality drives demand

    14.5.6   Put your money where your mouth is

14.6   Choice is power

    14.6.1   consumer led

        14.6.1.1   Consumer vs Citizen

    14.6.2   education is important (current lack) for value

    14.6.3   Importance of small retailers

14.7   Milk is power

    14.7.1   The cow holds a symbolic power

    14.7.2   Value in the product

14.8   Location is power

Appendix F: Participant Information Sheet

Evaluating agri-food supply chain sustainability practices: Participant Information Sheet

My name is Tim Else and I am a researcher at the University of Sheffield. In my project, I am looking at how sustainability practices are evaluated by different members of the dairy industry. If you have been given this document to read, then I think you are a perfect participant to help in this research. To help you understand more about what taking part in this research means, I have created the following information sheet for you to read through. It is fairly comprehensive, but you can always email if you still have any questions. Also, feel free to discuss this document with others, if you wish. Should you decide to take part in this research, contact me and we can arrange a time and place to meet up. Finally, regardless of what you decide, thank you for taking the time to read this document and consider my research.

What is the projects purpose?

By asking different members of the UK dairy industry, this project aims to explore current approaches towards sustainable behaviour in the dairy industry, how these approaches are evaluated and whether being in a powerful position has any relevance to sustainable responsibility. Coupled with analysis of dairy industry literature, this project forms the basis of the PhD qualification for the lead researcher.

Why have I been chosen?

You have been chosen to take part because you are a member of the UK dairy industry. Your details will have either been found on the internet, you were already known to the lead researcher, or someone who thinks you might be interested in this research has recommended you to the lead researcher.

Do I have to take part?

It is completely up to you to decide if you want to take part in this research or not. If you choose to participate, you will be asked to sign an online consent form before the interview, which makes sure that you understand this information. There are no negative consequences if you decide not to participate.

After the consent form has been signed, you can withdraw your data up to 31 calendar days after the interview, with no negative repercussions and no reason needed. Before this, you can change your mind at any time, including in the interview itself. You can choose to miss out any questions you don't feel comfortable answering in the interview too.

Beyond these 31 calendar days, publications relating to the data will inevitably arise (such as the PhD thesis), meaning data will not be able to be withdrawn.

What will I have to do if I take part?

You and the lead researcher will arrange a convenient time to have an interview, which will be conducted face to face or over the telephone. In the interview, which is expected to take between 30 to 45 minutes, the researcher will ask questions relating to the two main topics under investigation: sustainability and power in the dairy industry. A full briefing will be given beforehand,

and a debrief will be given after. A simple flowchart of the interview, including timings, is given below.

Briefing	Questions	Debrief
5 minutes	30 minutes	5 minutes
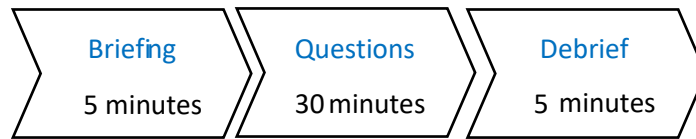
Will I be recorded? How will those recordings be used?

An electronic device will record the interview audio, so the researcher can type up the conversation when he gets back to the office. The recording of your voice will not begin until the briefing has finished and the lead researcher tells you the recording device is activated. The researcher will also tell you when the recording equipment has been deactivated. After analysis of this, written themes and quotes may be taken and used in the PhD document, as well as in other documents, such as academic publications and presentations. The actual audio file will only ever be listened to by the researcher.

What are the possible disadvantages of taking part?

The main disadvantage to taking part is the inconvenience of having to undertake the interview, which is expected to last around 30 to 45 minutes. Furthermore, as personal situations may be touched upon in this research, another more unlikely disadvantage to taking part could be feeling upset or worried about what is being discussed. In addition to being able to ask to skip any questions, helpful resources relating to money and stressful situations can be found in a "Useful Resources" document, available on request.

What are the advantages of taking part?

Initially, there would be no clear advantage to taking part in this research. However, in time, it is hoped that the researcher will be able to share findings from this research with policy makers, such as industrial bodies. This may then help shape future sustainability policy in the UK dairy industry.

If I take part in this project, will my identity be kept confidential?

Any information relating to your identity will be kept strictly confidential by the lead researcher. You will not be identified in the PhD thesis or any publications that come from this project. The only piece of information about you that will be shared is your general role in the dairy industry (farmer, processor, consumer, industrial body etc).

What will happen to the data collected during and after this research project?

Only the lead researcher will know your personal data, as well as which interview transcripts are yours. Your name and any identifying features you talk about will be changed by the lead researcher, creating anonymised versions of the data. The supervisory team will have access to these anonymised transcripts to help the researcher with his analysis.

With your permission, one full anonymised interview transcript will be shared by the researcher in this thesis as evidence for undertaking interviews. However, you do not have to agree to this if you feel uncomfortable.

After the analysis phase of this research, your words may be quoted in publications, reports, web pages, and other research outputs. You will not be named in any these outputs.

Personal details and transcript recordings will be deleted when the researcher finishes the project. Anonymised transcripts and consent forms may be retained up to 10 years, depending on publications arising from this research.

What is the legal basis for processing my personal data?

The legal basis for collecting and using your personal data is because it is necessary for undertaking this research project, which is being carried out in the public interest. More information about the legal basis of processing your data can be found at: https://www.sheffield.ac.uk/govern/data-protection/privacy/general

Who is funding this research?

This research is funded by the Economic and Social Research Council, known as the ESRC.

Who is the data controller?

The University of Sheffield will act as the data controller for this study. This means that they are responsible for looking after your information and using it properly.

Who has ethically reviewed this project?

This project has been ethically approved via the University of Sheffield's Ethics Review Procedure, as administered by Sheffield University Management School.

How do I complain about this research if something goes wrong?

In the first instance, contact the lead researcher or the supervisor using the contact details below, who will address any issues raised. If you find their response is not satisfactory, then contact the Head of Sheffield University Management School, whose details are also listed below. If your complaint relates to how your personal data has been handled, then please visit: https://www.sheffield.ac.uk/govern/data-protection/privacy/general

Thank you for taking the time to read this participant information sheet!

If you have any more questions, please contact the researcher using the following details:

Lead Researcher: Mr Tim Else   Email: telse1@sheffield.ac.uk

Project Supervisor: Dr Sonal Choudhary   Email: s.choudhary@sheffield.ac.uk

Head of Department: Prof Rachael Finn   Email: r.l.finn@sheffield.ac.uk

Address for all the above: Sheffield University Management School

Conduit Road

Sheffield

S10 1FL

Appendix G: Consent Sheet

Evaluating agri-food supply chain sustainability practices: Interview Consent Form

Please tick the appropriate boxes	Yes	No
Taking Part in the Project		
I have read and understood the project information sheet dated June 2019 or the project has been fully explained to me.		
I have been given the opportunity to ask questions about the project.		
I agree to the lead researcher taking an audio recording of the interview with a dictaphone.		
I understand that my taking part is voluntary and that I can withdraw from the study any time until 31 calendar days after the date on the bottom of this form; I do not have to give any reasons for why I no longer want to take part and there will be no adverse consequences if I choose to withdraw.		
I understand I can choose not to answer any or all questions as I see fit, without repercussion.		
I understand I can add any conditions to this consent form, if I wish.		
I agree to take part in the project.		
How my information will be used during and after the project		
I understand my personal details, such as name and email address, will not be revealed to people outside the project.		
I understand the lead researcher and the supervisory team will have access to all anonymised transcripts for the purpose of data analysis.		
I understand and agree that my words may be quoted in publications, reports, web pages, and other research outputs. I understand that I will not be named in these outputs.		
The leader researcher will choose one anonymised transcript to serve as an example in the appendices of his PhD thesis. I give permission for my full anonymised transcript to be considered for this purpose.		
So that the information you provide can be used legally by the researchers		
I agree to assign the copyright I hold in any materials generated as part of this project to The University of Sheffield.		

Name of participant   Signature   Date

Name of Researcher   Signature   Date

Project contact details for further information:
Lead Researcher: Mr Tim Else   Email: telse1@sheffield.ac.uk
Project Supervisor: Dr Sonal Choudhary   Email: s.choudhary@sheffield.ac.uk
Head of the Management School: Prof David Oglethorpe   Email: d.oglethorpe@sheffield.ac.uk

Appendix H: Data Management Plan

Data Management Plan

Overview

Researcher: Tim Else
Project Title: Conceptualising and evaluating hegemonic agri-food supply chain sustainability practices: a UK dairy industry perspective
Project Duration: 4 years (PhD student)
Project Context: My research involves evaluating the drivers and barriers of sustainable practices in the UK dairy supply chain from the perspective of several different stakeholders (such as farmers, processors, retailers, consumers etc.). I am also interested in the importance of power in ensuring sustainable practices are adhered too. The ultimate goal of my research would be to inform future dairy policy in the UK, especially in the wake of Brexit.

Defining your data

Where does your data come from?   The participants I will be dealing with are stakeholders in the UK dairy industry. Data will be collected from participants through semi-structured interviews, either online or in person. Audio and visual data will be recorded from these interviews.
How often do you get new data?   Data were collected between June 2018 and August 2019
How much data do you generate?   The data generated was 26 audio recordings, transcripts, researcher notes and images of LEGO structures.
What format is your data in?   Audio recordings will be stored as MP3s and their associated transcripts will be Microsoft Word. Of course, the dictaphone and camera used to capture the interviews will also store data in their respective factory-assigned formats. Finally, any observations notes taken down will be stored in the researcher's notebook. When the observation notes or paper questionnaire surveys are digitalised, they will be stored in a PDF format.

Looking after your data

What different versions of each data file do you create?
The audio files and observation notes from the interviews only ever have one version of each file. Transcripts will have two versions of each file – one which is a blank transcript, and the other which is a coded and annotated transcript.

What additional information is required to understand each data file?
In my data storage file, there is be a master word document explaining how everything is stored (for example, file structure) and what should be/is actually stored.

Where do you store your data?
I will follow the University's recommendation of the 3-2-1 policy. My data files will be stored on my University Drive (U:) and my personal laptop at home. For the final medium, I was torn between GoogleDocs cloud service and an external drive. Whilst GoogleDocs provides adequate protection to the University for data storage, the idea of an offline external drive locked away at home sounded more secure to the researcher, so was finally selected. The University Library service discuss data storage issues in more detail at
https://www.sheffield.ac.uk/library/rdm/safedata

How do you structure and name your folders and files?
Following the guidance given by the UK data service (https://www.ukdataservice.ac.uk/manage-data/format/organising), I prefer a shallow file hierarchy. As a general rule, I would like to use the following naming structure:
Interview: Inter_Paul_2018_01_31 - where the name is the pseudonym and the date is when the interview took place.
Photo: Photo_Paul_2018_01_31 – this would be a corresponding photo from the Paul's interview example shown above.

How is your data backed up?
CiCS perform a regular back up of work stored on the University Drive (U:). I will regularly ensure that all necessary and up-to-date files are on the University drive for backing up.
Any paper-based data, such as my observation notes, will be digitalised and stored on the University drive in a timely manner.

How will you test whether you can restore from your backups?
I will perform a fortnightly check that files stored on the U: drive are still usable. If there was an issue with a particular file, then a copy of a usable version of said file would be transferred to the University Drive from a different media.

Sharing your data

Who owns the data you generate?
As per the University of Sheffield's policy on good research and innovation practices, any data I generate is owned by the University of Sheffield. Furthermore, as per the PGR Code of Practice, the University of Sheffield also owns any intellectual property that arises from my project.

Who else has a right to see or use these data?
My supervisors have the right to see the raw data in its anonymised form, as I will undoubtedly need assistance at some point.

Who else should reasonably have access?
Of course, themes and occasional quotes will be an integral part of my PhD thesis. However, consent for doing this will be explicitly sought on the consent form, so participants can choose not to share their transcript in this way.

What should/shouldn't be shared and why?
I do not believe all my interview data should be shared in its entirety. As I wish the individuals to feel safe to freely express themselves with complete anonymity, as well as feeling comfortable to try out an innovative research method, I want to give them the option that their data will only be seen by myself and my supervisors. As such, a question about use of interview transcript will be included on the consent sheet.

Archiving your data

What should be archived beyond the end of your project?
Regardless of whether data is shared or not, a personal archive of all data should be retained. This is in case of publication and other academic queries. *At this point, it is worth mentioning that ESRC PhD students are NOT required to deposit data onto the UK Data Service specifically* (http://www.esrc.ac.uk/funding/guidance-for-grant-holders/research-data-policy/)

For how long should it be stored?
Any personal data for participants will be deleted in the week after my degree is awarded. Anonymised data will be kept for 10 years after completion.

When will files be moved into the archive?
Given the reasons explained early, I have no plans to archive my dataset online. If I choose to use an online archive for my data, such as the UK data service or the UoS ORDA, then this would be at the end of my thesis.

Where will the archive be stored?
If I did decide to archive my data online, I would most likely use the UK Data Service, which is run by the ESRC (who fund me!).

Who is responsible for moving data to the archive and maintaining it?
I would be responsible for moving my data onto the UK Data Service. Once it is there, the UK Data Service would maintain it as necessary.

Who should have access and under what conditions?
Anonymised data could be made available on request.

Executing your plan

Who is responsible for making sure this plan is followed?
I take full responsibility for ensuring this plan is acted upon. I am also in charge of bringing up this plan with my supervisory team on a timely basis.

How often will this plan be reviewed and updated?
I will discuss this plan every 6 months with my supervisors.

What actions have you identified from the rest of this plan?
- Discussions with my supervisors on a timely basis, which will help to refine and strengthen this document.   - Create an identical file storage system on my University drive and my laptop – and begin to regularly back up work.

What further information do you need to carry out these actions?
- Reading the PGR Code of Practice: https://www.sheffield.ac.uk/polopoly_fs/1.727257!/file/Code_Of_Practice_2017-18.pdf   - Reading the University Library resources on data management: https://www.sheffield.ac.uk/library/rdm

Appendix J: Risk Assessment Document

Column one: Hazard (Detail specific hazards foreseen for this activity)	Column two: Potential consequences (Detail potential outcomes of hazards)	Column three Initial Risk Level (insert numerical value 0-3)	Column four Minimise risk by: (What control measures will you take to reduce the level of risk?)	Column five Residual risk
Personal Safety: Working out of campus in offices/houses alone	Some of the hazards can could be experienced working off campus alone include: - kidnapping - theft - dealing with aggressive people - violence Outcomes of these hazards could incur mental and physical injury.	(Unlikely, but possibly fatal) 3	- Appropriate preparation for lone working should be undertaken, such as attending appropriate training - Only carry necessary valuables when working (ie. mobile phone, dictaphone and minimal cash) - Operate a 'Call In: Call Out' system, where a nominated individual will call the police on 101 if no contact has been made after a certain time. - Keep reflecting on communication with participant. If feeling uncomfortable, terminate the interview and leave.	(Now very unlikely) 0
Personal Safety: Working in remote locations alone (for example, farms)	In addition to the hazards above, working in a remote location may mean that it is more difficult to contact individuals if problems arise (due to poor mobile phone reception and isolation from general public). An outcome of this would mean it is more difficult than usual to contact others for help is needed.	(Unlikely and Serious) 2	- Operate a Call In: Call Out system as explained above. - Let the designated contact know you are specifically working in a remote location where communication might be an issue.	(Now very unlikely) 0
Personal Safety: Being bothered by participants outside of work (blurring the lines of professional boundaries)	If personal contact details, such as a mobile phone number, are given out, there could be a blurring between personal and professional life. Participants may share details with others who might be interested in the research, potentially leading to nuisance calls.	(Possible, but Minor) 2	- Get a Pay-As-You-Go SIM card and have a dedicated work number that can be disposed of at the end of the research project	(Now very unlikely) 0

Personal Safety: Being aware of heavy machinery (for example, farms/processors)	Heavy machinery covers both moving vehicles and stationary equipment. Not being aware of the dangers associated with these vehicles and equipment could lead to serious injury or death of the researcher	(Unlikely, but possibly fatal) 3	- Take note of all safety signage seen - Avoid any heavy machinery where possible. - Do not touch or lean on any heavy machinery. - Wear a Hi-Visibility tabard when walking onto a working farm/factory.	(Now very unlikely) 0
Personal Safety: being aware of animals (on working farms)	As some data collection will take place on working farms, the researcher will be exposed to livestock and working dogs. Some animals might behave aggressively towards the researcher, including headbutting, scratching and biting. Contact with animals can lead to exposure to pathogens. Note that the researcher has been immunised against tetanus, in line with University of Sheffield guidance.	(Possible and serious) 4	- Do not touch any animals unnecessarily - If contact is made with an animal, ask to go to the toilet and wash hands - Seek medical attention as soon as possible if any injury is sustained from an animal	(Now unlikely) 2
Participant Safety: Security of data when in the field	If consent forms are all stored in one folder, this should not be carried to all fieldwork sites, as the opportunity could arise for an individual to observe the personal details of another participant. This could break confidentiality and potentially jeopardise participant safety and researcher integrity.	(Possible and serious) 4	- NEVER carry a pack of all consent forms out on fieldwork. Instead, have a specific folder that only contains paperwork relating to the participant being interviewed.	(Now very unlikely) 0
Participant Safety: Distress from personal experience	When discussing questions relating to personal experience, participants could become upset. If the interview were to proceed, or the researcher did not acknowledge the distress, this could affect the mental health of the participant.	(Possible and Serious) 4	- If the participant cries, never touch them. Just offer them a tissue and give them space. - Offer to terminate the interview (or decide to terminate). It can always be rescheduled or completely cancelled. - In the debrief, point out the mental health resources that will feature on the Useful Resources sheet.	(Now unlikely) 2

Transport Safety: Travelling on routes that are unfamiliar	As participants could be based in locations that the researcher has never visited before, there is a risk that he could get lost on the way to an interview. This could cause distress and may result in physical injury.	(Possible, but minor) 2	- Plan journey thoroughly and carefully before setting off - Take written record of directions on journey - Take a mobile phone power bank to keep phone charge up when using maps application AND to summon help if required.	(Now very unlikely) 0
Transport Safety: Driving myself to participants	Driving to participants could involve making several long journeys, where the researcher could become tired at the wheel. This reduced awareness could result in serious injury to the researcher and others. Furthermore, if driving in winter, the weather conditions could make the road hazardous. This could lead to an accident, or the researcher getting stuck.	(Unlikely, but possibly fatal) 3	- Take regular breaks when driving long distances. Following rule 91 of the Highway Code, this means taking a minimum break of 15 minutes every 2 hours of driving. - Avoid driving in adverse weather. Check the weather forecast before setting off and be prepared to move interview with participant.	(Now very unlikely) 0
	Initial risk level: 31			**Residual risk level: 4**