



Exploring third-party certification programmes in commodity value chains: A temporal myopia perspective

Thesis submitted for the degree of Doctor of Philosophy

By

Daniel Siaw

Brunel Business School

Brunel University London

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DECLARATION

I declare that this research thesis is my own unaided work. It is being submitted in partial fulfilment for the requirement for the degree of Doctor of Philosophy at the Brunel University London, United Kingdom.

Daniel Kwame Siaw

16th January 2023

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ABSTRACT

Certification programmes have become a widely adopted practice across commodity industries and serve as a mechanism for encouraging sustainable agriculture aimed at improving livelihoods, reducing poverty, and conserving the environment. Certification has also become critical in shaping the value creation and capture potential of producers, manufacturers, and consumers embedded in the value chains of many commodity industries. However, recent years has seen commodity certification programmes struggling to yield the expected benefits for which they were putatively established. Drawing on temporal myopia (TM) as a theoretical lens, this study explores the existential challenges facing the loosely coupled actors in CVCs, that has led to the floundering of these certification programmes. Focusing on the Ghana cocoa industry, the study provides a fine-grained explication of how the differential and competing organizing practices of these actors cumulatively contribute to the near collapse of these certification programmes. Adopting an interpretive approach and an exploratory qualitative research design, data for the empirical inquiry were chiefly collected using semi-structured interviews with cocoa farmers (25), the Ghana Cocoa Board (5), certification organisations (5), cooperatives (7) and produce buying companies (10). This was supplemented with focus group discussions (44), and publicly available documents on certification programmes. The study makes three main findings. First, the study unpacks the state of the art of certification programmes to understand how loosely coupled actors respond to certification practices, emphasizing how the activities of various loosely coupled actors contribute to those structures and procedures, which provides understanding of the organising practices required in certification programmes. Second, it highlights how TM accounts for the floundering of certification programmes in CVCs. Third, it demonstrates how environmental, social, and institutional factors may interact with the certification requirements, rubrics, and standards, to precipitate a range of organising practices that may operate in combination or serially to facilitate (or impede) certification programmes. The contribution of the thesis is also three-fold. First, broadening our understanding of the state of the art to certification in organising, this study extends our understanding of how loosely coupled actors in CVCs frame, make meaning, and respond to certification practices. Second, the study shows how taken for granted everyday organizing practices of the loosely coupled actors could serially combine to precipitate the near collapse of the certification programmes

which frequently seek to promote sustainable production and livelihoods. Third, the study offers deeper insights into how temporal myopia serves as a blocking mechanism which induces these loosely coupled actors', to focus on short term gains within the contingencies of the socio-economic environment in which they operate.

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TABLE OF ABBREVIATIONS

Abbreviation	Explanation
CVCs	Commodity value chain
GCC	Global commodity chains
GCVC	Global commodity value chains
LBCs	License buying companies
UTZ	Unheimlich Toller Zauberer
RA	Rainforest Alliance
TM	Temporal myopia
COCOBOD	Ghana Cocoa board
CHED	Cocoa Health and Extension Division
IPM	Integrated pest management
GVC	Global value chain
Coop	Cooperative
QCC	Quality Control Company
PC	Purchasing clerk
PBC	Produce Buying Company
GAP	Good Agricultural Practices
FLO	Fairtrade Organisation
IMS	Internal Management Service

CHAPTER 1

INTRODUCTION

The global commodity chain (GCC) has emerged as a common concept for understanding the relationships between the production, distribution, and consumption of goods as well as their fragmentation and distribution across the globe (Sturgeon, 2008; Lee, 2010; Siaw et al., 2022). Emphasizing the context within which the labour force and production process give form and shape to the transformation of commodities into finished goods and services, GCCs have come to dominate contemporary discourse on the distribution of goods and services to customers across the globe (Gibbon, 2001; Kaplinsky and Farooki, 2011; Newman, 2012). Though heralded as a global innovation that has led to the removal of trade barriers, increased social welfare, and resulted in a general improvement in the livelihoods of people, GCCs are not without drawbacks. They are known to exploit the very employees they tend to benefit by using slave labour and taking advantage of weak institutions to lower working standards. Of particular concern is their intractable social and environmental costs. These concerns range from their unsustainable exploitation of natural resources and their overall carbon footprint (Morris, Kaplinsky and Kaplan, 2012; Volenzo and Odiyo, 2020). Calls to mitigate and manage such unwanted spillover effects of GCCs have now reached a climax. In response, governments and supranational organizations have attempted to regulate the activities of GCCs by passing legislations and byelaws and promoting sustainable standards forcing many firms to comply. In parallel, many organizations around the globe have also implemented strategies and practices to ensure the consequences and impact of their GCC value creation and capture activities are positive rather than negative (Humphrey and Schmitz*, 2001; Thorlakson et al., 2018). One upshot of this turn to improve GCCs activities is the emergence

of certification programmes in GCCs, aimed at standardizing the organizing practices of GCC actors, which in turn, could help improve outputs and their overall societal and environmental impact (Fenger et al., 2017; Oya et al., 2017; Ansah et al., 2020; Brako et al., 2021). These certification programmes over recent decades have come to gain a lot of traction in the agricultural sector and are regarded as a marker of good practice. A global standard designed to encourage sustainable agricultural production and to improve the livelihood of commodity producers, their families, and communities (Rueda and Lambin, 2013; Asamoah et al., 2013), certification among food and other agricultural products has been promoted as a gateway to sustainability and a framework for sustainable production across global markets. Often developed by non-governmental certified bodies and global leading firms, these certification programmes encourage adherence to best practices known to promote environmental conservation (Ruben and Fort, 2012) and positive socioeconomic conditions; in addition, they offer a price premium to commodity producers and access to a global market (de Jesús-Crespo et al., 2016; Jena and Grote, 2017).

Developed and managed by trade associations, non-governmental organizations, and charities, these certification programmes, which are frequently referred to as third-party certification programmes, have been credited for democratizing best practices with their tailored training for commodity producers and other actors within the agricultural commodity chain (Fenger et al., 2017). For instance, UTZ-Rainforest Alliance, a certification body focusing on the production of cocoa, tea, and coffee in the developed and emerging economies is cited as having significantly supported their certified farmers to improve their production, net income, and price premiums (Takahashi and Todo, 2017; Iddrisu et al., 2020). As an intergovernmental process of ensuring compliance with requirements and standards across the commodity food chain, certification programmes have also become a potentially

influential mechanism for addressing several sustainable development goals, including "no poverty" (goal 1), "responsible consumption" (goal 12), and "life on land" (goal 15) (United Nations 2020b), as well as private sector commitments to ensure sustainable supply and value chains (Gunawan et al., 2020). These certification programmes have gained importance across major export commodities from the global south.

However, most of these certification programmes in the global south are not delivering on their promises. These challenges in practice span across financial, operational, and institutional aspects, which pose major barriers to the widespread adoption of certification in the global south. The high cost of implementing certification in the CVC has an impact on both smallholder producers and supranational organisations. The internalisation of the procedures outlined in certification standards, in particular, requires that multinational corporations make significant changes to their operations (Basso et al., 2012; Ingram et al., 2014). These changes in practice typically demand significant financial commitments, which may be beyond the financial capabilities of some actors engaging in certification in the global south. Also, trade associations and non-governmental organisations (UTZ-Rainforest Alliance, Fairtrade) frequently need to recruit specialised and technical personnel to oversee internal certification procedures and train other staff and farmers on certification standards, both of which also require considerable financial investment. Similarly, the cost that farmers may incur to adjust farm operations might be prohibitive (e.g., pesticide acquisition and other farm inputs). Apart from the costs associated with changes in internal operations, certification implementation entails external auditing from certification bodies, which can further increase costs for international organisations and certification organisations engaging in certification in the global south.

Besides, excessive bureaucracy, a lack of farmer unions, and difficulties localising certification principles also represent some challenges to certification programmes in the global south. In addition, the extensive documentation of certification principles, guidelines, and criteria as well as the bureaucracy when dealing with national and regulatory authorities, and the hardship of securing documentation often discourage certification bodies in practice. Moreover, the lack of farmers' organisation often adds to the time and effort for locally implementing certification standards. Forming farmer groups requires significant work by LBCs and cooperatives and is frequently complicated by dynamics within groups and individual agendas during decision-making (Buehler and Schuett, 2014; Owusu Ansah et al., 2017). Such behaviour among farmers hinders the development of certification practices, due to the divergent views among farmer groups, which in turn, decouple standard from practice. Another challenging factor to certification adoption in the global south is the proliferation of certification programmes (with their different guidelines, criteria), which tends to confuse many commodity producers on how to implement the various standards (Lemeilleur et al., 2015; Iddrisu et al., 2020). For instance, a single cocoa farmer may be signed up to more than two certification programmes that have slightly different guidelines and indicators, making their effective implementation and compliance difficult (Dompheh, Asare and Gasparatos, 2021). Finally, a number of policy issues prevent certification from being adopted and implemented effectively in the global south. These issues include uneven government regulations, a lack of clarity regarding tenure, and, most significantly, the absence of a comprehensive national certification policy. This has led to a situation where most of these certification programmes are floundering in practice, causing many GCC actors to approach certification with a lackadaisical attitude or to quit it entirely.

In this regard, for many, certification has simply become a badge of honour for overcoming stringent requirements, or a tick box exercise allowing access the international market but not delivering on the potential of helping to improve sustainable production, livelihoods, and the environment as suggested (Basso et al., 2012; Ingram et al.,2014; Ansah et al., 2020).

An emerging literature has explored these challenges in implementing certification programmes (Fenger et al., 2017; Oya et al., 2017; Brako et al., 2021), with mixed results. Ansah et al. (2020), in their study on farmer participation and compliance procedures, found that farmers need to comply with basic requirements, such as inspections and other farm practices to enjoy the extra benefits like price premium, which can support their livelihood. Notably, Veleva et al. (2001) observed that, to ensure sustainable growth and commodity production targets are met, environmental and resource concerns must be incorporated into government and industry planning and decision-making processes (WEC, 1999; Ekins, 2000). Besides, Bray and Neilson (2017) and Fenger et al. (2017) also identified agricultural commodity certification as a mechanism for customers and commodity producers to mitigate the social and environmental impacts likely to emerge from their product consumption and to alleviate the risk of long-term scarceness of supply within the chain. Elsewhere, Iddrisu et al. (2020) and Oya et al. (2018) argued that farmers who are the main stakeholders in agricultural production warfare will benefit from increased yields, higher income levels, and better environmental services when they adhere to the global compliance protocols established in a certification programmes. Other studies (Blackman and Naranjo, 2012; Elder et al., 2013; Ibanez & Blackman, 2016) also found that certification increases the use of farm practices associated with improved environmental performance, for instance, the use of organic fertilizers, crop rotation, shade trees, or organic/integrated pest management (IPM) practice, but Ruben and Fort (2012) suggest that certification leads to little or no change in production practices.

Overall, certification practices are identified as the level of compliance to global standards for commodity producers in meeting economic, social, and environmental, requirements (Millard, 2011; Mol and Oosterveer, 2015).

The literature in this field has started to examine the challenges in the implementation of certification programmes, their impact on commodity producers, as well as the context within which they enable (or impede) sustainable value capture (Ansah et al., 2020; Brako, Richard, and Alexandros, 2021). Meanwhile, early studies have uncovered that some of these certification programmes have become mere badges doled out to actors who must comply with very basic standard requirements. In this regard, many of these certification programmes are gradually outliving their usefulness (Basso et al., 2012; Ingram et al., 2014; Oya et al., 2017; Astrid Fenger et al., 2017) and come to represent mere certification badges, leaving room for (non) certified commodity producers to exploit their country's weak institutions and produce-buyers to even sell certified produce to conventional buyers for an immediate cash return (Amankwah-Amoah et al., 2018; Gockowski et al., 2013). Of particular note here is the extent to which loosely coupled actors in the CVC have decoupled certification objectives from practice, resulting in them being frequently viewed with mistrust and being exploited by private and public entities for their own gain rather than improving livelihoods and the environment (Beuchelt and Zeller, 2011; Blackman and Rivera, 2011; Giuliani et al., 2017). The upshot of such non-conformity in practice is the floundering of many of these certification programmes.

1.1 Research objectives and questions

Certifications programmes such as Fairtrade, UTZ certified and Rainforest Alliance, offer price and incentives (price premiums) to commodity producers for adopting to specific

production and global standards requirements which are also meant to increase productivity and income of producers, but also to improve the social and environmental conditions of agricultural commodity production. Given the importance of certification programmes in commodity value chains (CVCs), the question that arises is why so many of these certification programmes are failing to deliver on their promises. This is intriguing given that, over the decades, certification programmes have become very popular in most CVCs. In this regard, the main objective of the study is to develop and extend our understanding of the floundering of certification programmes in CVCs. Empirically, this study focuses on the Ghanaian cocoa industry, whose value chain activities, over the years, have attracted considerable attention owing to the value of the industry to the country's economy and the millions of actors whose livelihood depends on it. In doing so, this thesis draws on temporal myopia (TM) as a theoretical lens to investigate the organising practices of the loosely coupled actors in the value chain. TM refers to a short-sighted defect which induces individuals to see things away from the main object (Fredrick, 2002; Opper and Burt, 2021). In organisational terms, this syndrome plays out by inducing individuals and the management of firms to consider an immediate result of a business decision and ignore the future implications, or sometimes ignore what has happened in the past and focus on only on what is happening in the present. In many instances, the TM syndrome affects organisational cognitive structures and leads to a failure to consider the consequences of members' actions or decisions at the present time without considering the future and the past.

Drawing on an exploratory qualitative research approach, this thesis explores three sustainable cocoa certification bodies (Rainforest Alliance, UTZ Certified, and Fairtrade) in Ghana, the world's second largest producer of cocoa. Semi-structured interviews and focus

group discussions were used to provide an initial understanding from the perspective of loosely coupled actors — cocoa farmers, certification officers, the Ghana Cocoa Board, cooperatives (farmer groups), and licensed buying companies (LBCs) to organising practices in certification programmes. The data from the semi-structured interviews and focus groups discussions were used to address research questions related to the certification architecture, processes, and structures, and some underlying challenges in practice, as well as the factors that enable (or hinder) the successful implementation of the various certification programmes. This provided a foundation for a better understanding of how the combination of these practices contributes to the floundering of certification programmes in Ghana’s cocoa sector. In that regard, this empirical enquiry is driven by the following overarching research questions:

- How have certification programmes come to be labelled and identified as floundering in commodity value chains? (RQ1)
- How does temporal myopia account for the floundering of certification programmes in commodity value chains? (RQ2)
- What are the practices that facilitate (or impede) certification programmes in commodity value chains? (RQ3)

1.2 Research contribution

The contribution of this thesis is developed in the context of Ghana’s cocoa industry. First, regarding the state of the art of organising practices in certification programmes, this study conveys an empirical account of how loosely coupled actors in the CVCs respond to certification practices. Highlighting the organising practices of certification programmes, this study elucidates the certification architectures, structures, and procedures involved in cocoa producers and other loosely coupled actors in the Ghanaian cocoa industry regarding obtaining the certification labels, and the underlying challenges they face.

Second, the study combines the ‘temporal myopia ‘(TM) concept (Ridge et al., 2014; Opper and Burt, 2021) with that of the ‘loosely coupled actors in the cocoa sector ‘(Deans, Ros-Tonen and Derkyi, 2018) to develop a novel perspective and framework of how TM influences loosely coupled actors in their practices, which contributes to the floundering of certification programmes in CVCs.

Finally, the study provides unique insights into how certification programmes have come to be labelled and identified as floundering and the practices that facilitate or impede certification programmes in CVCs. This goes a long way towards filling the gaps in the current literature on certification programmes in CVCs (Gockowski et al., 2013; Ansah et al., 2020).

1.3 Structure of the Thesis

The thesis comprises seven main chapters excluding the references. It draws together and synthesises existing empirical, conceptual, primary, and secondary data to achieve a complete finding that extends our understanding of why certification programmes in CVCs are floundering. Table 1.0 offers a summary of the structure of the thesis.

Table 1.0 Summary of the thesis structure

Chapter	Chapter Contents	Elements
1	Introduction	The object of study, justification of the study, the research objectives, and an overview of the thesis.
2	Systematic Literature Review	A review of theories, models, previous studies, and gaps in the existing literature.
3	Sources and Methods	Research methodology, methods, overview of the empirical research domain and contexts, and data analysis.
4	Issues and Findings (1)	<i>Research Question 1:</i> Explores how certification programmes come to be labelled and identified as floundering in commodity value chains.

5	Issues and Findings (2)	<i>Research Question 2:</i> Investigates how temporal myopia accounts for the floundering of certification programmes in the commodity value chains.
6	Issues and Findings (3)	<i>Research Question 3:</i> Explores the practices that facilitate (or impede) certification programmes in commodity value chains.
7	Conclusion	Restatement – Review of main findings – Contribution to knowledge and practice– Limitations of current research and directions for future research.

Chapter 1 presents the introduction of the study. It highlights the weaknesses and gaps in prior studies, indicates the aims and objectives of the study, and concludes with the overall structure of the thesis.

Chapter 2 is a critical literature review of the existing burgeoning literature. It is organised around the themes of CVCs and certification programmes, and the use of TM as a lens. The chapter begins by reviewing the relevant literature on the typologies of GCCs. Next, it analyses the role of producers and the buyer-driven chain in the CVC as well as the role of governance and explores some contemporary issues that drive the chain. The second section discusses third-party certification programmes from both the global north and south and emphasises the gap in the literature, which was the basis for the current study. The third section draws on TM as a theoretical lens. It shows how TM induces organisational members and individuals to ignore the past and the future in their everyday routines and focus solely on the present. The chapter concludes by unpacking the TM certification framework to show how the past, present, and future play out in CVCs.

Chapter 3 contains the research methodology and methods employed in the research. First, an overview of the empirical research contexts and settings are presented, where some loosely coupled actors who are implementors of the various certification labels are discussed. This is followed by the explorative qualitative research design, the approach, and the theoretical sampling strategy adopted for this thesis. In the penultimate section, the methods and techniques used in the data collection and analysis are reviewed and justified. These include semi-structured interviews, focus group discussions, and the analysis of some publicly available documents. The final section illustrates how the data will be analysed and examines the strategies used in the study to tease out the findings of the research and ends by highlighting some limitations.

Chapter 4 is the first chapter that presents the research findings from the empirical enquiry. While the recent theoretical and empirical literature depicts certification programmes as a mechanism to ensure sustainable agriculture and development of the global north, the findings from this empirical enquiry support the claim that there are non-conformities in practices (Aidoo and Fromm, 2015), which tend to affect the organising structures and processes. Hence, the various certification labels face a number of deeply embedded, interrelated challenges that contribute to certification struggling in recent times across the commodity sector in the global south.

Chapter 5 presents the second set of findings from the empirical inquiry, and these are related to the second research objective. It offers a detailed analysis of how TM influences loosely coupled actors in their situated practices and further explores how TM affects the actors' cognitive bandwidth thereby changing the way they think and make decisions related to certification practices. Evidence from the study data suggests that loosely coupled actors have

articulated various practices as part of their certification vision, but they have not been able to integrate this vision into their practice. Also, some actors are also content with the present certification practices, while others cannot escape the past and keep repeating past practices, which neither support nor improve the certification programmes. The chapter goes on to show that the TM syndrome induces these actors to foresee the future prospects and limits of the certification programmes but instead remain satisfied with their present practices.

Chapter 6 presents additional findings from the empirical inquiry, and these are related to the third research objective, which seeks to identify those practices and their underlying activities that facilitate (or impede) the certification programmes in CVCs. Evidence from the data shows that providing support in the form of coaching and guidance to cocoa farmers, investing in farmers' capacity building through farmer field schools (FFS), adopting a digital payment system in the cocoa value chain, and implementing an integrated pest management (IPM) programme were found to be the constitutive practices that work in tandem to strengthen certification programmes in CVCs. In contrast, the study further identifies some practices adopted by these actors that hinder the success of various labels in practice. For example, the use of banned pesticides, selling certified cocoa beans to non-certified produce buyers, and the low promotion of certification standards are all practices that contribute to the floundering of certification programmes.

Chapter 7 is the final chapter of the thesis. It summarises the main findings and contributions from the research. The implications of the findings for both management and research are outlined. The chapter concludes by highlighting the limitations of the research and suggests areas for further study.

CHAPTER 2

THIRD-PARTY CERTIFICATION PROGRAMMES IN COMMODITY VALUE CHAINS

This chapter focuses on the review of relevant works of literature on third-party certification programmes in commodity value chains (CVCs). The chapter is further divided into three major sections with sub-themes. First, the chapter discusses the typologies of the global CVC, followed by an exploration of some contemporary issues driving the global commodity industries, and the role of intermediaries, governance, and technology within global CVCs. Second, the chapter examines third-party certification programmes in CVCs and further explores how certification programmes have come to be labelled as a mechanism or tool in the commodity industries. Next, the chapter presents chain actors' responses to issues surrounding certification programmes in CVCs. In the penultimate section, the concept of temporal myopia (TM) is employed as a theoretical lens. The chapter concludes by unpacking the TM certification framework to show how the past, present, and future play out in practice.

2.1 Review approach

The method sourced in this piece was appraised by previous studies (Staggers, 2009; Feldhoff et al., 2016) to justify in a clear manner how the most appropriate works of literature were selected for this section of the thesis. First, Table 2.0 describes the inclusion and exclusion process, and the criteria adopted for the selection of the various studies explored in this chapter. Table 2.0 further describes the reasons for the selected articles. The emphasis was on research articles that were four and three stars, peer-reviewed, written in the English language, and not published in a predatory journal. The main sources for the literature search were Google Scholar (www.google.com/scholar), Scopus (www.scopus.com), and Web of

Science (www.webofscience.com). The key words of the academic literature in the search of the databases were certification programmes*, value chains*, commodity industry*, commodity value chain*, global commodity chains *, temporal myopia*. This helped the researcher to identify and then draw on industry-specific kinds of literature, and further expanded the coverage as a strategy to search for other articles, which were not industry specific, but were in line with the study area though from a different academic discipline. Some of the articles identified from the various databases were irrelevant to the research; these articles were ignored, and the researcher used only the relevant studies. The focus was on international business knowledge-specific articles, precisely, global CVCs, contemporary issues in the commodity industry, the role of governance in global CVCs, third-party certification programmes, and temporal myopia. Most importantly, articles from these specific areas also had to be published in English language as indicated in the criteria (Glavee-Geo et al., 2020). As described by Aguinis and Solarino (2019), the method adopted was viable because of the level of clarity it applied in the selection criteria. Interestingly, the selection criteria did not put much emphasis on the publication year of the articles at the initial stage of the search, but this was later considered due to the relevance of some emerging themes in the subject of discourse. Publicly available articles were also extracted from various certification organisation websites to supplement the literature already identified. Certification organisation websites, such as UTZ Certified, Rainforest Alliance, and Fairtrade, helped the researcher acquire more articles to support the arguments on certification programmes in CVCs. The supplementary articles derived from these credible websites also contributed to the understanding of the literature from different perspectives. Additionally, the supplementary secondary data also helped to support what scholars have clearly defined as the practices for the implementation of third-party certification programmes in CVCs. The

source, date, and time of assessment of these supplementary articles from the various archival base are indicated in the reference list; these online articles were searched through Google.com.

At the first stage of the search, several relevant articles were identified, and several reviews were conducted on a specific subset of the research area, especially on the supplementary articles derived from the various websites like United Nations, UTZ Certified, the Rainforest Alliance and other institutions and agencies whose activities affect various commodity industries. The reliable databases used in the search, like Google Scholar, Scopus, and Web of Science gave a wider scope of the list of articles that were in line with the research themes rather than choosing other databases which could have limited the search to a single article. This multi-disciplinary method (Kauppi et al., 2018) was reliable, and made it easier to identify the line of articles for the review (Jackson and Mazzei, 2011). Though the weakness of the review may be the lack of numerical robustness, this was not the focus of the literature search; instead, the focus was on peer-reviewed articles with page numbers and volumes. Regarding access to the literature, the search terms were useful only for the title and abstract and were derived from the understanding of third-party certification programmes, global CVCs, and TM, which form the core topic of the thesis. Subsequently, the application of these terms resulted in the identification of articles covered in the literature review. Over the past two decades, international business journals have published articles that draw on third-party certification programmes, GCVCs, and TM from different perspectives (Preprah, 2015; Ton et al., 2008; Rahim et al., 2020; Gockowski et al., 2013; Ingram et al., 2014); however, the strategy adopted for the search for peer-reviewed and supplementary articles limited the number of articles proposed initially for the literature review. The initial search at the first stage

generated 8,413 articles from the three databases, as shown in Figure 2.0. However, most of them were irrelevant to the research area, and the number of articles was later shortlisted to 2,015 at the first stage of the search. The shortlisting was based on articles which were four and three stars and were peer-reviewed in an international rank journal.

During the second stage of the review process, much reading was done to identify the appropriate articles for the final review. Here, the study extended the review process to how the selected articles may contribute to knowledge, drawing on TM as a new theoretical perspective to explore the literature about CVCs. Interestingly, at the second stage of the selection process, the articles included in the review were drawn based on their research area; these articles identified most of the previous research gaps that the author had identified and their contribution to the new theoretical lens on TM. Based on that, 450 articles met the criteria after completion of the second stage of the review to ascertain the design of the literature review. However, in line with the three research questions, the study further excluded those articles that did not focus on the main topic of the study. The inconsistency of several articles was considered until a final settlement was reached at the second stage of the search. After the second stage of the review, 160 articles were shortlisted for the systematic literature review. For instance, articles like Ingram et al. (2014) and Gockowski et al. (2013) all satisfied the inclusion criteria at the final stage. In contrast, over 6,398 articles that were not in line with the set criteria were excluded from the first to the final stage of the review. For instance, (Terziev, 2019; Krimsky and Wrubel, 1996), an article in social sciences which was discovered in the search database of Google Scholar, was excluded from the list because it was not in line with the established criteria for the study. In all, holistic area-specific articles were discovered using the established criteria for the final literature review. The table 2.0 below outlines the

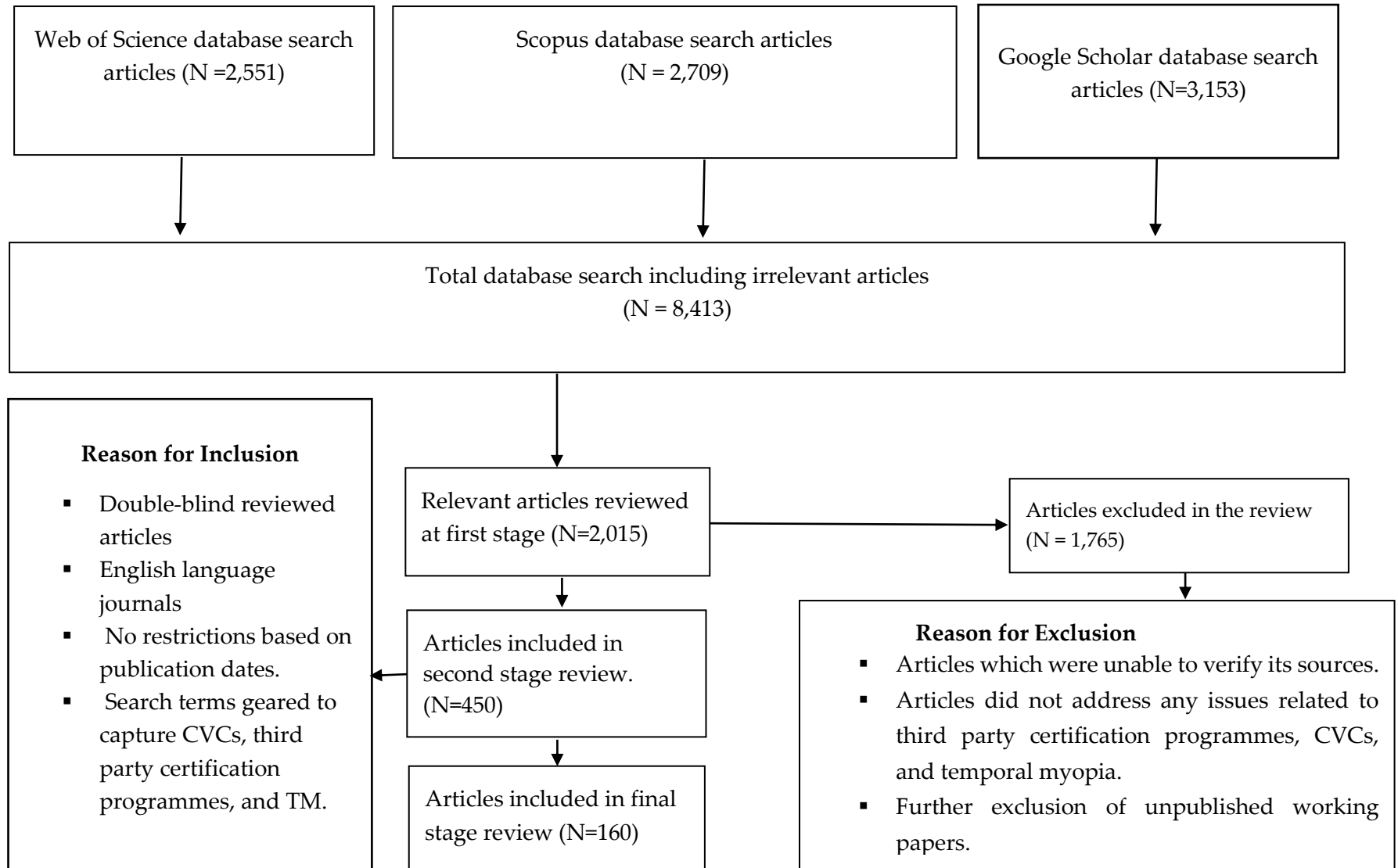
criteria adopted and the reasons that led to the selection of such articles for the systematic literature review.

Table 2.0: Review method for article selection

Criteria	Type of criteria	Reasons for criteria selection
The major keywords for the study were attached to the end of every search. They include certification programmes, commodity industry, commodity value chain, global commodity chains, temporal myopia. Conditions for selecting and including review sources.	Inclusion	Using keywords to search specified databases informed by screening and exclusion criteria Empirical and theoretical peer-reviewed journal articles on certification programmes impact and challenges in the commodity sector, global commodity value chains, governance in and could be accessed through Google Scholar and Web of Science databases.
Conditions for omitting publications during the review process.	Exclusion	The review excluded grey literature (anonymous websites, unverified sources, and commentaries), as well as editorials and non-business and non-managerial research papers. In addition, duplicated articles, master's thesis, doctoral dissertations, and unpublished working papers were all excluded.

The table 2.0 above outlines the inclusion and exclusion criteria adopted in the selection of articles for the literature review; it shows the criteria process, the criteria type, reasons for the selection. The criteria column outlines how the selection of specific articles for the literature review was carried out, the type of literature, and the database used in the selection process. The inclusion and exclusion levels define the type of articles that were relevant and so were added to the list and those which were irrelevant were omitted from the review. In the next section the review procedure is outlined in Figure 2.0.

Figure: 2.0 Summary of systematic literature search procedure



Using the procedure from figure 2.0 above, the study identified 8,413 journal articles from the three repositories that matched the predefined search criteria, and these constituted the core of this review. After reading through these articles in depth, the study excluded 1,765 of these articles which did not meet the inclusion criteria, and 2,015 articles were included at the first stage of the search. Through further analysis with the key words, the study excluded articles that did not focus on the study area; of the remainder, a total of 450 made it to the second stage of the search. However, it was discovered that not all the criteria were central to the arguments of the study; therefore, based on the research questions driving this empirical enquiry, 160 relevant articles were refined from the three broad areas and selected for the systematic literature review after the final search. Each is organised by the author, the year of publication, the research questions, the research settings, data, and method adopted and the main findings from the study. The next section presents an overview of the global commodity value chain.

2.2 Typologies of global commodity value chains (GCVCs)

Over the past decades, a significant amount of the literature on global trade and production has clearly emphasised various processes and activities involved in creating value within global CVCs in developed and emerging economies (Dunaway, 2014; Brunhammer, 2021). However, Hawkins and Anner (2020) emphasised that activities and processes leading to value creation emerge from both upstream and downstream practices across the CVCs in emerging and developed economies. Further to that, Hawkins and Anner's study went on to show that these interconnected value-added activities across the upstream and downstream have also contributed to the development of and have enhanced commodity production and increased consumption and have facilitated efficient trade distribution systems among trade partners in the global commodity space. Thus, they have enhanced production capacities and

improved efficient upstream and downstream deliveries across borders. Interestingly, Nissanke (2017) argued that these activities involved in creating value in the commodity industries have been a useful exploratory mechanism for organising thoughts and shaping research in the global commodity space.

Furthermore, Komlosy and Musić (2021) were of the view that, in recent times, the pathway to describe a link in a GCVC is to clearly define the relationship that exists between the lead actors and the primary and support activities involved in creating goods and rendering services, from the initial inputs of raw materials, manufacturing, transportation, and distribution, and on to marketing, retailing, consumption, and final disposal across firms in developed and emerging economies. Moreover, Grumiller (2021) argued that these value-added activities have contributed to the development and growth within the global commodity space, that is, by specifying the functional processes within a given line of economic activity, followed by depicting the geographical dissemination and organisation of those activities as they traverse state borders (Pananond et al., 2020). In this regard, the concept of a GCVC has become an important subject in the literature, as it brings together the core functional activities within and along the commodity chain and outlines the role of agents, chain participants, global lead firms, the role of governance, buyer- and supplier-driven chains, the link between firms and processes/activities involved in transforming goods and services into useful output at different geographical areas, as well as the various supply chain processes involved in the distribution of these goods to consumers in developed and emerging economies.

2.2.1 Formulation of the global commodity value chain approach

The roots of GCVCs extend back to the world-system theory (Ciccantell, 2021), a multinational approach to the global economic system (Landsteiner and Langthaler, 2021), and were later established as "a relatively coherent concept" (Scholvin, 2020) in a collection of works exploring commodity chains and global capitalism (Shin, 2020). However, scholars have also identified Hopkins and Wallerstein (1977, 1986) as the first to use the term "global commodity chains" as a heuristic to investigate the operation of globalisation and the replication of a tiered and hierarchical world system outside of the country's national-territorial boundaries. Drawing insights from Hopkins and Wallerstein's (1977, 1986) research on how GCVCs traverse different borders, Purcell et al. (2018) and Mishrif (2021) argued that the GCVC concept has also been used in analysing the international trading system as well as the growing economic integration of global production and marketing chains. Purcell et al.'s (2018) study goes on to emphasise that the GCVC concept has also helped production organisations and policy makers in analysing the impact of globalisation on industrial commodity chains and the power dynamics that exist among chain actors in a firm's operations across different geographical areas.

According to Chalaby (2015), the GCVC concept was introduced into the mainstream literature in the 1990s out of the research into political-economic development and underdevelopment, which focused mainly on world-systems theory, and dependence theory, which focused mainly on how some developed countries benefit from undeveloped countries by exploiting them and taking advantage of the flow of resources from "peripheral" poor undeveloped countries to "core" wealthy countries. Besides, in the early 1990s, Suwandi et al. (2019) postulated that the GCVC concept also focuses on organisations and global industries

and explored how the power imbalances that centred on multinational lead firms affect national development and production activities. Bair (2005) affirmed Suwandi et al.'s (2019) view on this issue and also argued that this imbalance has led to a breaking up of the world-system theories and has resulted in multinational organisations taking over the operations of less developed economies. Furthermore, Lee (2010) and Purcell et al. (2018) considered GCVCs as a tool for examining the geographical dispersion of production activities; they also suggested that the concept could be used to determine which firms or countries retained the most profitable gateways within the chain, thus revealing the unequal distribution of profits among them.

In contrast, Hawkins and Anner (2020) argued that in the early 2000s, some GVC researchers began to include the GVC concept into their research, using the term "commodity" as a homogeneous item with minimal entry barriers. Simultaneously, the introduction of this new term sparked a debate about the link between the GCVC and GVC approaches. Interestingly, this GCVC approach has been attracting significant attention since the early 2000s. In addition, Scholvin (2020) argued that during that period, numerous studies focused on producer- and buyer-driven commodity chains, including Gereffi (2018), who tried to use the framework to analyse exports across various commodity industries in both developed and emerging economies. Sturgeon (2008), Gereffi (2018), and Ponte et al. (2019) all emphasised that, over the years, GCVCs have focused on producer- and buyer-driven chains because such chains have shown the power of major agents and their ability to either incorporate or relegate less powerful actors to perform lower-value-added activities. There are two distinct structures within this broad process of commodity chains.

2.2.2 Producer-driven commodity chains

Given that these companies typically created international production networks to obtain raw materials and new overseas markets, direct foreign investment by multinational corporations was critical to the formation of producer-driven value chains. Producer-driven chains are becoming increasingly designed so that low-profit activities are outsourced upstream to networks of suppliers who are contractually obligated to produce under strict criteria. Thus, they compete for the supply of the crucial agent, who does not have to incur the same level of commitment to them. Other low-value-added downstream activities are entrusted (or outsourced) to the control of similarly competitive retail networks. Ellison and Gereffi (1990) explained further that in the producer-driven commodity chain, most transnational corporations in the consumer durable and capital goods manufacturing sectors, especially the automobile industries, began to establish their own international production networks to break into overseas markets, particularly in Latin America and Southeast Asia. Because of their emphasis on locally owned subsidiaries, multinational enterprises were able to exercise immense control over the backward and forward links in the full value chain of which they were a part. The computer sector is similarly characterised by capital-intensive production and is classified as producer-driven, but other segments, such as consumer electronics, could be considered buyer-dominated or in transition.

2.2.3 Buyer-driven commodity chains

In contrast to producer-driven chains, buyer-driven chains have minimal entry barriers to production. Therefore, manufacturers are subservient to the major agents in charge of design and marketing, particularly international brand names and retailing, where entry barriers are high and profits are concentrated (Raikes et al., 2000). Thus, buyer-driven commodity chains

are systems in which large retailers, marketers, and branded manufacturers play key roles in establishing decentralised production networks in a range of exporting countries, most of which are in the developing world. Here, production is increasingly outsourced to a competitive decentralised structure of sub-contractors. The bulk of them are found in poor countries, and they are frequently arranged in a multi-stage but also multi-quality array, with the lowest technology, quality, and value-added in countries with the lowest wages. This is the sole basis on which new brand-name "producers without factories" are organised. Clothing, footwear, toys, and fresh fruit and vegetables are all examples of buyer-driven structures.

Gereffi (1994) posited that in the buyer-driven chains, consumer goods industries have adopted a trade-led industrialisation pattern. Meanwhile, most of the production is done via multi-tiered networks of manufacturers that produce finished goods for international buyers, such as large retailers, or marketers, who order the goods and provide specifications for the products. Interestingly, Gereffi's (1994, 1999) research further emphasised that profits in buyer-driven chains come from a unique combination of high-value research, design, sales, marketing, and financial services that allow retailers, designers, and marketers to act as strategic brokers in connecting overseas factories and traders with evolving product niches in their main consumer markets, rather than from scale, volume, and technological advances as in producer-driven chains.

Drawing on the bargaining power of the producers, Gereffi (1999) and Gibbon (2001) were of the view that producer-driven commodity chains are where large, transnational manufacturers tend to play a central role in coordinating production networks - usually their backward and forward links. The focal distinction between producer- and buyer-driven

commodity chains, here is that buyer-driven commodity chains strictly emphasise the coordination undertaken by buyers with low market entry barriers while the producer driven chains frequently have high entry barriers since many supply chains, like those in the automotive and aerospace sectors, depend on capital- and technology-intensive production that is underpinned by economies of scale (Gereffi, 2001). Moreover, scholars such as Ponte et al. (2019) and Zhong et al. (2020) in their research made another distinction between the two types of commodity chains and their role in the global commodity space. For example, Ponte et al. (2019) and Zhong et al. (2020) were of the view that buyer-driven commodity chains refer to those industries in which large retailers, marketers, and branded manufacturers play the pivotal roles in setting up decentralised production networks in a variety of exporting countries, typically located in developing countries. whilst in producer-driven chains, manufacturers are producing advanced products like aircraft, automobiles, and computers. These are the key economic agents not only in terms of their earnings but also in their ability to exert control over backward linkages with raw material and component suppliers, and forward linkages into distribution and retailing (Strange and Humphrey, 2019). Following the distinction between buyer- and producer-driven commodity chains, Gereffi's (2010) study further introduced four main dimensions to the discourse, namely, the input-output structure, the territory covered, the governance structures (Gereffi, 2010; Horner, 2017), and the institutional framework through which national and international conditions and policies affect the global trade process at each level of the commodity chain. The GCCs' input-output structure and geographical coverage have primarily been utilised to describe the setup of individual chains; the governance structure has received the most attention so far because it is where the analytical framework introduces the concepts of barriers to entry and chain coordination, as

well as making the distinction between producer-driven and buyer-driven governance structures (Dallas et al., 2019).

Besides, Gereffi (2014) and Grabs (2017) argued that producer-driven and buyer-driven commodity chains are founded in separate industrial sectors and are headed by different types of transnational capital, that is, both industrial and commercial, and have different core competencies. Yet, both buyer-driven and producer-driven commodity chains are useful in analysing and evaluating activities within GCVCs (Grabs, 2017). The fourth dimension was emphasised by Pasquali (2021) to describe the conditions in which key lead agents incorporate subordinate agents in their control of market access and information in the GCC. Here, Pasquali's (2021) study highlights the power dominance of large MNCs in the global north that partner with other companies across the global south to control a specific market. Additionally, Gereffi's study further elucidated how subordinates' involvement in a GCC can provide indirect access to markets at lower prices than individual small-scale producers, and how technological information encourages producers to expand the chain hierarchy (Gereffi, 2001). This suggests that agents in a GCC are necessary but that conditions are not sufficient for subordinate agents to upgrade and that participation in the chain requires the acceptance of terms defined by key agents as a condition for participation, particularly for those aiming to advance to higher technology and value-added positions in the GCVC. The next section discusses some contemporary issues that have been making waves in the global commodity industries recently.

2.2.4 Global commodity value chain governance

The GCC approach has become an important framework for analysing economic development, as well as the evolution and complexity of the global agricultural-food system

in the context of globalisation and has proven useful in identifying power relationships and governance within chains, as well as their prospects for broad-based growth (Dolan and Humphrey, 2000; Islam, 2008). Governance is described by Clarke and Boersma (2017) as "power" and the ability to exert control within the GCC. In many circumstances, global value chain governance is the relationship among stakeholders and regulatory institutions that influence a range of activities along the value chain, from product/service initiation to the final consumers (Gereffi et al., 2018). Thus, governance is a central concept to value-chain analysis and enforces parameters set by global lead firms under which stakeholders in the chain operate in their situation practices (Lee and Gereffi, 2021). Besides, McWilliam et al. (2020) and Ponte et al. (2019) argued that the governance structures set within organisations and industries are meant to implement laws that may affect the operations of local firms that have direct connections to global markets. This means local and global lead firms play a role by setting up the governing laws surrounding the upstream and downstream operations of the GCC (Heron et al., 2018). Additionally, Van Der Ven (2018) and Alexander (2020) posited that the majority of international trade is conducted through industrial networks controlled by a small number of large buyers, mostly from the developed economies. Studies by Van Der Ven (2018) and Alexander (2020) further suggested that these lead firms regulate network access by establishing a standard parameter for suppliers in terms of what should be produced, when it should be produced, and how it should be supplied. The Van Der Ven (2018) and Alexander (2020) study goes on to argue that these parameters set by lead firms control a handful of large buyers, and they in turn, create considerable entry barriers for producers from developing countries and, in certain circumstances, from emerging economies. Here, governance becomes a central concept to GCC and enforces the parameters set by global lead

firms under which chain actors and stakeholders in the chain have to undertake (Neilson et al., 2018).

However, Barrientos et al. (2019) and Gereffi (2019) argued that not all industries share these structures of governance because the coordination of operations tends to be founded on a mix of business relations and a network-style of governance based on a separation of competences between firms. Thus, the feature of GCC governance is seen as the laying down and coordination of the structures that influence lead firms in setting parameters across global commodity industries (Ingweye and Qadwe, 2018). However, McWilliam et al. (2020) argued that the GCC governance in recent times has been transformed from frontline market trading into activities. This means governance is seen from the organisational viewpoints as the non-market coordination of economic activity that has both a direct and indirect influence on firms' activities, such as production, marketing, inbound and outbound logistics, and other supporting activities along with the GCC processes (Kano, 2018). Moreover, De Backer and Miroudot (2014) stated that the high transactional cost in coordinating these economic activities along the GCVC and across networks has led to the production of non-standard commodities across emerging economies in recent times. This organisational dilemma has called for the GCVC activities and governance structures to be strengthened especially in emerging markets, where substandard goods easily get onto the market base despite non-compliance with governance measures set by private and public institutions and by the government (De Backer and Miroudot, 2014). Nevertheless, there is little statistical data on compliance and non-compliance with the governance structure in the GCVCs especially in emerging economies. In that regard, global lead firms continue to set parameters to regulate this dilemma across emerging markets (Mac Clay and Feeny, 2018).

In recent times, a growing body of research has been examining the impact of international trade channels on economic growth, with a focus on the processes through which import, and export flows influence productivity and output growth (Kaplinsky and Morris, 2018). However, most of this literature tends to overlook a crucial aspect of the coordination and organisation of the relationships (chain governance) among the many actors involved in these activities in the GCVC as well as their development consequences within the commodity industries (Ryan et al., 2020; Havice and Campling, 2017; Purnomo et al., 2018). Interestingly, the recent literature on GCVC takes the role of governance in upstream and downstream operations explicitly into account. According to Barrientos et al. (2019), in many circumstances, the governance in GCCs is the control relationship among chain participants such as processors, retailers, regulatory institutions, wholesalers, and other stakeholders, who influence a range of activities along the firm's operations, from product/service initiation to the final consumers. Additionally, scholars such as Kano and Hoon (2020) and Davis et al. (2018) have postulated that in the recent study of GCVCs, the issue of governance has been essential to various stakeholders. Most importantly, governance in GCVCs has served as a control mechanism in determining market access and capability acquisition, and eventually, in gaining distribution among chain participants (Kano, 2018; Grabs and Ponte, 2019).

On the other hand, Kano and Hoon Oh (2020) described governance as the "authority or power relationships that determine how financial, material and human resources are allocated and flow within a chain". However, Kano and Hoon Oh (2020) identified the two types of relationship in the GCVC, namely, producer-driven and buyer-driven chains, arguing that the 'governance structure' of both chains is largely determined by entry barriers. In that regard, the buyer/producer-driven dichotomy was complemented with a five-fold typology in a recent study by McWilliam et al. (2020) and Ryan et al. (2020), ranging from market-based

through modular, relational, captive, and hierarchical, to ascertain the “explicit coordination” between the buyer and the supplier in the GCVC. Besides, Gereffi et al. (2005) defined governance in a GCVC as “authority and power relationships that determine how financial, material and human resources are allocated, controlled, and flow within the GCVC” (Gereffi et al., 2005; Ponte and Sturgeon, 2014). Thus, governance draws on the inter-firm relationships and institutional mechanisms through which non-market coordination of activities in a GCVC is achieved (Humphrey and Schmitz, 2008). Moreover, regarding governance serving as the pivot among global firms, John (2018) argued that producers in developing countries are expected to meet certain governance requirements across a GCVC’s network. This means local industries need to ‘line-up resources’ to compete on the global fronts that frequently do not (yet) apply to their domestic markets (Humphrey and Schmitz, 2002). Meanwhile, other scholars, such as Fearn et al. (2012) and Yan and Wang (2014), have argued that earlier studies that applied to GCVC analysis limited their inquiry to identifying the flow of materials and information across various countries. Interestingly, to understand the role of governance in this issue, Gereffi (2010) and Gibbon et al. (2008) claimed that ‘authority and power’ are the key determinants that control the flow of materials and information across the upstream and downstream operations in GCVCs across developed and emerging economies.

Recent work by Horner and Nadvi (2018) and Ponte et al. (2019) has suggested that GCVC governance has become an important mechanism in understanding how and when lead firms develop, monitor, and enforce the norms and standards that help multinational businesses and other firms in the commodity industries better integrate and coordinate their activities. This means governance in GCVCs is critical for the development, transfer, and diffusion of knowledge that leads to innovation, which allows businesses to enhance their performance and maintain a competitive advantage with the support of government, private and financial

institutions, and chain participants in improving operational activities in various commodity industries (Davis et al., 2018).

2.2.5 Governance and power among chain participants in global commodity value chains.

Havice and Campling (2017) defined power as a firm's or organisation's ability to exert influence and control over other firms or actors in the chain and beyond. However, Grabs and Ponte (2019) postulated that power among chain participants in commodity chains is normally accumulated, held, and exercised, and can be divided among lead firms, suppliers, and other stakeholders within the GCVC. Interestingly, Van Der Ven (2018) posited that in a GCVC, lead firms dominate the entire chain because of their purchasing power and the authority to choose and replace suppliers who do not adhere to the parameters set by them. Besides, the purchasing power allows lead firms to explicitly coordinate chain activities and to enforce suppliers, importers, and exporters to lower the costs on various supplies, improve the quality of products and services based on the set parameters, employ specific business processes that will enhance production and service, and purchase inputs from specific vendors and processors who adhere to best practices, such as sustainability and certification standards within the global commodities industry (Pietrobelli and Saliola, 2008; Nadvi and Raj-Reichert, 2015). However, in recent times, the configurations of GCVCs and production networks have been constantly changing, leading to new trajectories and geographical distributions of value creation and capture (Grabs and Ponte, 2019). These changes in GCVCs and production networks have led to an increased power dynamic among chain participants, suppliers, and produce buyers across different countries. In this respect, Heron et al. (2018) and Selwyn and Leyden (2021) argued that power is usually held by final-product manufacturers in producer-driven chains, which are mainly capital and skill-intensive

businesses normally in developed countries, The situation is similar in the buyer-driven chain, where the power is held by retailers, marketers, or branded manufacturers. Interestingly, studies by Heron et al. (2018) and Selwyn and Leyden (2021) further emphasised that these changes in GCVCs and production networks have shaped mass consumption and streamlined decentralised manufacturing operations across different commodity industries.

On the other hand, governance and power imbalances can be a barrier to more sustainable production and operational practices in a GCVC (Palpacuer and Tozanli, 2008). Besides, existing supply and value chain relationships can be precarious throughout the chain, as lead firms cannot govern without complete information on commodity production and processing circumstances in each segment of the entire GCVC (Gereffi and Lee, 2016; Kawakami, 2020; Sako and Zylberberg, 2017). Therefore, greater transparency of transactions within the GCVC and metadata could affect the lead firms' power and, ultimately, the distribution of value-added within the GCVC (Gardner et al., 2019; Fold and Neilson, 2016; Ponte and Sturgeon, 2014). This means closer cooperation among actors and chain participants along the entire GCVC does not form part of lead firms' strategies (Patel-Campillo, 2011).

2.2.6 Implications of governance on rents and inequality in global commodity value chains

Recent work on GCVC governance has focused on how chain actors and other stakeholders coordinate activities across commodity industries in developed and emerging economies (Kano, 2018; Gardner et al., 2019; Fold and Neilson, 2016; Ponte and Sturgeon, 2014). However, for most of these actors, coordinating processes within and across the chain tends to overlook a critical aspect of the story: the implication of governance on gains and the inequalities in the relationships that exist between the upstream and downstream coordinating processes (Davis et al., 2018). The upscaling of this upstream and downstream relationship in the GCVC

requires a wielding power within the firm's processes and a complex interplay between commercial and public sector actors (Gereffi et al. 2005; Morris et al., 2011; Kaplinsky, 2013). Significantly, the sector is controlled or 'governed' by multiple stakeholders - both public and private (Thiele et al., 2011). These 'controls' centre around logistics operations, the division of labour, technology and innovation, branding, competitive positioning of the product or service in the global market, as well as the distribution of rents in the GCVC (Ponte and Sturgeon, 2014; Heeks, 2017). Mostly, these gains (rents) are generated by upstream and downstream firms across operational countries; however, the processes leading to the attainment of these gains from various firms are highly governed by global lead firms in the commodity industries. In this research, the missing link is the inequality of governance to clearly define the 'controls' in upstream and downstream coordination across developed and emerging economies (Mishra and Dey, 2018; Gardner et al., 2019; Havice and Campling, 2017; Grabs and Ponte, 2019). Recent work, however, has attempted to broaden the scope of governance on rent and the inequalities that exist within upstream and downstream processes among coordinating firms in GCVCs (Mayer and Phillips, 2017; Quentin and Campling, 2018; Santoso et al., 2021). Despite control measures in coordinating upstream and downstream activities in GCVCs, Kaplinsky's (2004) study on chain analysis suggests that there has also been a concerted effort to start the process of analysing the implications of governance on gains from a broader governance perspective and how these gains influence stakeholders', firms', and lead firms' operations in GCVCs.

Nowadays, governance in GCVCs has become an important mechanism in controlling global trade (Horner and Nadvi, 2018; McWilliam et al., 2020). Most importantly, the concept of governance in GCVCs has demonstrated the control measures and indicated how

international trade and investment build cross-border production networks that connect countries, businesses, and employees as well as promoting industries' upstream and downstream collaborations and cross-border integration across the world (Kaplinsky, 2013; Heron et al., 2018). Besides, these upstream and downstream relationships among global lead firms have also contributed to 'value creation' among chain actors both in advanced and emerging economies. In contrast, according to Li et al. (2021), the dichotomy between a downstream and upstream GCVC has previously not been clearly defined in certain sectors of the global economy. In this vein, Xie and Lie (2020), in their study on industrial upstream and downstream and cross-border integration, argued that there has been a clear distinction between the upstream and downstream operational activities and integration, which is characterised by firms, regulatory institutions, lead firms, and other stakeholders within the commodity space in recent times. For instance, in the cocoa industry, the upstream sector consists mainly of firms involved in the cultivation and production of cocoa beans, while the downstream covers global firms involved in the storage and haulage, primary and secondary distribution, and the marketing of the refined cocoa produce. Xie and Lie (2020) and Swaray and Salisu (2018) have further suggested that the relationship between upstream and downstream has dominated discussions in the GCVC literature in recent times and has emphasised the power dominance within the integrated network. This means a single actor cannot point to chain dominance and gains but can indicate an integration of upstream and downstream chain actors and their competing countries.

Additionally, Lima et al. (2016) stated that the underlying intuition among GCVC actors and lead firms is the authority over rent among upstream and downstream operations and how these gains are shared among the underlying sectors within the commodity industries.

Furthermore, neoliberalism in commodity trade provides the scope to gains (rents) and clearly defines the level of these rents to the coordinating countries (Davis et al., 2018). As such, Davis et al. (2018) was of the view that due to neoliberalism, commodity trade producers are exposed to new techniques of processing, better and newer inputs, new customers, and new product designs in their quest to enter competitive markets, and that has contributed to the global north chain actors' domination of governance and rent over the global south and also their control over the downstream activities. This argument by Davis et al. (2018) was further supported by Alford et al. (2021); they claimed that gains and authority are controlled by the northern chain actors, who even set the parameters for upstream stakeholders on production processes in the form of what to produce, at what time, and even the type of suppliers and their tiers to transact business. Drawing some fundamental insights from governance on the rent inequalities literature in GCVCs across the upstream and downstream levels, it is obvious that most production and other chain activities and processes take place at the upstream level. Yet, the downstream drives the gains and has power over the commodity industries through their direct marketing and distribution contacts with consumers across the global market (Ponte and Sturgeon, 2014; Ponte et al., 2019; Grabs and Ponte, 2019).

On the other hand, Kaplinsky and Morris 2001; Gereffi et al. 2005; Kaplinsky, 2013 emphasised that GCVCs are dominated by lead firms and actors who coordinate activities within the upstream and downstream; however, governance at the downstream plays a key role by controlling both sectors of the chain and, thus, activities across the global north and south. This means operations at the global north contribute to the development of a GCVC, compared to the global south, where raw materials are explored for production, whilst in the global north, chain actors and agents focus on value addition, marketing, and distribution. In

contrast, Santoso et al. (2021) claimed that upstream activities have always been the backbone of global industries and have authority over the supply of raw materials and production processes, especially in the global south. Following this philosophy on the governance of rent inequalities in a GCVC between the upstream and downstream activities, it is obvious that lead firms have dominated the global north and have authority over operations in the global south, which is dominated by upstream activities. In the next section, the study reviews the role of technology in the global commodity value chain.

2.2.7 Commodity value chains in the fourth industrial revolution

Technology developments affect every part of our lives, transforming industries and professions, and influencing information exchange across stakeholders (Bacco et al., 2019). Recently, technologically innovative solutions, such as drones, non-adjustable weighing scales, and point of interest mappers, have been created in GCVCs to decrease deficits, increase efficiency, secure global supplies, connect stakeholders, and advance cooperative advantages from production to consumers across various sectors of the global economy (Heeks, 2017). In this regard, the relevance of technology addressing most of these efficiency and inefficiency issues within and across GCVCs from different economies cannot be underestimated (Tallon, 2011). However, scholars such as Keogh et al. (2020), Vagadia (2020), and Kamilaris et al. (2019) from an agricultural technology literature perspective, have argued that production efficiency cannot thrive without the use of modern sophisticated devices such as drones, blockchain technology, RFID, computers, and ERP systems in the transformation and as a platform for connecting various chain actors and stakeholders within and across the global commodity.

This argument by Keogh et al. (2020), Vagadia (2020), and Kamilaris et al. (2019) on devices driving commodity chains was further postulated by Veraart et al. (2020), who argued that due to globalisation, countries have struggled to control the flows of resources and have constructed national narratives around global trade. However, the fact remains that today's global trade is transnational, and practices around it can only be viewed from different geographical locations through technology. Recent studies in global commodity trade have shown that there are two categories of technology in the global space (Rodrik, 2018). The first draws on political science research on international relations, which examines the involvement of global actors such as engineering communities, multinational corporations, and non-governmental organisations (NGOs). These actors shape socio-technical systems across the global north and south. The second assessment emphasises globalisation studies, which draw on the interlinkages between domestic and international developments across trading countries (Manyika et al., 2016; Xing and Marwala, 2017).

On the other hand, however, from the perspective of third-party certification programmes, the basic concept of technological development in commodity certification programmes is to provide transparent validated information on certification practices across developed and emerging economies (Tallon, 2011; Spiller and Tuten, 2019). Most importantly, the use of a 'decentralised technological system', such as system application products (SAP) and other ERP systems, is seen as an appropriate way to facilitate the production, validation, recording, storing, monitoring, and sharing of information on certification programmes among stakeholders and actors within a CVC (Rouhani and Mehri, 2018). Here, the essence of technology evolution in the third-party certification programme is to create a transparent record of certified and uncertified commodities and an efficient monitoring system, which will enhance best practices in the commodity industries. Comparatively, the Colombian coffee

industry in recent times has launched a new blockchain technology to their value chain operations. The blockchain initiative serves as a solution for global lead firms in the documentation of production processes and processing of 'single-origin coffees', which are UTZ and Rainforest Alliance certified from a single producer (Tröster and Hiete, 2019). Interestingly, the technological platform allows coffee consumers and global lead firms to receive information about the different stages of the production and encourages customers to support social practices and environmental developments in the production regions of Colombia.

Despite the effort made by chain actors and other relevant stakeholders relying on technology to connect operations from the global north to the south and vice versa, there are always major and minor challenges encountered by stakeholders and chain actors in the connection processes (Howson, 2021; Beckert et al., 2021). Besides, regulatory constraints from public and private agencies, inadequate training for chain actors, trust on the web, and uncertainty surrounding technology adoption constitute some of the challenges connecting chain actors and other participants from the global south with the global north in recent times (Agyekumhene et al., 2018). For instance, in the global south, most commodity producers lack technology in their production and farming practices, which has an adverse effect on the implementation of third-party certification programmes. Also, the lack of any proper digitalised monitoring system encourages producers to deviate from the core objective of the certification management systems put in place by these private NGOs and other stakeholders within the commodity industries (Ansah et al., 2020). In conversely, Raab and Szekely (2017) argued that the widespread use of existing digital technology in GCVCs will require not only the building of trust among stakeholders on the effectiveness of the technical solutions these technologies provide, but it will also be important to convince them of how safe these are

particularly with regard to data protection. Furthermore, in emerging and developed economies, technology within commodity industries must be simple, easy, and user friendly, as this will allow stakeholders to have command over it and implement it as expected across operational themes (Nitithamyong and Skibniewski, 2004; Sabatier et al., 2012; Foster et al., 2018). Notwithstanding the enormous contribution of technology to various aspects of GCVCs, such as the ERP system and other devices, Zhao et al. (2019) claimed that the high cost associated with the implementation has prevented most organisations, especially in emerging economies, from implementing them. The next section outlines and discusses the various intermediaries within GCVCs.

2.2.8 Intermediaries – actors within global commodity value chains

The development of a GCVC involves exploring the varying role(s) of intermediaries across the production and distribution chains (Ramirez and Rainbird, 2010). Coe and Yeung (2015) and Lund-Thomsen et al. (2021) described these intermediaries as actors who can bridge and connect numerous participants in a chain, allowing them to engage in mutually beneficial value-added activities within and across the commodity chain. They further suggested and acknowledged that such intermediaries can be both firm and non-firm players in the GCVC. In other words, intermediaries are predominantly seen as facilitating the efficient functioning of the GCVC, for instance, by providing unique inputs that are often intangible in nature. However, Breul et al. (2019) distinguished between three sorts of intermediaries: those involved in finance, in logistics, and in the standards that regulate international trade.

In addition to the discourse on intermediaries in a GCVC, Coe and Yeung (2015) and Lund-Thomsen et al. (2021) drew on standard intermediaries as mediators in the establishment, enforcement and harmonisation of protocols, codified knowledge, and specifications in the production of products and services. Thus, intermediaries act as 'go-betweens' for various

actors and relevant stakeholders and facilitate the interests of a variety of actors within and across the chain, such as lead firms, suppliers, and public and private institutions within and across a GCVC. In contrast, to ascertain the role of relevant intermediaries in a GCVC, Bernard et al. (2015) further drew on intermediaries as a unit of a business that matches demand and supply activities whilst disseminating information and facilitating operational activities within and across the GCVC. Here, individuals and firms serve as an intermediary between the entity, customers, and suppliers within various global businesses. For instance, Resnick et al. (2013) conducted a case study of commodity market brokers and suggested that brokers are important intermediaries within the chain and, as such, most emerging businesses try to add them to their organisational structure because they contribute to better price management, search cost, and risk management, and are better managers in connecting the business to the global markets. Building on Ahn et al.'s (2011) and Bernard et al.'s (2015) view of intermediaries as a business unit, Lund-Thomsen et al. (2021) argued from an institutional regulatory perspective that rapid upscaling procedures in businesses may sometimes jeopardise the rigour with which standards are implemented. In practice, this means that regulatory intermediaries' capacity to apply that standard strictly is sometimes jeopardised by their desire to scale up their projects quickly to satisfy consumer demand for higher volumes of production of sustainable commodities. This analysis helps explain why the commodity industries may not always be in a position to achieve their intended aim of normalising more environmentally friendly production processes for commodities. Although the above constitute some very initial thoughts on the role of intermediaries in a CVC, it is not clear, for instance, exactly what roles public and private intermediaries play in the process at the upstream and downstream level of a GCVC. In the next section, the study draws on the

role of selected intermediaries in the upstream and downstream and their influence within the GCVC.

2.2.8.1 Distributors and Retailers

Among production firms in GCVCs, some direct exporters and intermediaries assist producers in the distribution of the supplies to prospective consumers across global markets (Szczepanik, 2017). However, the international literature on trade has over the years focused on the manufacturing and distribution of supplies across markets. Interestingly, recent work on global trade has highlighted the existence and the relevant role of key intermediaries such as distributors and retailers in GCVCs. Butt (2021) highlighted that distributors contribute to the downstream of various commodity industries; that is, they control domestic markets, with a high influence on production due to their purchasing power in breaking bulk. Besides, distributors also adjust to production standards through packaging and sorting to meet the customer's demands and sometimes act as the consolidators of produce from many small producers across the GCVC (Givens and Dunning, 2019). Thus, distributors serve as middle suppliers for multiple products across different markets with far greater efficiency for their prospective customers. Recently, Wang et al. (2019) and Butt (2021) have claimed that the necessity for data privacy has sped up the adoption of new technologies across different sectors of the global economy. In that regard, distributors have been labelled as protecting global supply chains by widening distribution access and improving production outcomes through innovations like blockchain and artificial intelligence (AI).

On the other hand, retailers across the global north and south have had little influence on the performance of their operations across GCVCs. Over the past decades, retailers have served as the link between producers and consumers. Mostly, they breakbulk and depend solely on supplies from wholesalers due to their small financial backing and their reliance on credit

(Schulze et al., 2019). However, they champion domestic market sales and contribute to the development of a new product through their regular contact with customers, especially in emerging economies (Dunne, et al., 2011).

2.2.8.2 Transporters

Recently, transporters have become the new frontiers to supply and value chain operations (Pokrovskaya et al., 2020). Most importantly, transporters play a key role in the facilitation of supplies within and across global trade (Savir et al., 2017). Thus, transporters facilitate the movements of input and output processes from producers to consumers in and across a GCVC. Additionally, transporters ensure that products and supplies are delivered to the final consumers while ensuring that delivery schedules between parties are being adhered to and on time. Significantly, transporters create a cordial relationship between the producers or between the manufacturing entities and the consumers through a well-structured delivery schedule (Miroudot and Cadestin, 2017). Alternatively, transporters can sometimes carry passengers from one destination to the other; they contribute to the efficiency of organisational management services and have a significant influence on the performance of the GCVC (Nordås et al., 2006; Hasan and Salah, 2018).

2.2.8.3 Financial institutions

Over the past decades, financial intermediaries, such as commercial banks, investment banks, mutual funds, or pension funds, have acted as intermediaries for financial transactions across various sectors (Allen and Santomero, 2001; Adrian and Shin, 2010). However, recently, the influence of evolving financial institutions on the mechanism of linking investors within and across GCCs with the pace of economic activity has attracted widespread attention across global trade (Di Tella, 2019; Tsomaia, 2020). Thus, financial institutions have, over the years,

served as intermediaries in connecting investors and borrowers across different sectors of the global economy. Interestingly, Brogi and Lagasio (2019) claimed that financial intermediaries act as a third party to organisations and individuals who strive to meet both parties' financial demands to their mutual satisfaction. Most importantly, across a GCVC, investors can make greater investments through financial institutions that serve as a security for their investment and a 'gatekeeper' to a range of other investors over time (Mabote, 2017). Moreover, the partitioned financial economy drives trade through public financial institutions, such as the central bank, while commercial banks and non-banks have control over financial transactions and provide direct and indirect financial and insurance support to investors and global businesses across developed and emerging economies (Mabote, 2017; Di Tella, 2019). Based on Mabote (2017) and Di Tella's (2019) research on the role of financial and non-banking institutions serving as intermediaries to global trade, Fontana and Passarella (2018) further suggested that non-banking financial intermediaries do not take deposits from investors. However, they are able to provide credit facilities and offer insurance policies and other types of support to stakeholders in global trade.

On the other hand, global firms and trade partners benefit from financial intermediaries in a variety of ways, including safety, liquidity, and economies of scale in banking and asset management (Beck et al., 2015). Although developments in technology threaten to eliminate the financial intermediaries in some sectors, such as investing, disintermediation is less of a concern in other areas of finance, such as banking and insurance. Besides, many intermediaries participate in securities exchanges and manage to grow their funds using long-term plans. Despite technology being a benefit to some sectors of the global economy, the operations of financial intermediaries continue to dominate in the issue of firms' and

countries' competitiveness and offer support to other emerging businesses across developed and emerging economies.

2.2.8.4 Public and private institutions

A growing narrative in studies of intermediaries has emphasised the role of the government and private institutions as key intermediaries in global trade (Ramirez et al., 2018). However, the development of the GCVC with different governance rules highlights the opportunities for institutionally and socially embedded organisations, such as government agencies, associations, NGOs, and other intermediaries, to support the process and coordination of global commodity trade within emerging and developed economies (Marques and Eberlein, 2020; Swinnen et al., 2010). The analysis of government and private institutions serving as intermediaries between upstream and downstream operations has contributed to an expansion in trade and the development of various commodity industries. Moreover, Kivimaa et al. (2019) and Ramirez et al. (2018) have stated that a more comprehensive perspective would see the power of government and private agencies in mediating trade operations within a GCVC as a relational skill arising from its conscious function of coordinating and/or supporting the activities of actors and other stakeholders. In contrast to the arguments posited by Kivimaa et al. (2019) and Ramirez et al. (2018) on the governance role of government and private agencies in mediating trade operations, Barrientos et al. (2011) further accentuated that governments and other private institutions playing intermediary roles can sometimes be influenced by negotiated arrangements between firms and associations, civil society, corporate social responsibility initiatives, and lead firms' operations across countries especially in the global south. Moreover, the influence and power of these government and private agencies in contemporary times mean they have become powerful in global industries

and sometimes dictate the direction of the upstream and downstream operations of a GCVC across developed and emerging economies (Neilson, 2008).

2.3 Contemporary issues in global commodity value chains

Contemporary commodity production is becoming ever more globalised and industrialised, and products are subject to increasing standardisation across the global north and south. In the global north, the commodity industry is being intensified and yields per hectare have been climbing steadily over the last few decades. This is believed to place a burden on chain actors, while enhancing capacity and trade across borders. However, the recent pandemic has triggered a global economic crisis, across developed and emerging economies, thus demonstrating the vulnerability of various economic structures especially in commodity trade.

2.3.1 Covid -19 and global commodity value chain

COVID-19 is shaking the global economy; the pandemic is causing a massive distraction to people's lives and livelihoods as well as to the world's social and economic structures (Tucho and Kumsa, 2021; Engidaw, 2022). In the past two years, the COVID-19 pandemic has given rise to various predictions on the future shape of GVCs. According to Nordhagen et al. (2021), the pandemic was an exogenous shock of an unprecedented magnitude, which inflicted immense damage on multinational companies (MNEs), small and medium-sized businesses (SMBs), and their supply chain partners with international economic ties. In addition, according to Phillips et al. (2021), the pandemic has exposed the fragility of the coordination of activities among chain actors and the vulnerabilities of GVCs across industries. Despite the integration of the global economy, and although global commodity trade is growing at more than twice the normal rate across borders, Gereffi (2020) argued that the pandemic has rapidly

become the most disruptive event to this global growth and has had a significant negative influence on various industries. Most importantly, when the pandemic hit, GVC vulnerabilities became evident in other sectors which rely on personal interaction, such as the hospitality industry, as the global lockdown led to the closure of hotels, gyms, pubs, cafes, and restaurants and many other businesses (Lucchese and Pianta, 2020; Shapoval, et al., 2021). Meanwhile, the pandemic has exposed GVCs' vulnerability in the face of increased risk and urgency, highlighting the need for a more coordinated and responsive value chain coordination and supply of commodities as well as the relocation of manufacturing closer to the point of demand (Marinov and Marinova, 2020; Arriola et al., 2020). Yet global firms cannot fully address risks and vulnerabilities or stress-test beyond their first-tier suppliers without reviewing their GVCs, and this precludes identifying opportunities to reconfigure their GVCs. To address these pressing demands, Phillips et al. (2021) suggested that small-scale local production should enable decentralised design and manufacture via geographically unconstrained value chains. To that end, Fonseca and Azevedo (2020) and Di Stefano (2021) argued that the COVID-19 epidemic has heightened the argument over value chain organisation. GVC growth has slowed since the 2008 Global Financial Crisis. Although it is too early to tell what effect COVID-19 will have, many experts believe the pandemic will encourage reshoring and near-shoring. Given the unparalleled shock triggered by COVID-19, governments, consumers, and businesses have all called for increased GVC resilience to ensure a smooth chain coordination while maintaining efficient upstream and downstream operations across developed and emerging economies (Ivanov, 2020; Govindan, Mina, and Alavi, 2020).

2.3.2 Climate change and global commodity chains

GCC analysis has greatly aided our understanding of global trade and development processes since the mid-1990s (Selwyn, 2012). However, the high demand for various commodities has been closely related to the increase in the world's population and the rate of urbanisation (Rehman et al., 2021). The world's population is currently 7.9 billion people, with 56.2 percent living in cities. Moreover, the global population is expected to reach approximately 10 billion by 2030, which means the demand for global commodities and the expansion of GCCs is expected to rise (Lin and Jia, 2018). Wu et al (2021) and Díaz et al. (2019) posited that the high global population will also contribute to high emissions of greenhouse gases caused by human and chain activities, and intermediately will affect the weather patterns and global trade. This argument by Wu et al. (2021) and Díaz et al. (2019) was further supported by Taylor et al. (2019), who argued that over six million world leaders and relevant institutions are working to develop solutions to reduce carbon emissions to net-zero by the year 2040 to achieve a sustainable environment. According to the Intergovernmental Panel on Climate Change (IPCC), this global target will have both a direct and an indirect impact on global commodity trade as the world seeks to limit global warming to 1.5°C by 2040 (Shukla et al., 2019; Fragkos, 2020; Molina and Abadal, 2021). Based on this, Robertson (2021) went into more depth and suggested that global leaders and relevant institutions are extending further the conversation on climate change, which will necessitate quick and far-reaching transformations in energy, land, urban infrastructure, transportation, industrial systems, oil, and energy production and supply, agricultural production, automobile industries, commodities trade, and other industries in developed and emerging economies.

Environmental field research carried out by Warszawski et al. (2021) suggests that the global scale-up of these transformation systems to curb climate change is unprecedented, and they

will necessitate considerable emissions reductions across all sectors. Warszawski et al.'s (2021) study further indicates that the regulations and rules addressing climate change will have an impact on global commodity flows, chain actors, and other relevant stakeholders within the entire GCC. To address climate change and its impacts on and threat to GCCs, Santoso et al. (2021) and Fernandez-Stark and Gereffi (2019) postulated that these global issues require the inputs of both upstream and downstream chain actors, global lead firms, institutions, and relevant stakeholders both public and private because the commodity industry is considered one of the socio-economic sectors sensitive to climate change (Afrifa et al., 2020). Taking a stance from the practices of climate change and its impacts on GCCs, Zhang and Fujimori (2020) argued that this global transition has caused most global industries to change their business strategies and try to develop a strategic plan towards sustainable production. For instance, the global automobile companies are switching from petrol and gas to hybrid electric vehicles (green) whilst developing climate change global policies on the operations of the automobile markets.

On the other hand, a recent study by Song and Zhou (2020) has highlighted the measures adopted by global political and institutional leaders to fill the global trade gaps caused by climate change and other contemporary issues in global trade. Song and Zhou's (2020) study further indicates that creating value within the GCC requires the growing integration of global production networks within the commodity industries. Moreover, chain actors and relevant stakeholders need to diversify chain operations rather than being clustered to their operations in these current times. This diversification will create employment avenues across global economies, such as new turbine designs, new designs for solar panels, banking green bonds, and new battery technology. In contrast, Goldberg (2020) argued that increasing production efficiency to create value in global trade and diversification in chain operations as emphasised

by Song and Zhou (2020) will not help significantly in reducing the risk in global commodity trade in the event of significant climate change, global pandemics, certification, and other contemporary issues confronting global trade, where trade extends beyond boundaries (Parajuli et al. 2019). This means that to be able to withstand these contemporary global challenges, chain actors need to focus on the network efficiencies across GCCs rather than the value chain. The summary of literature and finding are presented in the table 2.1 below. The next section discusses the evolution of certification programmes in CVCs.

Table 2.1 Summary of past studies on global commodity value chains and contemporary issues in the chain

Author (year)	Research questions	Research Settings (data and methods)	Key findings
Gereffi and Korzeniewicz (1994)	How novel are emerging phenomenon and emerging patterns of social and economic organisations?	Global commodity industries (Multiple case studies)	Coordination across firm boundaries, but also the growing importance of new global buyers
Kaplinsky and Morris (2018)	What are the generation of rent and distribution of gains in the global operations of governed GVCs?	Examining food-safety standards in GVCs from various stakeholders—the corporate sector, civil society organizations, the nation state, and supranational institutions (Multiple case studies).	Distinguish between the four sets of rent—gifts of nature; innovation rents; exogenously defined rents; and market power.
Purcell et al. (2018)	What is the historical development of value relations which confront small producers at the root of the cocoa GCC in Ecuador?	Ecuador cocoa industry (Interviews and secondary data)	Offered a theoretical framework grounded in Marxian rent theory to understand the historical development of value relations which confront small producers at the root of the cocoa GCC in Ecuador
Humphrey and Schmitz (2002)	How insertion into global value chains affects local upgrading strategies?	Developing country producers’ relationship when exporting to developed markets (Case studies)	Continuum arm’s-length market relationships through to hierarchical governance (vertical integration)
Van der Ven 2018	Do retailers and supermarkets hold power over third-party transnational sustainability standards?	Global Aquaculture Alliance and case study of Walmart (Interviews and secondary data)	The survival of third-party standards ability to achieve broader global governance objectives often depends on market uptake
Gereffi (2001)	What are the key roles played by commercial capital in the expansion of manufactured exports from developing countries?	In depth interviews with managers with managers of overseas buying offices, trading companies, manufacturers, and retailers in East Asia and United States. Supplemented with secondary data.	Big buyers have shaped the production networks established in most dynamic exporting countries.

Heeks 2017	What are the broad issues surrounding digital data, information, knowledge, information systems, and information and communication technologies in the process of socio-economic development?	Digital Gig economies (Literature review)	Online labour is associated with both positive and negative outcomes at micro and macro level.
Nordhagen et al. (2021)	How is COVID 19 impacted on critical food system actors in low- and middle-income countries, micro, small, and medium-sized enterprises (MSMEs)?	Survey of 367 food MSMEs from 17 LMICs in Sub-Saharan Africa and Asia.	Disruptions in access to inputs, equipment, and services were all widespread, and most firms (85%) expected continued disruptions to supply chains, particularly with regard to input and transport.
Gereffi 2020	What does the COVID-19 pandemic teach us about global value chains?	A case study of the face mask value chain in the United States of America.	Misalignments between the priorities of U.S. federal government officials and the strategies of leading U.S. multinational producers of face masks, which resulted in exceptionally costly policy delays in terms of health outcomes.
Song and Zhou, 2020	How would COVID-19 likely deepen an existing malaise in the global economy, and what could be done to address these problems while managing the economic recovery?	Mixed methods of the global economy	Structural reform, new technology and re-integration could lead to a solid recovery in the post pandemic era.
Parajuli et al. (2019)	What is the importance of assessing environmental sustainability of fruits and vegetable production sector in future climate change (CC) scenarios?	Mixed research method	Shift to a milder climate towards the poles could potentially improve crop production, whilst in the tropics, dryer and semi-arid regions, the adverse impact could be a dramatic reduction in agricultural productivity.

2.4 Third-party certifications programmes in commodity value chains

Certification programmes originated to ensure the sustainable production of commodities and to indicate that the product meets a set of social, economic, and environmental standards while satisfying consumers' consumption preferences (Deppeler, Fromm and Aidoo, 2014; DeFries et al., 2017). These standards are often created in consultation with key actors in the cocoa supply and value chains (i.e., cocoa producers, industry experts, manufacturers, and NGOs) and have an independent third-party organisation to ensure compliance. As defined by the Committee on Sustainability Assessment (COSA, 2013), third-party audited certification programmes are a set of systems that operate according to a "codified set of standards for production and management practices". These standards are often implemented by non-governmental agencies with support from other governmental regulatory institutions and global lead firms (Dankers and Liu, 2003; Clark and Martínez, 2016). Currently, three major NGOs (Rainforest Alliance, UTZ Certified, and Fairtrade) have been certified to undertake these third-party certification programmes across emerging economies. However, to be certified, organisations often require accreditation from international public and private institutions, such as the International Federation of Organic Agricultural Movements (IFOAM), American National Standards Institute and the Registrar Accreditation Board (ANSI-RAB), the Standards Council of Canada (SCC), the Euro-Retailer Produce Working Group for Good Agricultural Practices (EUREPGAP), the International Accreditation Forum (IAF), and the Japan Accreditation Board (Hatanaka et al., 2005). Usually, the procedure for securing third-party certification approval from these international bodies includes the following steps. First, a service provider or supplier must apply for certification from a specific third-party certifier. Second, the third-party certifier then

performs pre-assessment and documentation checks of the supplier's facilities and operational activities within the commodity industry. Third, field audits are conducted by the third-party certifier to ascertain their operational scope. Finally, the third-party certifier grants a certification, which requires the retailer to mark the goods as certified until compliance is confirmed (Deaton, 2004). Comparatively, third-party certification programmes are presumed to be independent and objective in operations and have been cited as one of the main reasons for their widespread use. Notably, these characteristics of third-party certification programmes are thought to be essential for efficient food protection and quality control across the global agricultural CVC (Tanner, 2000; Hatanaka et al., 2005). Drawing on the types of third-party certification programmes, Tanner (2000) made a distinction in the variation between traditional product protection and quality assurance systems within the agricultural CVC. Thus, the distinction is made based on the specialisation of certifiers who are seen as 'independent' in their operations. Here, traditional products come direct from local farms whilst quality assurance refers to the operational management systems along the CVCs.

Additionally, Fagan (2003) credibly argued regarding what he described as 'independence', referring to third-party certification programmes as a more credible non-governmental organisation than first and second certification programmes; that is, third-party certification programmes offer an accurate and effective mechanism for controlling best practices within the CVC (Golan et al., 2001; master's and Sanogo, 2002; Hatanaka et al., 2005; Hatanaka and Busch, 2008). Meanwhile, third-party certification programmes have also been described by Oya et al. (2018) as a "bundle of intervention" that facilitates the organisational process and enhances the producer's well-being over time. Thus, the direct and indirect impact of third-party certification programmes aims to strengthen beneficiaries' production. This includes the production turnover, prices, revenue, and wages of certified producers and their pre-defined

households (Oya et al., 2018). Mostly, these third-party certification labels adopt a mixture of stakeholders, independence processes, the enforcement of best farming practices, capacity building, and training for producers and their respective organisations, as well as various market initiatives, such as price premiums and credit facilities, to achieve sustainable value capture (Ansah et al., 2020).

On the other hand, most commodity certification programmes have different objectives; some focus on the well-being of producers and their society, while others focus on the environment but also aim to strengthen their organisation through training and generally empower various associations and groups undertaking the certification programmes (Ronchi, 2002; Lernoud et al., 2017; Krumbiegel et al., 2018). Moreover, over the years, third-party certification programmes within the commodity industries have created and introduced a broad range of approaches in a wide range of environments (Bowling and Ball, 2018). For instance, diverse standards are applied to small producer organisations by Fairtrade. Nonetheless, this presents a significant problem for auditors and other key stakeholders when it comes to monitoring their activities due to the interaction of several goals. For instance, the environmental outcome from diverse certification standards and types of strategies adopted by certification officers may have a direct socio-economic impact on the well-being of the producer and other stakeholders within the CVC (Oya et al., 2018). Following this, with regard to the criteria and diverse impacts of certification programmes across the commodity industries, previous studies (Oya et al., 2018; COSA, 2013; Deppeler et al., 2014; Hatanaka et al., 2005) have shown that third-party certification programmes over the years have led to an improvement in the well-being of producers and have increased the capacity of most agricultural products. For instance, cocoa producers have gained access to credit facilities and financial support in their farm practices especially in the global north, where interestingly,

there has been an increase in production capacity and an improvement in the livelihood of commodity producers. In addition, Lytton (2013) and Deppeler et al. (2014) proposed success-based factors of third-party certification on producers' well-being; better access to domestic and global markets is one of the mechanisms that certification programmes may use in improving the situation for commodity producers across the sector, as well as the differentiation of income sources and access to credit, the strengthening of the producer organisation, and transparency of the value chain. Moreover, multiple certification programmes have also been related to enhanced environmental standards and best practices across various production sectors. The registration of certified producers and the formation of lead firms set the pace for certified producers to produce sustainably in all seasons of production across the CVCs.

Notwithstanding the benefits of certification programmes and their contribution to the well-being of small-scale commodity producers and the environment (Oya et al., 2018), Vagneron and Roquigny (2010) and Deppeler et al. (2014) stated that the act of certifying a single commodity within the commodity industry can lead to a decrease in the production of a variety of crops within the CVC. Notably, it can be seen as a long-term risk to the industry, the producers, and the producing country. Likewise, Giuliani et al. (2017) argued that certification programmes have rather increased social inequalities and other societal issues like decoupling and child labour among commodity producers and their communities especially in the global south, where most standards are decoupled in practice (Moberg and Lyon, 2010; Vagneron and Roquigny, 2010).

Table 2.2: Summary of three audited certification programmes considered in this review.

Programme	Year	Main objectives	Produce certified
UTZ Certified	2002	"Standards cover management, farming practices, working conditions, and the environment".	Cocoa, tea, coffee
Rainforest Alliance	1987	"Responsible for social and environmental management system, ecosystem conservation, water conservation, fair treatment and good working conditions, community relations".	Bananas, coffee, cocoa, tea, palm oil
Fairtrade International	1997	Ensure that producers receive prices that cover their average costs of sustainable production. "Provide an additional Fairtrade Premium which can be invested in projects that enhance social, economic, and environmental development".	Bananas, coffee, cocoa, tea

Source: DeFries et al. (2017)

2.4.1 Certification as a tool/mechanism in commodity value chains

In recent years, there has been a rapid increase in the design and implementation of a wide range of voluntary standards, in both public and private certification programmes, to ensure sustainable production across the commodity industries (Buller and Morris, 2004; Ponte, 2019). Interestingly, these third-party certification programmes have been implemented based on the growing interest in healthy living by consumers across the world, who are interested in produce that is free from any unethical practices in the agricultural food chain. Most importantly, the common perception of consumers is that originally produced products reduce consumers' exposure to artificial products and eliminate any unethical practices associated with their production (Hatanaka et al., 2005; González and Nigh, 2005; Chkanikova and Sroufe, 2021).

In addition, certification programmes over the years have been used as a tool or mechanism in promoting sustainable agriculture and best practices (González and Nigh, 2005; Auld, 2010;

Raynolds, 2009; Menozzi et al., 2015). Here, certification programmes tend to focus on three broad objectives: protecting consumer well-being, improving producer and labour well-being, and promoting environmental protection (Waldman and Kerr, 2014). However, assessing the efficacy of these certification programmes has proven challenging in recent times. Studies have shown that most of these non-governmental voluntary certification programmes are new in the CVC (Lee et al., 2012; Grandin, 2017). For instance, the UTZ Certification programme was established in the year 2002. Specifically, the programme was responsible for certifying farmers in the production of cocoa, tea, and coffee in the commodity industry. Yet, Lee et al. (2012) and Grandin (2017) argued that there is only limited baseline data for on-farm conditions and supply during the pre-certification over the period, and this makes it difficult to measure this certification programme's impacts on actors and the environment. Furthermore, segregating the effects of certification programmes along the CVC can be difficult sometimes due to the constantly changing constellation of factors affecting the activities along the chain (Nesadurai, 2018) resulting in their inability to serve their intended purposes in the commodity industry.

Conversely, other scholars have argued that to determine the sustainable impact of certification programmes on the commodity industry, there is the need to understand the strength and weaknesses of the programmes in the past. Here, lead firms through certification programmes such as UTZ certified set the parameters for producers and stakeholders regarding what to produce, how to produce, when to produce, and how much to produce. These parameters serve as a control mechanism for certified commodity producers to adhere to these global standards (Henson and Humphrey, 2012; Antràs and Chor, 2013). Despite the weaknesses surrounding the implementation of certification programmes in the commodity industries, from the various perspectives argued by scholars, it is obvious that certification

programmes have served as a mechanism and a tool for controlling standards that facilitate market penetration for stakeholders within the agricultural commodity chain across the world (Cohn and O'Rourke, 2011; Kim et al., 2019). In the next section, the study assesses some key actors in the CVC and their responses to the certification programmes.

2.4.2 Key actors' responses to certification programmes in commodity value chains.

To ascertain the impact of third-party certification programmes within agricultural CVCs, it is important to consider the merits and demerits surrounding the implementation of the certification programmes in practice (Vandecandelaere et al., 2020). Previously, scholars have argued that to implement a successful certification programme in the commodity industry, the views of key actors on the impact of the programme must be considered (North, 1989; Hatanaka et al., 2005; Ponte and Gibbon, 2005; Rodríguez-Pose, 2020).

2.4.2.1 Knowledge scaling among commodity producers

Knowledge scaling increases household returns on a particular task. Most importantly, Powell and Swart (2008) described knowledge scaling as the act of adding a new experience to existing knowledge, whether theoretical or practical. In the context of commodity production, Shepherd and Patzelt (2021) stated that knowledge scaling is the additional training received by commodity producers on best farming practices in addition to their already practical experience in agricultural production. Additionally, Brown et al. (2017) emphasised that the new knowledge obtained by commodity producers with their existing experience contributes to drastic changes in agricultural production and its value chain processes. However, different approaches to economic empowerment strategies are used by producers to deal with changing practical and theoretical knowledge in farming practices. Hence, the decision to diversify economic activities on or off the farm is heavily influenced by the existing experience

of commodity producers and the newly acquired knowledge, such as best practices on third-party certification programmes (McDermott et al., 2010).

According to Delmas and Grant (2014), over the years, certification programmes have always focused on commodities that receive after-sales premiums. Thus, cash crops such as cocoa are a source of foreign exchange for emerging economies and other developed countries. Besides, Delmas and Grant (2014) were also of the view that certification is expensive to implement, and hence, governments and institutions should focus only on certifying crops that can be exported and so are a source of foreign exchange. However, Reuben (2017) was of the opinion that premiums paid to commodity producers as an incentive for being certified, though not always the focus of stakeholders, can alleviate other unethical practices that surround production, such as child labour and other aberrant behaviours that remain in farming communities. Conversely, Baradaran and Barclay (2011) argued that, despite the new knowledge acquired by commodity producers through certification best practices, the impact of certification on producers' households is always driven by the level of revenue derived from their production and which is a source of income for their livelihood. Hence, issues surrounding their production processes are not always the focus. Likewise, Brown et al. (2017) emphasised that when producers scale up their knowledge and become specialised in a particular certification programme, a reduction in the market price of their certified products may have a direct negative impact on their livelihood and that of other stakeholders within the CVC. This may reduce their incentives to innovate in all aspects of the value chain as well as limiting their competitiveness in the world market over time, thus accounting for the low net returns to certification programmes in the long run. For instance, Ruben and Hoebink (2015) discovered that "UTZ Certified coffee producers in East Africa are more inclined toward specialization, whilst Fairtrade producers usually maintain some degree of crop and

activity diversification". This means specialised producers suffer more when there is a global reduction in the market price of coffee and other commodities (Ruben and Fort, 2012).

2.4.2.2 Local Authorities: Cooperatives and farmer groups responses to certification programmes

Most voluntary certification programmes depend on local human resources to provide the necessary training to commodity producers and to ensure an effective harvest in the CVC. Payments of premiums and dues and the distribution of incentives to producers are often made by cooperatives in the local communities (Carrin et al., 1999). Over the past decades, it has been possible to ascribe a sustainable certification programme to the output of best practices propagated by the local cooperatives. However, members of these associations sometimes act contrary to their mandate resulting in the sale of their products to other buying organisations that are prepared to make a good offer (Imami et al., 2021; Bijman and Iliopoulos, 2014; Ahado et al., 2021). Thus, inadequate capital for the payment of a certified harvest has caused members of cooperatives to divert part of the harvest to other buying companies because these companies are believed to pay on delivery. This means most cooperatives and LBCs have insufficient capital to pay producers upon delivery because most third-party certification programmes are pre-finance (Guo and Zhao, 2010). This results in major "off trades" that threaten inner cooperative cohesion and impede the cooperative's collective ability to deliver planned market transactions. Mostly, cooperatives serve as intermediaries for all farming practices and ecosystem conservation; they manage certification implementation processes alongside other institutions and other stakeholders (Ghazoul et al., 2009; Milder et al., 2015).

2.4.2.3 Institutional response to certification programmes in CVCs.

Globalisation has aided the proliferation of neoliberal policies around the world in recent years, undermining government controls at both national and international levels (North, 1989; Rodríguez-Pose, 2020). Indeed, in the past few decades, the role of institutions has been structured around the discourse of political, social, and economic contexts. Globally, institutions have been managed by human beings to create an orderly management process in trade and to reduce uncertainties in transactional exchanges among trading partners. Nevertheless, this process has also served as an incremental avenue in connecting the past with the present and the future (North, 1984; Greif, 1992; Hodgson, 2006; Osman et al., 2012; Alonso et al., 2020). However, recently, the agricultural CVC has witnessed the dramatic liberalisation of conventional government controls in their operations; calls by private voluntary agreements through government institutions in addressing the financial, quality, and ethical aspects of agro-food production and trade have proliferated in recent times (Lin, 2014; Mishra and Dey, 2018). These private non-governmental voluntary initiatives, such as specifying standards, ensuring compliance, and encouraging firm participation, have been incorporated into the agricultural food value chain as new standards for sustainable agricultural practices (Honey, 2008; Bartley, 2010; Fouilleux and Locont, 2017). Moreover, these institutional practices have established transnational private governance structures across international trade (Gereffi et al., 2001).

In addition, these certified NGOs have created global networks, which largely bypass existing state and industry governing structures in agro food-producing countries (Singh et al., 2019; Zhang et al., 2018; Klooster, 2005). Here, the ability of these non-governmental institutions to gather the support of stakeholders and commodity producers to create this global network is achieved through customer loyalty, the global market share of the commodity, producers adhering to the parameters set by lead firms, and often price premiums set as an incentive for

producers (Ponte and Gibbon, 2005; Fold and Larsen, 2011). Essentially, these success-based factors for certified producers are derived through regulatory authorities, such as UTZ Certified, Rainforest Alliance, and Fairtrade certification programmes and the local licensed commodity-buying companies. Notwithstanding the effort of certification programmes and institutions propagating successful agricultural practices, there are factors restricting institutions in promoting sustainable agricultural production (Gereffi, 2010). These include the level at which certification programmes are characterised by their governance arrangements, which form their democratic capacity (Raynolds et al., 2007). Governance arrangements include the players involved in establishing and implementing requirements, the essence of regulatory processes, and the development and marketing strategies. Also, regulatory structures are characterised by specific criteria, such as the degree of social and ecological concern, the rigidity of their standards, and the incorporation of trade and price specifications, which decide whether certification works to hold the level by preventing the degradation of social and environmental standards or lifts the bar by raising social and environmental standards (Bartley, 2011). Furthermore, certification programmes over the years have been characterised by their market reach and growth potential, both of which are important factors in determining the ability of these private regulatory mechanisms to influence global production, demand, and trade (Renard, 2005; Hatanaka et al., 2005). Although scholars increasingly agree that the agricultural food sector is moving from public to private control through certification, the primary institutions, structures, and consequences of this change are still being debated.

2.4.2.3 Spillover of certification programmes: Response of producers and the global markets

Third-party certification spillover offers a quick avenue to scale up sustainable commodity production and give producers access to certified markets by adhering to the parameters set by lead firms, where price premiums are offered for sustainable agricultural practices (Ingram et al., 2018). However, over time, more commodity producer associations and cooperatives have sprung up due to certification (Carrin et al., 1999). Interestingly, certification programmes have served as a mechanism in promoting a number of these professional producer associations and providing a range of benefits and attractions to producers (Renard, 2005). Although farmers within the CVC are satisfied with certification based on its associated benefits, they still believe the programme can improve by reviving and expanding the sector to meet other needs of stakeholders and upcoming producers.

Also, certification programmes have served as a means by which other services have been added to the commodity production structure, allowing for a higher level of intensity and a wider range of services to be offered (Gereffi and Fernandez-Stark, 2011). Alternatively, Ribaud et al. (2010) argued that a certification programme may create an incentive for producers to expand their production scope to maximise profit. Hence, if the argument by Ribaud et al. (2010) is true, the negative spillover effect of the certification should be observed in the commodity-growing areas as emphasised by Wulf (2018). In contrast, Rueda and Lambin (2013) explained that such negative spillover effects may be prevented. However, if the certified commodities and other commodity producers receive a sufficient price premium through the certification programme, they may be motivated to maintain the surrounding environmental conditions to continuously participate in the certification programme (Bui and Kapon, 2012). In this case, the certification programme may positively affect the surrounding

natural environment instead of causing a negative spillover effect (Blackman and Rivera, 2010).

2.4.3 Impact of certification programmes in commodity value chains

The act of measuring the effects of policies and events, or a benefit of an event to a specific group of individuals or organisations is referred to as impact assessment (Phillips et al., 2009).

However, over the past decades, commodity certification standards have been widely used to enhance the performance of the agrifood chain and to support the welfare of commodity producers and the sustainability of the environment (Ruben, 2017). Schenkel et al. (2015) argued that certification programmes have also been considered as an appealing firm strategy for enhancing producers' and stakeholders' integration and improving the entire performance of the CVC operational activities. Notwithstanding the contribution of certification standards to the enhancement of the entire CVC, Honey (2002) credibly argued that certification has no legal basis but is always driven by standards backed by an approved certified licence obtained by producers as a controlling mechanism of non-governmental third-party agencies (Vince and Haward, 2019). Thus, they can represent a driving force and mechanism upon which all third-party agencies, such as UTZ certified, Rainforest Alliance, and Fairtrade, can successfully implement their voluntary standards within the commodity industry.

Besides, the impact of certification programmes in CVCs is becoming increasingly critical for preserving customer trust, as it acts as a mechanism for public transparency (Ruben, 2017; Osmundsen et al., 2020; Oya et al., 2018). Here, certification programmes aim to set standards for producers and other stakeholders in the CVCs. However, Reuben (2017) argued that third-party certification programmes cannot always be accessed solely as a tool for achieving such standards but also as an avenue to behavioural change between commodity producers and

their customers. Though early scholarship has posited that certification is a tool or a mechanism for managing standards across CVCs (Buller and Morris, 2004; Ponte, 2019), certification programmes over the years have been considered as organisational interventions which certify change (Oya et al., 2018). However, to ascertain the direct and indirect impact of this change, the outcome is based on commodity producers and consumers, who are the beneficiaries of the programme; that is, the output comes in the form of price change for commodities on the world market, the wages of producers, and the general yield obtained as a result of certification and its direct effects on producers. From this perspective, Bulga et al. (2020) and Dengerink (2013) argued that certification programmes have served their intended purpose.

On the other hand, Oya et al. (2018) claimed that successful certification programmes are restricted by organisational standards. There is the need to enhance the capacity of stakeholders and producers to achieve long-term goals through training and through negotiating price premiums and credit facilities for producers. Notwithstanding the collective objective of certification programmes across the CVC, Lernoud et al. (2017) and Bulga et al. (2020) stated that not all certification programmes are guaranteed to certify the well-being of chain actors at all levels in the global south; for instance, Fairtrade aims to empower and support the lead firms and institutions in charge of managing the commodities and the vulnerable groups in society, and is keen to promote the eco-labelling of certified commodities compared to other support. Other researchers (Ssebunya et al., 2019; Ruben and Zuniga, 2011; Oya et al., 2018) have observed that ascertaining the impact of certification is based on the output of certified producers compared to non-certified producers. Thus, the impact can be evaluated from the pre-certification output of producers compared to the post-certification

period; this can highlight a definite assessment trend and show the impact of the certification programme. Consequently, the impact of these changes in output has been attributed to the types of best practices put in place by stakeholders and certified commodity producers (Auld, 2010; Blackman and Rivera, 2010). Alternatively, while prior studies have focused on best practices and interventions as a mechanism for achieving successful certification programmes, Kim et al. (2019) and Thorlakson (2018) have claimed that the impact of a successful certification programme is based on adequate labour standards relating to waged and non-waged working conditions, particularly with regard to the health and safety of producers and other stakeholders involved in operations. In this regard, when commodity producers receive an adequate wage rate for their products and adhere to health and safety measures surrounding their operations without any casualties, then we can say there is a successful implementation of the certification programme across its operational chain (Heuer, 2021).

Following on from this, certification programmes that were originally centred on best practices in agricultural production have been expanding their voluntary standards over the years to large-scale farms to broaden their scope (Raynolds, 2017). As a result, most certification programmes, including those focusing on other aspects of sustainability, such as environmental management, for instance, Rainforest Alliance, have included basic labour standards in their provisions (Raynolds et al., 2014; Auld et al., 2008). Most importantly, the effect of certification programmes on the wages of labourers working on most commodities has been studied, with consideration given to the fundamentals surrounding their operations (van Rijn et al., 2020). However, with the proliferation in standards, for instance, label tags among Fairtrade certification practices, scholars' focus in recent times has turned to empirical studies looking at the amount of value third-party certification programmes have added to

production in CVCs (Oya et al., 2018). Here, the main focus is on quality production based on international markets and on how consumers' quest for agricultural commodities is becoming increasingly intense as to what to consume and the conditions surrounding the production processes of the product and other social and sustainable development (Henson and Humphrey, 2010). Notwithstanding the use of production quality and value creation as a key empirical focus of recent scholarship, the income and welfare of producers and environmental and climate change resilience are also given consideration.

Likewise, social norms attempt to enforce the prohibition of child labour and the payment of a fair living wage for commodity producers. Given the multiple certification programmes, certified commodities, and participating countries, it is clear why impact assessment researchers on certification programmes have produced widely disparate outcomes in recent times. Conversely, other scholars (Tallontire et al., 2012; Lebel, 2012; Nelson et al., 2017) in their studies on the impact of certification programmes have presented diverging results drawing on both the negative and positive outcomes from their findings on certification programmes. Specifically, they have emphasised issues related to sustainability, child labour, and other unethical production practices. Following these outcomes, Henson and Jaffee (2008) argued that some certification programmes may reduce the income of the low-income producers to the minimum due to the costs attached. Yet, small-scale producers are not able to afford the associated dues and other costs associated with being a certified member. In contrast, Hansen and Trifkovi (2014) stated that certification programmes such as UTZ Certified help boost rural smallholder producers' incomes and reduce chronic poverty through the sale of their certified products; thus, while some think that certification programmes help raise rural smallholders' incomes and reduce chronic poverty, others think

the opposite is true. Similarly, the impacts of certain certification programmes, such as Rainforest Alliance, on environmental key indicators affecting commodity production, which includes soil erosion, deforestation, and biodiversity, are acknowledged, but overall results are difficult to track (Blackman and Rivera, 2010). Research by Sirdey and Lemeilleur (2015) and Oya et al. (2018) provides an outline of various certification interventions in the commodity industries and their impact on commodity producers and other relevant stakeholders in CVCs. Table 2.3 below presents a summary of certification interventions and their impact on commodity chain actors.

Table: 2.3 Summary of certification interventions and their impact on commodity chain actors

<i>Certification interventions</i>	<i>Impact of certification programmes on commodity producers and other actors in CVCs</i>
<i>Produce price</i>	This contributes to increased profit for commodity producers, such as UTZ-Rainforest Alliance, and Fairtrade, which dominate the commodity industry.
<i>Price premium</i>	Invested minimum premiums by certified producers can improve working and living standards, children's education, and sustainable production.
<i>Produce quality</i>	Technical assistance by certification officers, quality control, lead firms, and regulatory policies have contributed to improved farming practices, resulting in higher incomes for producers and stronger market controls.
<i>Institutions</i>	Government and private entities in charge of managing the production and marketing of the commodities have set standard parameters that empower and improve global market access and competition.
<i>Credit facilities</i>	Credit provisions (inputs) improve income stability for commodity producers and other chain actors, which contributes to a reduction in stock shortages for exports.

Source: Oya et al. (2018)

2.4.4 Challenges facing third-party certification programmes in commodity value chains.

Although previous studies have emphasised various mechanisms put in place by stakeholders, public and private institutions across the global south and north manage third-party certification programmes in commodity industries (Devaux et al., 2018; Oya et al., 2018). Yet these mechanisms have been interpreted as barriers to both market access and business opportunities for low-income country producers, exporters, and other stakeholders within the global value and supply chains (Reuben, 2017). Likewise, the United Nations' sustainable development goals (SDGs) and other agencies with the support of multiple players, such as commodity producers, state institutions, and global lead firms (Gibbon and Lazaro, 2010; Henson and Humphrey, 2010; Oya et al., 2018), work hard in supporting and contributing to the development of these global standards across various sectors of the economy, especially in low-income and emerging economies (Boiral and Gendron, 2011; Bolwig et al., 2013).

The development and improvement of these third-party certification programmes will help resolve major agro-food safety issues. However, Samerwong et al. (2018) argued that future improvement of these third-party certification programmes will help address the ambiguities that several certification programmes have faced, such as producers' well-being, price premiums, credit facilities, and other social and environmental issues which have been a challenge to the programme. According to Henson and Humphrey (2010), most certification programmes in the CVC underestimate the complexities of the obstacles that must be overcome, resulting in major impacts being achieved only under very strict conditions. However, the answers to these complexities lie not only in more focused support for standard growth and better-informed approaches to producers and stakeholders but also in project preparation that puts a greater emphasis on smallholder producers' adjustment options and

strategic value chain responses (Reuben, 2007; Hatanaka et al., 2006; Kirwan et al., 2017; Henson and Humphrey, 2010). In contrast, the cost of production and its associated best practices has been high for producers (Gockowski et al., 2013; Waldman and Kerr, 2014). This means commodity producers need to balance their outputs with profit to fit into the certification programme (Basso et al., 2012). Also, premium bonuses paid to producers do not seem to have a significant effect on producers' real earnings. This may be due to the high cost of meeting certification requirements, as well as the fact that certain certified commodities are sold as traditional produce buyers (Basso et al., 2012; Fenger et al., 2017). Moreover, Kleemann et al. (2014) stated that based on previous studies, producers' well-being has always shown mixed and contradictory results regarding the effect of third-party certification programmes. In contrast, Ansah et al. (2020) and AsFenger et al. (2017) drew on some positive impacts that certification programmes have on the financial capital of producers; however, the argument behind the positive impacts depends heavily on the support of such programmes. For instance, the Rainforest Alliance continues to support cocoa producers financially; they also render technical support on their farms, and increased credit and access to inputs to those producers who have signed exclusively onto the Rainforest Alliance programme in the global south (Callahan, 2019).

Drawing on the reoccurring certification issues across the commodity industry in emerging economies, prior studies have emphasised the myth surrounding the procedures of certified producers which have not been properly documented. From this perspective, it is difficult to clearly understand the exact impacts of the certification programmes on the well-being of producers (Tran and Goto, 2019; Basso et al., 2012; Rueda and Lambin, 2013; Gockowski et al., 2013; Jena et al., 2017; Ingram et al., 2014; Paschall and Seville, 2012; Reuben, 2007). Moreover, ensuring producers' compliance with various certification programmes and their adherence

to best practices and standards is critical for advancing certification goals, and accurately evaluating their impacts on producers and consumers has been a major concern for producing countries and global lead firms (Junior et al., 2016; Blackman and Rivera, 2010). Waldman and Kerr (2014) claimed that in the commodity industry, producers' adherence to certification standards depends on the effectiveness of the certification programme, the level of compliance objectives of the programme, and the incentive attached to the programme practices for environmental conservation and producers' well-being. For instance, Ruben and Zuniga (2011) were of the opinion that commodity producers adhering to compliance measures and best practices sometimes express some doubts after they join the programme, especially when price premiums and other training needs are not met.

Even though producers sometimes fail to adhere to certification compliance measures, there have not been any sanctions or consequences against their noncompliance behaviour in the global south (Ansah et al., 2020; Akinwale et al., 2019). In that regard, it can be seen that producers' compliance with the certification programme, processes, and sustainability practices may or may not be improved by using group certification only but rather should consider other forms of organising practices for their training (Higgins et al., 2008). Indeed, capacity building, in the long run, will have a positive impact on whether producers adhere to best sustainable practices due to the inability of third-party certification programmes to meet the required needs for training (Astrid Fenger et al., 2017; Ansah et al., 2020). More importantly, previous studies have identified that certification at the group level has various benefits; for instance, the financial capacity of producers may also be improved since the cost associated with group certification is minimal compared to individual certification (Astrid Fenger et al., 2017; Gockowski et al., 2013). In contrast, concerns have been raised by lead firms, relevant stakeholders, and other private institutions about multiple certification

organisations working simultaneously. These stakeholders believe multiple certifications could cause confusion and increase administrative costs, and there have been instances where some producers have been forced to sell certified cocoa as conventional buyers because certified LBCs sometimes delay in releasing funds to pay producers, thus lowering their income and undermining the certification initiative over the past years (Wiengarten et al., 2017; Dietz et al., 2020). Moreover, issues such as producers' dissatisfaction with premiums and pricing, certification auditing lacking credibility, poorly functioning producers' associations, increased barriers for producers to participate in certification programmes, the persistence of gender inequality, high compliance costs, the lack of technological development in operations among producers, and issues related to decoupling still perpetuate certification practices (Giuliani et al., 2017; Basso et al., 2012; Fountain and HützAdams, 2015; Albersmeier et al., 2009; Weiligmann et al., 2010; Nkamleu et al., 2010). In keeping with these arguments, this study draws on TM as a theoretical lens to delineate how the syndrome of myopia influences the organising practices of chain actors in commodity certification programmes. The summary of literature and finding on certification programmes in commodity value chains are presented in the table 2.4 below.

Table 2.4 Summary of past studies on certification programmes in commodity industries

Author (year)	Research questions	Research Settings (data and methods)	Key findings
DeFries et al. (2017)	Is voluntary certification of tropical agricultural commodities achieving sustainability goals for small-scale producers?	Tropical Agricultural commodities (Literature review)	Certification is not a panacea to improve social outcomes or overall incomes of smallholder farmers
Astrid Fenger et al. (2017)	Investigate how Rainforest Alliance (RA) certification of small-scale cocoa farmers in Ghana has affected both the financial and the natural capitals of the farmers.	Ghana cocoa sector Mixed Method data collection	RA certification scheme has a positive influence on the certified farmers in terms of cocoa production, yield, income, and farmers' perception of changes in their natural and financial capitals.
Ansah et al. (2020)	How does smallholder cocoa farmers perceive certification program requirements, price premium arrangements, and inspection regimes?	Ghana cocoa sector Mixed method	Smallholder cocoa farmers are inadequately informed about the certification programs, disconnected from price premium management.
Gockowski et al. (2013)	What are the productivity and profitability of RA-Cocoa relative to the existing Ext-Cocoa and High-Tech procedures?	Ghana cocoa sector Qualitative study-interviews and secondary data	Certification programmes can sometimes play a role in meeting sustainable development goals and do not support the view that such programs are merely greenwashing.
Blackman and Rivera, (2010)	What are the environmental and socio-economic impact of sustainable certification?	Evidence reviews on agricultural commodities, tourism operations, and fish and forest products.	Produce buyers must offer price premiums high enough to offset the costs of certification and attract a significant number of applicants.
Oya et al. (2018)	What are the socio-economic effects of certification systems on agricultural producers and wage workers in low- and middle-income countries?	Agricultural producers in Latin America and sub-Saharan Africa – Mixed-method systematic review	No evidence that total household income improves with certification
Auld (2010)	Certification as governance can be a tool for change and what type of change that is likely to be?	Global coffee industry Literature review	Certification programs alone struggle to account for the great diversity of production systems by which and social contexts in which coffee is grown.

Hatanaka et al. (2005)	What are the key factors driving the adoption of certification, as well as some of the implications that TPC might have on various actors throughout the agrifood system?	Agric food retail industry Conceptual paper	Third party certification also offers opportunities to create alternative practices that are more socially and environmentally sustainable.
Giuliani et al. (2017)	Investigate whether coffee farms that have been granted in-house socio-environmental certification from a global buyer, display better social and environmental conduct compared to non-certified farms?	Econometric analysis using data from an original cross-country survey covering 575 coffee farms in various regions of Brazil, Colombia, Costa Rica, Guatemala, and Mexico.	Institutional strength of the farm's home country has a positive influence on its social conduct.
Witteveen et al. (2017)	What are the design and development of the Digital Farmer Field School?	Prototype testing in the Sierra Leone cocoa industry	DFFS offers an appropriate environment in which collective and individual learning is stimulated and facilitated.
Pinto et al. (2014)	What is the potential for mainstream certification schemes, adopted mainly by large farms, to support smallholder farmers through group certification?	Coffee industry in Brazil Qualitative research-Interviews and secondary data were used	Group certification has increased access to small and medium size producers compared to certification for individually certified producers.
Dompreh et al. (2021)	What is the impact of certification standards on farm yields and the wellbeing of oil palm and cocoa smallholders?	Quantitative study- using a household surveys from Ghana oil and cocoa industry	Certified cocoa smallholders have a relatively lower income diversification, which increases their vulnerability to price and yield fluctuations.

2.5 Certification programmes in commodity value chains: A temporal myopia perspective

The word 'myopia', from a medical perspective, refers to short-sightedness in seeing things distant from the main object (Fredrick, 2002) due to a refractive error that prevents an individual from bending to see other directions. However, this refractive syndrome has over the years been assimilated into most international business studies (Chikudate, 2015; Katelaris, 2011; Maskell and Malmberg, 2007), and has been used to describe a situation in which an organisation's focus is solely on a single direction, for example, a focus on the present with no regard for the future or even the past. Likewise, it could refer to a focus on the future with no focus on the present or the past (Opper and Burt, 2021; Ridge et al., 2014). From this perspective, an organisation that is unable to see from multiple directions in their business processes is said to suffer from TM (Opper and Burt, 2021; Michel and de La Croix, 2000). Thus, the term 'temporal myopia' refers to the fact that whatever stands further away in time receives less consideration than what is in the present (Kim and Zauberan, 2009; Wittmann and Paulus, 2009).

In many situations, the management of firms consider only the immediate result of a business decision and ignore the future effects. Similarly, they may consider the future or the past and ignore the present. Indeed, in the context where people show a relative ascendancy of a single direction, it can be considered as a trait of the characters involved (Chiaburu et al., 2001). For instance, in a context where people react quickly to situations without having a thought for the consequences in the future, there is nothing in their mind beyond the impulsive behaviour of the individual at that moment (Ainslie, 1975). In this circumstance, the individual's impulsivity is conceptualised in the immediate or past direction.

Recently, extensive use of the term 'temporal myopia' describes a cognitive framework or structure that helps members of an organisation to understand their prevailing environment and business decisions but prevents them from engaging in active thought about and analysis of their actions and decisions (Van der Wal et al., 2018; Blagoev et al., 2021). Additionally, Kim and Zauberman (2009) described TM as a syndrome that prevents organisational members from having the ability to consider future decisions even at the present time. Thus, the TM syndrome affects organisational cognitive structures and leads to a failure to consider the consequences of members' actions or decisions in the present while also considering the future or the past. This organisational and individual phenomenon was further emphasised by Parfit (1984), who highlighted the belief that future orientations are tendencies within human behaviour, and it should be considered that what is ahead is always harder to achieve than what has been left behind in the past. Drawing on Parfit's (1984) perspective on TM, Lewin (1951) described the distant future as being less present, and this always affects a person's life space or not at all. This is because, if individuals or organisations are always aware of what is ahead in the future or what has happened in the past, they will always make provisions to curtail the consequences of any uncertainties that might arise. Therefore, TM limits or impedes organisations' or individuals' capacity to foresee signs of an opportunity in a present action or a business decision (Catino and Patriotta, 2013). In that regard, TM becomes the blocking mechanism that confines individual or organisational rationality to a subjective representation of reality and keeps ideas focused on a single direction (van der Wal et al., 2018; Opper and Burt, 2021). As a result, the integration of multiple directions in making strategic decisions, such as future and past best practices to certification programmes, may not be achieved due to the TM impeding individuals or organisation from inventing with reference to the future or with reference to past practices (Moore et al., 2007; Wei et al., 2021).

Besides, the effect of TM may be considered as a 'single gratification' to organisational and individual decisions, which is considered as the underlying cause of the undesired level of an organisational or individual direction (Boakye et al., 2022; Wong et al., 2015). For instance, drawing on the case study, Worthy et al. (2012) suggested, involves a range of decisions:

...such as deciding whether to attend graduate school or join the workforce immediately after graduating from college. Joining the workforce may lead to more immediate benefits in the form of higher income than would be earned while in graduate school, but a graduate degree could very likely mean higher cumulative income throughout one's life. Thus, a second consideration that must be kept in mind when making decisions is how current choices will influence future outcomes or possibilities. People must not be temporally myopic in that they fail to see the delayed consequences of each option as well as the immediate consequences.

Worthy et al.'s (2012) study demonstrates that decision-making is an everyday recurring task (Worthy et al., 2012; Slovic et al., 1998; Rees et al., 1991); notably, these decisions have both immediate and long-term direct and indirect consequences for the parties involved. However, it is sometimes obvious that the parties involved in this decision making may not know the direct and indirect implications due to TM impeding their thought processes (Piquero and Tibbetts, 1996).

Experimental studies investigating global businesses (Kirby and Maraković, 1996; Bartol and Srivastava, 2002) suggest that rewards that are received more quickly are mostly preferred over delayed rewards. As a function of the delay, the intrinsic quality of a value is diminished over a long period. Conversely, Gjesme (1981) and Raynor and Entin (1983) argued there are positive long-term implications for the business practices of global firms who in recent times have overcome TM and are able to focus on multiple directions for their business operations. Further to that, Lasane and Jones (1999), Sternad and Kennelly (2017), and Wong (2005) argued that individuals and organisations could overcome TM by departing from the established single direction of their organisational and individual practices. However, this

departure requires a fundamental change in organising practices and routines to facilitate the redefinition and delegitimization of organisational practices (Oliver, 1992). Thus, a reweaving of the organisational and individual practices influences the direction of an operation or a business (Secchi and Cowley, 2020). This means the change, however, is dependent on the organisational and individual ability to switch the lens from a single to multiple directions, resulting in consideration of the past and the present or the future with regard to organisational or individual decisions. Consequently, the far-sightedness among organisational members remains unchanged as a single direction to decisions have become a normative standard for practice in most international business settings. In conceptualising TM in commodity certification programmes in organising, this study argues that TM serves as the blocking mechanism inducing certification officers and other actors in their past, present, and future situated certification practices in the CVCs. In the next section, this study unpacks TM in CVC and shows how the syndrome plays out in commodity certification programmes in organising.

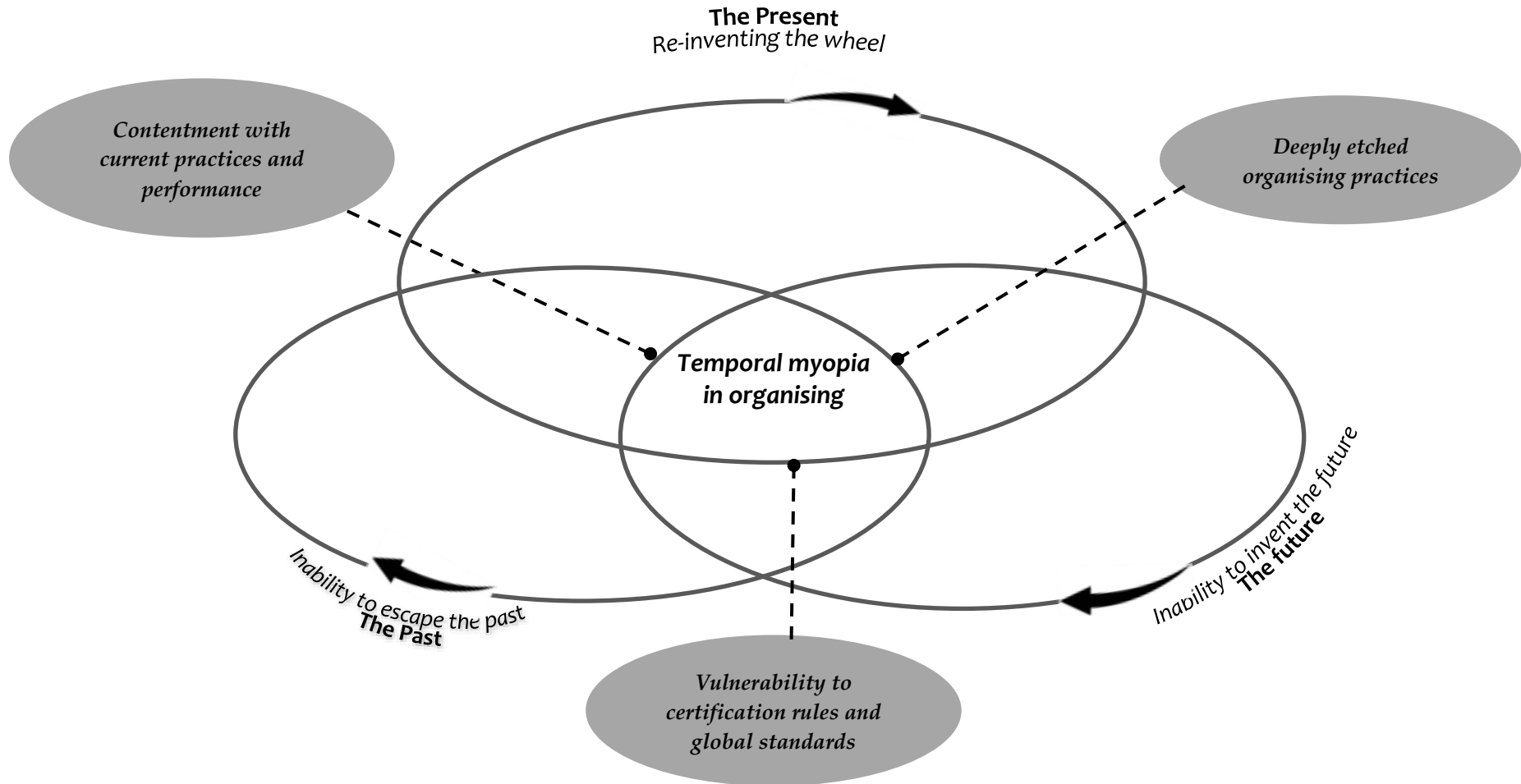
2.5.1 Unpacking temporal myopia in certification programmes in commodity value chains (CVCs)

The CVC operates through different stakeholders and intermediaries in connecting both the downstream and upstream activities. However, over the past two decades, the commodity trade has coincided with an increasing focus by consumers and global lead firms on best practices and conditions under which various commodities are produced (Browne et al., 2000). This dilemma regarding unethical practices among commodity producers and other chain actors has given rise to third-party certification programmes in the commodity industries (Hatanaka et al., 2005; Clapp, 2017). In the process of institutionalising these global standard practices in ensuring sustainable agriculture in the CVCs, the syndrome of temporal

myopia (TM) has become a blocking mechanism inducing actors in their routine practices in implementing many certification programmes in the CVCs, thereby changing how they organise and make decisions related to the creating and capturing value from the certification programmes within the contingencies of the socio-economic environment in which they are operate. As showcased in figure 2.1 below the model identifies the past, present and future and shows how TM syndrome plays out in CVCs. The past is typically associated with how the syndrome of myopia induce chain actors in the CVCs to be stack to past practices and are unable to escape the past in the present operations. These actors keep repeating past practices in the present which do not bring any value to the present business operations and even the future.

In the present stage, actors keep re-inventing their operational wheels, they are content with the present practices and do not consider either the past or the future activities in their present business operations. At this stage, the sole focus is the potential value these actors or their organisation could capture from their business operations. In the future, the model shows how the syndrome of TM induces chain actors to be vulnerable to rules and global standard requirements surrounding their operational settings. They are unable to invent the present and past practices into their future operations. Here, TM becomes the syndrome at the centre of operations impeding chain actors in their situated practices in CVCs. In the next section this study elaborates further on how the syndrome of TM plays out in the past, present, and future certification practices in CVCs.

Figure 2.1 Temporal myopia in commodity value chains



The Past

First is the relational representation of the *past* consideration to TM. The transient changes in chain actors' perception due to TM is what Bajaj and Pande (2016) described as 'memories to spring readily to the mind'. Thus, chain actors failed to consider the past consequences and impact of the certification programmes; managers of the certification programmes considered only the present impact. However, examining the programme's background on a case-by-case basis to check its previous impact and consequences from a country-specific perspective would have given chain actors a fair idea of what the present implementation of the certification programme may offer. Nevertheless, certification officers and other chain actors were vulnerable to the certification rules and global certification standards, as they were unable to escape past certification practices (Fig. 2.1) and had to keep 're-inventing the wheel' with a sole focus on what they could potentially capture from the present practices of the certification programme. This, in turn, can produce a non-sustainable result even if the practices of certification officers and other chain actors conform to certification standards. Moreover, the significant contribution of organisational managers recognising past portfolios in present times is described as 'intelligent products acting under the influence of potential fields' (Zambrano et al., 2011). Here, TM induces current certification officers to ignore potential chain actors who played key roles in the implementation of the certification programme in the past even though their inputs would have potentially been a better contributor to the programmes in the present or the future.

According to Cody et al. (2002), a blend of knowledge improves organisational and business performance over time. Here, acquiring experience and knowledge from past certification managers and incorporating them into the implementation process would have given

certification bodies and other chain actors a reasonable idea about how the challenges and the prospect of the certification programme were dealt with in the past. Yet TM induces certification organisations, cooperatives, and produce buyers to consider only the present certification officers and ignore the past managers in the implementation processes. This means knowledge excellence from past managers is overridden by the present managers and even actors of the certification programme. As described by Leitão (2009) and Zambrano et al. (2011) as the 'integration of a supervisory agent in multi-agent systems'. Here, centralised agents, such as lead firms to oversee monitoring and ensure successful implementation of the certification programme by low-level agent agents such as cooperatives and LBCs, are normally ignored in practices. Thus, TM induces certification bodies, cooperatives, and other farmer groups to ignore lead firms in decision making even though, as supervisory agents, they could have suggested past implementation strategies from other countries to assist these certification bodies, cooperatives, and produce buyers, which could have been a good strategy in the present implementation process of the certification programmes.

As Burt and Soda (2017) and Opper and Burt (2021) wrote, sometimes when parties share past events as a reference, they develop inertial attitudes towards present processes and strategies and are therefore less likely to deviate from the past in any present or future activity they undertake along the same lines. That is, certification officers and chain actors with prior relations use what has been done in the past as a point of reference, and so build more inertial attitudes toward the past, and hence are less likely to press for deviations from what has been done before when undertaking the same activities in the present or future. For instance, a researcher who proposes to publish his research work in the *International Journal of Management Reviews* (IJMR) needs to consider from other scholars' previously published research how articles that get published are presented or the style of writing in the journal,

and so is able to use the structural presentation from previous scholars' work as a guide to their own work. This is believed to prevent any present or future deviation from their work. However, from the context of the certification programme, TM prevents certification bodies and other key chain actors in the CVC from referring to the previous success factors of the programme. In the long run, reference to these past certification strategies and practices would have served as a guide to prevent them from deviating not just from the present but also in the future.

The Present

As present feelings may be so powerful that consideration of future and past events is neglected (Wittmann and Sircova,2018). Thus, TM plays out by inducing certification officers, certification bodies, LBCs, commodity producers, and regulatory institutions to consider the present benefits of the certification programme. Therefore, certification officers believe certifying commodity producers and paying premiums is enough at the present stage to alleviate any unethical social and environmental conduct in commodity production. It is obvious that each differential and competing organising commodity producer tends to prefer a repetitive action that brings immediate benefits, while ignoring the long-term global consequences that such an action can cause. Meanwhile, porous institutions and certification organisations have provided territory and even more incentives for certification officers and commodity producers to repeat the behaviours that produce immediate benefits which are linked to the future global and collective difficulties regarding certification practices. For instance, environmental degradation and conservation have become a major issue confronting the agricultural commodity industry, which requires an immediate action, such as a strategy to weaken, dampen, or mitigate its effects (Duraiappah, 1998). However, TM is played out by

inducing certification officers implementing the Rainforest Alliance certification programme to contrast loops in the present; instead, it is necessary to weaken loops in the future by implementing a convincing sustainable environmental campaign to make certification bodies and other environmental policy makers conscious of the long-term disadvantage which consideration of the present term can produce.

Additionally, the commodity industry has been dominated by large actors along with their supply and value chain operations (Kaplinsky, 2000; Kannegiesser, 2008). Yet, TM induces these actors, such as LBCs, lead firms, government agencies, regulatory institutions, and commodity producers, to be mostly focused on the immediate and associated benefits of the certification programme, such as high seasonal yields in meeting the local and global markets demands. Here, commodity producers are considered 'the game-changer' (Mishra et al., 2018; Pretty, 2016) to meet such an immediate target. Thus, certification officers and other chain actors ignore both the past, which normally includes the context in which they operated, and the future, that is, the socio-economic and environmental implications of their uncoordinated present practices for their future value capture. Besides, commodity producers are also convinced by certification officers and other actors regarding an estimated output per yield of a hector by adhering to UTZ Certified and Rainforest Alliance best practices at the end of production. The underlying challenges to these considerations by certification officers and other chain actors is that short-term benefits produce cumulative effects that, when accumulated, lead to long-term collective and global disadvantages for the collective or the population considered as a whole (Mella and Pellicelli, 2017). As described by Wittmann and Sircova (2018), present feelings by commodity producers and other chain actors on the certification programme are so powerful that considerations of future and past effects and consequences are neglected. In that regard, TM induces commodity producers and other chain

actors to consider the certification programme only from the perspective of present gratification, such as high yields, without anticipating any direct or indirect effects of the success based on the proposed factors and their consequences for their practices in the future. Thus, certification bodies and officers are content with the present practices and performance of farmers in their certification practices without reflecting on the long-term implications of the programme on the livelihood of the farmers and their families. In the context of this study, the interest of certification officers is just in implementing the certification programme; however, to alleviate the issue of child labour, there is the need for certification officers to consider other corporate social responsibilities which support the call to adhere to certification standards, such as providing schools, jobs, factories, and other social factors which could help to relieve child labour.

From this perspective, it is seen that certification officers have decoupled standards from practice in order to achieve immediate gratification to the certification programmes. In that context, Giuliani et al. (2017) thought that TM induces certification officers and institutions to break the compliance and standards conventions governing the operational concept and to ignore other negative social conducts (Sandholtz, 2012). Further to Giuliani et al.'s (2017) arguments, Stål and Corvellec (2018) described this practice, thus TM as a pacesetter for decoupling among certified commodity producers. Decoupling—maintaining commercial returns while reducing the negative socio-environmental issues surrounding a particular activity (Fader et al., 2013). TM plays out in an individual's and organisation's predominant tendency to focus attention on the present without considering the future, with the notion that present considerations are always the priority. This decision-making strategy has been reliably linked to several behavioural practices among chain actors in their everyday lives

(Raynor and Entin, 1983). Interestingly, it is seen how present consideration in business decisions can sometimes be a negative predictor.

According to neo-institutional theorists (Suddaby et al., 2013) who proposed the concept of decoupling in the context of management research, the aim of this practice is to maintain ceremonial conformity. Thus, inconsistency between what is done and what is claimed by organisational managers due to unwelcome organisational pressures. Yet, organisations that represent institutional rules become loosely coupled, creating gaps between their formal structures and the uncertainties of technical activities (Meyer and Rowan, 1977; Giuliani et al., 2017). Here, certification officers are inconsistent with their present farm and off practices and compared to the standard of practice. Also, global lead firm presents an additional challenge to certification practices because of weak institutions and other deficiencies that define such environments (Sabir et al., 2019). Tracking and establishing relationship between norms and behaviour from the past and the future practices to certification practices seems challenging, though there are variations among institutional operations. However, the syndrome of TM induces lead firm from tracking the direct operations of various institutions and stakeholders within the CVC especially in the global south and causing them to focus on present reports obtained from managers of the certification programme (Horner, 2014).

The future

Third, in terms of the *future*, TM induces certification officers and relevant chain actors in their future consideration of the certification practices. As emphasised by Levinthal and March (1993), organisations sustain exploration in the face of a tendency to overinvest in exploitation. In this context, TM plays out by inducing managers of the certification programmes to 'prioritise exploitation' rather than 'exploration'. Thus, TM induces certification officers to consider the immediate success factors of the certification programme, such as premium

payments and other incentives for producers, rather than exploring new ideas and opportunities from the past to serve as a guide to improving the future of the certification programmes (March, 1991).

Moreover, Wittmann and Sircova (2018) argued that “a stronger future consideration starts with a mindful present, however past considerations are positive predictors of sustainable behaviour among individuals and organisations”. Thus, the blend of past and present considerations regarding the certification programmes’ practices are subject to sustainable future outcomes. Yet, TM induces managers of the certification programmes to focus on the present over the future. The step-path theory of action describes TM from the perspective of academic goal setting and emphasises that when firms and individuals are oriented about the future of their business or decisions, they will be able to “transform the present into the future” (Lasane and Jones, 2000). However, although it is rewarding to anticipate future decisions at the present stage, TM induces certification managers to forego future implantation strategies to certification programmes but rather focused on the present benefits. Further to that, Gjesme (1983) argued that it can be considered a personality trait when individuals exhibit a relative superiority in one path without considering other routes. Interestingly, this impetuous conduct suggests that exhibiting a single direction based on the organisational setting at the present stage without considering the future does not always make a strong business case (Evenden, 1999).

In contrast, recent empirical research by the Food and Agricultural Organisation (FAO) indicates that voluntary third-party certification programmes are still weak in practice (Loconto and Dankers, 2014). Most importantly, the study indicates that the practice of these voluntary standards across the commodity industry has been led by NGOs, such as UTZ certified, Fairtrade, and Rainforest Alliance, which have less experience in farm management

and environmental practices (Raynolds, 2009; Bray and Neilson, 2017). Drawing lessons from the FAO study report, this study shows that the inexperience of certification managers and other chain actors in the management of various certification programmes can be the key factor fuelling TM to exhibit a single direction (present) in the implementation of the third-party certification programmes in the CVC. However, to overcome TM, managers and chain actors within the CVC opt to allow a decline in short-term performance to achieve long-term stability (SATO, 2015). In tandem with TM, the syndrome impedes chain actors in the CVC, thereby losing sight of the global standards and requirements of certification programmes in CVCs.

2.6 Chapter summary and conclusion

In summary, a systematic review of the literature in the domain of the global commodity value chain, contemporary issues in global commodity industry, third-party certification programmes and some challenges to certification programmes in the commodity sector has been provided. However, despite useful studies across these areas, further work is required on the topic to solve contradictors and advance existing studies. Drawing on the theoretical lens to investigate these research areas, theoretically a fresh theoretical perspective has been recommended to explore the research. By utilising temporal myopia as an overarching theoretical lens, an organising framework has been developed to show how the syndrome of myopia plays out in commodity certification programmes in organising. In terms of research approach, despite several high-quality qualitative works, a vast number of prior studies in the domain of certification programmes in commodity sector have been conducted using quantitative methods (Wiengarten et al., 2017; Tran and Goto, 2019; Dietz et al., 2020). Such quantitative measures have not been able to also offer completely rich theoretical insight on

the subject. Moreover, as suggested by Ansah et al. (2021) more research is required on the topic with a specific focus on the structures, inspections, and premiums payments in certification programmes in organising. Hence, a qualitative study would be appropriate to explore such in-depth organising practices and enable one to delve deeper into the subject of study. The qualitative research approach brings together more informed knowledge on the subject to ultimately help certification bodies, farmer groups, and the regulatory institutions to ensure compliance in implementing certification programmes in the CVCs. Table 2.5 below is a summary of literature on TM in organising for this study. The next chapter will delve further into the research context, the reasoning for the choice of the qualitative method and the purposive and snowballing sampling strategy. The chapter will then provide an overview of the data collection method and data analysis process.

Table 2.5 Summary of past studies on temporal myopia in commodity value chains

Author (year)	Research questions	Research Settings (data and methods)	Key findings
Ridge et al. (2014)	What are the effects of temporal myopia (focussing on the short-term) and spatial myopia (focussing on the current market) on firm strategy?	Quantitative study Data was collected from 100 firms representing 11 industries for the years 1998 through 2000.	Temporal myopia creates a focus on the firm's current strategy, leading to a persistent strategy over time and spatial myopia focusses firm decision makers on better known technologies and competitors, leading to conformity to industry strategic profiles.
Wittmann and Paulus (2009)	What are the experimental delay discounting tasks as they relate to the experience of time?	Experimental study on the discounting of monetary rewards in different realms of human intertemporal decision making.	Rewards with delays up to one year are discounted differently than reward delays longer than one year.
Opper and Burt (2021)	What is the link between the social networks surrounding business leaders and temporal myopia in strategic planning?	Survey of 700 CEOs operating private manufacturing firms in China's extended Yangtze Delta region	Closed networks are less experienced in long-run planning and are also less successful in implementing long-run business plans.
Lasane and Jones (2000)	What is the relationship between temporal orientation and the frequency of self-reported academic procrastination?	Quantitative study through Questionnaire to accesses student decision-making and the degree to which students engage in academic procrastination	Social activities of college students may produce different decision-making contingencies as a function of dominant time orientation.
Wittmann and Sircova (2018)	What is the concept of balanced time perspective as the propensity to consciously switch among the time orientations of past, present, and future?	Empirical study on balance time perspective	Balanced time perspective is an individual trait one could strive to foster in everyone
van der Wal et al. (2018)	What is the underlying mechanism, demonstrating the negative influence of uncertainty on sustainable behavior?	Mixed method. A sample of 213 Dutch participants were recruited	Immediate benefits of sustainable behavior are a fruitful strategy only under uncertainty, not certainty.
Horner (2014)	Can some form of strategic decoupling be used as an effective component of economic development strategy to overcome adverse forms of incorporation in GPNs?	Firm-level interviews and a detailed review of secondary sources with stakeholders in the Indian pharmaceutical industry	Strategic decoupling and recoupling create opportunities for imitative learning and functional upgrading.

Stål and Corvellec (2018)	How does organizations mitigate demands for circularity?	Case studies of Seven Swedish apparel companies.	Decoupling allows firms to buffer business models from institutional demands
SATO (2015)	What is organizational change in the dealerships of the auto dealer company X in Japan?	Comparative case study and semi structured interviews with Japanese Auto Dealer company X	Myopia is not always a problem, but it impedes an organizational change in sales organizations where results are easily quantifiable, and feedback is rapid.
Mella and Pellicelli (2017)	Why are man and his organizations incapable of seeing into the distant future and instead behave in a myopic manner?	Conceptual paper on system thinking approach	Non-sustainability derives from actors' widespread "myopic behaviour" based on a simple and powerful systemic standard.
Boakye et al. (2022)	What theoretical mechanism underlie the perpetuation of bribery in organising?	Qualitative study—Data was collected using publicly available documents	Collective myopia in organising drove the bribery activities at Airbus.

CHAPTER 3

RESEARCH METHODOLOGY

This chapter presents the research methodology and the methods underpinning the empirical inquiry. First, the chapter provides an overview of the empirical research and its context and settings. Second, the research approach and theoretical sampling strategy are explored. Next the methods for recruiting participants are examined. Following this is the presentation of the data collection methods. The penultimate section covers the data treatment and analysis, and the chapter concludes by delineating the methodological limitations.

3.0 Empirical context and research settings

3.1 Overview of Ghana's cocoa and commodity industry

Over the years, the cocoa industry has been the backbone of Ghana's economic growth and development (Glavee-Geo et al., 2020), contributing 19% of Ghana's foreign exchange earnings, government revenues generation, employment, alleviation of poverty, and extension of social services to cocoa producers across various communities in Ghana (Amankwah-Amoah et al., 2018). Historically, the cocoa seed was brought into Ghana by Tetteh Quarshie, a Ghanaian blacksmith, in the year 1895 on a visit to Fernando Po in Equatorial Guinea. The cultivation of cocoa started in Akwapim Mampong in the Eastern region of Ghana and later spread to other regions like Western, Ashanti, Brong-Ahafo, Central, and Volta, where there is an estimated average rainfall (Kongor et al., 2019; Ludlow, 2012). In 1911, cocoa cultivation continued its expansion into all the regions in the southern sector of Ghana and saw its first export of cocoa of about 40,000 tons of cocoa beans. Since they began exporting, there has been continuous fluctuation in both price and annual yield (Austin, 2014). The cultivation and harvesting of Ghana's cocoa is centred around two main

seasons. The first is October – May and the second, the light season, is June – September, when even though the volume of light crop beans is less than that of main crop beans, they are of equal quality (Basso et al., 2012).

During the growth period, the Ghanaian economy was strictly tied to cocoa production (Kolavalli and Vigneri, 2011), and the cocoa market was highly regulated by the government of Ghana through various boards, such as the West Africa Produce Control Board, and the Cocoa Marketing Board. Then, in 1979, the Ghana Cocoa Board (COCOBOD), an authority tied to the Ministry of Agriculture, was instituted to regulate cocoa production in Ghana (Teal et al., 2006; Arhin, 1985). However, from 1979 to the 2000s, COCOBOD was responsible for the regulation, control, and strategic management along the cocoa value chain, from production to domestic and global commercialisation, including incentive policies to farmers, and the retail price of cocoa beans in Ghana was fixed (Amankwah Amoah et al., 2018; Yamoah et al., 2020).

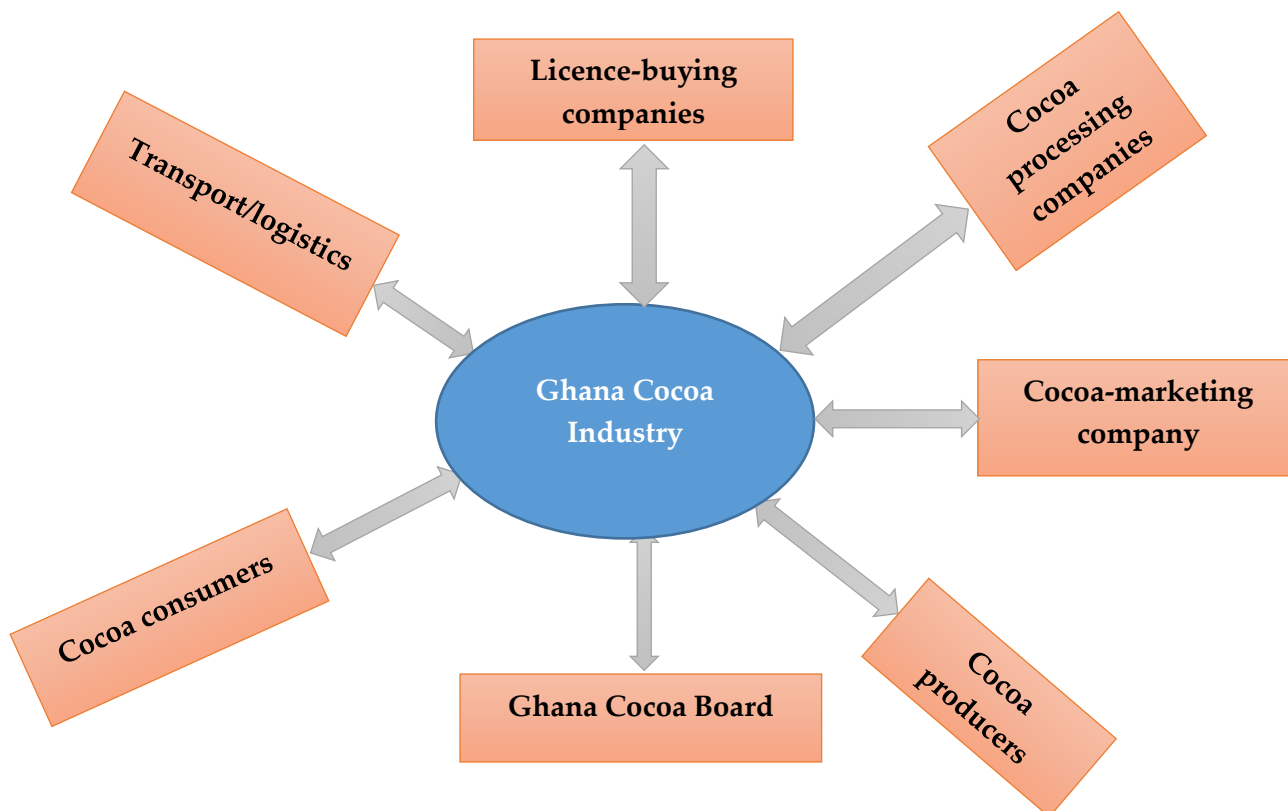
Recently, cocoa production has grown substantially along the pathway of Ghana's antique and economic development, concerning mainly its position on the global map and the level of production (Leiter and Harding, 2004; Okyere and Mensah, 2016). Ghana's cocoa production is second only to that of the Ivory Coast in the world cocoa production and is first in quality (Quarmin et al., 2012). Interestingly, over decades, the cocoa industry has served as the biggest employer in Ghana, and currently, about 6.3 million Ghanaians depend solely on the agricultural sector for their personal and family livelihood (Amankwah-Amoah et al., 2018). The industry also contributes approximately 30% of Ghana's foreign exchange earnings and employs over 800,000 farmers (Grossman-Greene and Bayer, 2009). Indeed, the sector outdoes any other export commodity in Ghana and contributes up to 21% of Ghana's gross domestic product (GDP) (Vigneri and Kolavalli, 2017). Also, the sector contributes

approximately 900,000 tonnes of certified and conventional cocoa to the economy. Most importantly, due to slightly lower levels of debris and defective beans, the higher-than-average fat content, and the mild and rounded flavour, Ghanaian cocoa is noted for its high quality (Kolavalli and Vigneri, 2011; USDA, 2012); due to its consistent superior quality (Mulangu et al., 2015), Ghana benefits from a 4-6% pricing premium on the international market. Most of Ghana's certified and conventional cocoa beans are shipped to the European Union, Asia, and North America (Monastyrnaya et al., 2016). The cocoa industry expected an increase in production of 5.8% in the 2020/21 season as stated in a recent report by COCOBOD (COCOBOD, 2019). Additionally, Ghana's cocoa production and trade over the years have also provided an excellent empirical environment to understand how trust may be exploited to strengthen relationships with global suppliers and customers given the country's status as the second largest exporter of cocoa to international markets (Dadzie et al., 2018). Moreover, with a global market value of \$11 billion dollars in 2020, the global cocoa market is expected to increase by 3.4% from 2021 to 2026, to approximately \$13.52 billion in global net value (COCOBO, 2021). However, achieving this global cocoa net value of \$13.52 billion by 2026 depends heavily on the contribution of Ghana's cocoa producers and their best farm practices, such as sustainability and certification programmes, making Ghana the second largest cocoa producing country in the world (Oomes et al., 2016; Ansah et al., 2018; Glavee-Geo et al., 2020). In the 2022 state of the nation address (SONA), the government of Ghana announced an all-time achievement of the cocoa sector reaching a production of 1,047,385 tonnes, the highest ever recorded in the history of Ghana's cocoa production. Meanwhile, to break the inequality gap in the international marketing system, the government are also set to pay a living income differential of (\$ 400) per tonne of cocoa to farmers (producers) to improve their income (SONA, 2022). Nevertheless, in a recent report published by Bloomberg (Bloomberg.com), the

government of Ghana announced in the 2022 mid-year budget that Ghana is set to record the lowest cocoa production in history for the past twelve years. This is a result of continuous drought affecting cocoa pods as well as the activities of illegal mining damaging about 19,000 hectares of cocoa plantations across the cocoa-growing regions in Ghana (Graphic, 2022). This represents a decline of about 1.05 million tonnes of cocoa compared to the previous year, that is, 641,000 tonnes in 2022 compared with 965,493 tonnes in the 2021 cocoa season (Ghanaweb.com). Despite the decline in production, COCOBOD has announced production will recover with an estimated harvest of about 850,000 tonnes of both conventional and certified cocoa for the next season (Bloomberg.com).

On the other hand, over the past two decades, Ghana's cocoa value chain has been dominated by farmer groups (cooperatives) and LBCs, such as produce-buying companies (PBCs), Adwumapa Buyers Limited, Kuapa Kooko Limited, Olam Ghana Limited, Federated Commodities, Amajaro Company Limited and many others. Importantly, all these LBCs operate a business operational model based on the number of dried certified and conventional cocoa beans they can purchase from local cocoa producers (Kolavalli and Vigneri, 2011). These purchases are made through purchasing clerks and agents, who have direct contact with the cocoa producers (Glavee-Geo, 2019). However, the purchase and transport of the dried certified and conventional cocoa beans from the cocoa growing areas to the approved depots is a difficult task with repercussions for the crop's political economics (Amankwah-Amoah et al., 2018). In that regard, the involvement of the LBCs in solving this task significantly affects the success of Ghana's cocoa in reaching the global market. In the next section, the study considers some key actors in Ghana's cocoa sector.

Figure 3.0: Some key actors in Ghana’s cocoa value chain



Adapted from Laven and Boomsma (2012) and Amankwah-Amoah et al. (2018)

3.2 Loosely coupled actors in Ghana’s cocoa certification programmes.

Cocoa production in Ghana is predominantly done by smallholder producers across various farming communities (Basso et al., 2012; Paschall and Seville, 2012; Darkwah and Verter, 2014). However, over the past decades, the industry has been dominated by various loosely coupled actors – farmers, certification officers, produce buyers, certification bodies, and the Ghana Cocoa Board – whose activities have a direct impact on certification practices. Importantly, their operational activities have also caused change by means of policy implementation and enhanced trade in the CVC. Essegbey and Ofori-Gyamfi (2012) recounted the history of support and input of these public and private actors in the cocoa industry in Ghana. To understand the developments and the role of these actors in the Ghana’s cocoa industry, research by Essegbey and Ofori-Gyamfi (2012) and Teye and Nikoi (2021) further

emphasised the importance and influence of these actors' operational activities to Ghana's cocoa certification programmes and the cocoa industry over the past years. The Ministry of Agriculture, through the Ghana Cocoa Board, has over the past decades have intervened in and contributed to matters affecting the cocoa industry and has taken the necessary steps to formulate and implement policies and guidelines to address any issues confronting the industry. This is because the government, private agencies, and institutions in charge of Ghana's cocoa industry need to create an enabling environment to drive trade and investment across the entire chain (Yamoah et al., 2020). As already indicated, cocoa production has contributed enormously to economic growth and development throughout the history of Ghana, and notably, these contributions were made possible through the intervention and initiatives of various actors, and their roles and functions within the cocoa value chain (Barrientos, 2014). It is also critical to understand how these actors interact with each other to achieve the industry's overall goals and objectives. In the next section, the role of these loosely coupled actors is discussed.

The Ghana Cocoa Board (COCOBOD)

In 1947, COCOBOD was established to oversee and regulate the affairs of Ghana's cocoa sector (Agyekum et al., 2016). Since its establishment, COCOBOD has undergone numerous reforms from management to production and this has been reflected in the change in production capacities (Essegbey and Ofori-Gyamfi, 2012; Ninsin and Adu-Acheampong, 2017). Most importantly, COCOBOD has been the main stakeholder making most of the decisions affecting the cocoa sector over the past decades. In addition, it controls many parts of the cocoa supply chain; it sets cocoa prices, controls the quality, tests, and distributes agricultural inputs, undertakes research, and provides extension services (Ninsin and Adu-Acheampong, 2017).

However, its constitutional and institutional mandate reflects current industry changes, particularly considering Ghana's socio economic and political goals. Currently, COCOBOD as a public entity has major subsidiaries streamlining operations across the cocoa value chain, for instance, the Quality Control Company (QCC), the Cocoa Marketing Company (CMC), the Research Monitoring and Evaluation Division (M&E), and the Cocoa Health and Extension Division (CHED) are all involved in routine value chain activities. The operational activities of these divisions within COCOBOD have a direct impact on Ghana's cocoa certification programmes (Barrientos, 2014; Kolavalli et al., 2012). Also, the M&E division of COCOBOD oversees Ghana's cocoa certification/sustainability initiatives and gives approval prior to implementation of these voluntary standards in Ghana.

In addition, COCOBOD has also provided production farm incentives and inputs, and protected cocoa producers from the precarious nature of prices on the global market by setting prices for the purchase of all cocoa beans. The current price of a 64kg bag of cocoa, both certified and conventional, in Ghana is GH 800 cedis. Meanwhile, COCOBOD is focusing its efforts on rewarding cocoa producers on output targets and producer prices to achieve sustainable cocoa production for Ghana.

Licensed Buying Companies (LBCs)

The purchasing and conveying of dried cocoa beans from cocoa growing areas to the cities is a difficult task with repercussions for the crop's political economics (Nimako, 2020). However, the involvement of LBCs in solving this task has a significant impact on the success of Ghana's cocoa reaching the global market (Ansah et al., 2018). Interestingly, the PBC, over the years, has been the largest local LBC in Ghana's cocoa value chain (Otchere et al., 2013; Monastyrnaya et al., 2016). Previously, the PBC had a monopoly over the purchase of Ghana

cocoa beans, as it was the only LBC occupying the cocoa purchasing space; they would buy all the dried cocoa beans from cocoa producers and transport them to their local depots (Glavee-Geo et al., 2020). Nonetheless, in recent times, the deregulation and liberalisation of cocoa purchasing have ushered in reforms through COCOBOD to curtail the monopolistic power of the PBC. A multiple cocoa purchasing system was adopted by COCOBOD to implement a competitive internal purchasing and marketing strategy. Ghana currently has forty-six LBCs, such as Amajaro Ghana Limited, Federated Commodities, Adwumapa Buyers Limited, Cargill, Akuafo Adanfo, Kuapa Kooko, and Olam Ghana Limited, which all emerged to break the monopolistic power of the PBC. However, the PBC as a public LBC still controls 31% of the domestic market share in the purchasing space for Ghana cocoa beans compared to other LBCs. Yet, across the cocoa growing areas, most farming communities are dominated by these private LBCs; for instance, a community of 250 - 400 cocoa farmers will see about five LBCs' cocoa sheds across the area, with the PBC dominating purchases. These LBCs purchase cocoa beans from farmers at a predetermined price set by COCOBOD as the industry's regulator and single buyer. In a turbulent global market, the set price aims to ensure that farmers receive a guaranteed income (Fold, 2002; Abbey et al., 2016). The COCOBOD inspectors check the cocoa at various LBCs' warehouses, and then hauliers take the certified, conventional, graded, and bagged cocoa to the ports, where it is received by the cocoa marketing company on behalf of COCOBOD for export in exchange for a small margin above the amount paid to farmers. Moreover, the regulations and guidelines for the privatisation of the internal marketing of Ghana's cocoa have established the legal framework that serves as national policy in Ghana cocoa purchases (Otchere et al., 2013; Amankwah-Amoah et al., 2018).

Obviously, the decision to implement the multiple-buying system was a significant step forward in the reform of the cocoa sector, which had been overwhelmed by several issues over the past decades, causing it to lose competitiveness (Yamoah et al., 2020). Apart from the purchasing of dried cocoa beans from certified and conventional cocoa producers across various regions in Ghana, most certification programmes, such as UTZ certified, Rainforest Alliance, and Fairtrade certification, are organised through LBCs. The private non-governmental agencies train these public and private licensed companies on the best sustainable agricultural practices, and this information is further transferred to cocoa farmers. Here, the LBCs serve as an intermediary between the certification bodies and the cocoa producers. They also provide training for cocoa farmers on best farming practices, such as planting seedlings, applying fertilizer and weedicides, spraying pesticides, mapping, pruning, and other agricultural practices, as well as providing education on environmental and social practices across the cocoa sector in Ghana.

Cocoa producers(farmers)

Cocoa is the most important contributor to Ghana's GDP, accounting for up to 75% of total export earnings (Amankwah-Amoah et al., 2018). Also, cocoa provides direct employment to over two million people, both producers and other industry players, as well as providing indirect employment to over three million stakeholders who, in turn, support the industry (PBC, 2021). Over the past decades, cocoa producers (farmers) have continued to be key stakeholders in the cocoa value chain across both developed and emerging economies (Aneani et al., 2012). However, the production process begins on the fields of the cocoa producers; they tend to live in areas of tropical forest, a habitat that covers twelve of Ghana's sixteen administrative regions and include several of the country's major ethnic groups.

Interestingly, the majority of the cocoa producers living in the twelve administrative regions are located and identified through farmers' associations and cooperatives. The Ghana Cocoa, Coffee, and Shea Nut Farmers Association (GCCSFA) is the most dominant farmers' association in Ghana's cocoa industry. However, cocoa producers, like most other farmers, have the difficulty of there being multiple farmer associations, which can lead to factions. The Ghana National Cocoa Farmers Association (GNACOFA) is still a powerful lobbying organisation that helps farmers influence crucial policy decisions in the cocoa value chain, just as they can influence government policies that are judged to be unfavourable to farmers (Essegbey and Ofori-Gyamfi, 2012).

Meanwhile, cocoa production has allowed most of these agricultural producers and their respective families to keep well above the national poverty level (Läderach et al., 2013). The stigma of poverty attached to cocoa producers in Ghana is decreasing slowly due to the various reforms introduced into the cocoa value chain over the past years. For example, growth in cocoa production has been more pro-poor than growth in other sectors of Ghana's economy (Kolavalli and Vigneri, 2011; Laven, 2011).

Certification Bodies

Agricultural commodity certification programmes have evolved to contribute to improving production, quality, and governance in trade and value chain relationships in Ghana's cocoa sector (Auld, 2010; Herzfeld and Jongeneel, 2012). In recent times, commodity certification programmes have served as a mechanism for improving the livelihood of commodity producers, their families, the environment, and respective communities across developed and emerging economies (Ruf and Schroth, 2015; Iddrisu et al., 2020). Thus, third-party certification programmes typically use market mechanisms to change production and trading

practices, and these, in turn, affect the welfare of consumers and producers, their families, and the environment (Barham and Weber, 2012; Ruben and Zuniga, 2011). Notably, certification among agricultural food safety standards is an important part of the global food chain and has also become essential for commodity producers to access high-value markets (Henson and Reardon, 2005). That notwithstanding, the popularity of third-party certification programmes in Ghana's cocoa sector may be seen as a response to growing public concern about healthy living, social injustice, and the environmental degradation associated with conventional agricultural production (Lazaro, Makindara and Kilima, 2008).

In that regard, a group of commodity certification programmes have aimed at improving the wellbeing of farmers and agricultural workers; standard setting and compliance, consumer advocacy, producer capacity building, supply chain development, price premiums, and the implementation of acceptable labour standards have emerged and are geared to encourage sustainable agriculture (Gockowski et al., 2013; Basso et al., 2012; Ingram et al., 2014; Ansah et al., 2020). These interventions seek to have an impact, directly or indirectly, on different intermediate outcomes of producers and other loosely coupled actors within the cocoa sector (Ingram et al., 2014). For instance, prices of produce, yields, farm revenues and wages, and household income are advocated by chain actors through certification programmes across developed and emerging economies. In Ghana, most of these certification bodies use a combination of standard-setting actions, compliance, capacity building, and training for farmer groups, LBCs, and cooperatives, as well as corporate social responsibilities and various market interventions, such as price premiums and credit facilities, to achieve their certification objectives (Oya et al., 2018). Table 3 below illustrates the role and functions of some loosely coupled actors within Ghana's cocoa industry.

Table 3.0 Summary of loosely coupled actors and their roles in Ghana’s cocoa value chain.

No.	Actors	Key function within the cocoa value chain in Ghana
1	Ghana Cocoa Board (COCOBOD) [Main actors: Research monitoring and evaluation Division, Quality Control Division, cocoa health, and extension division (CHED)]	Oversees and monitors Ghana’s cocoa certification programmes, sets cocoa prices, research into the cocoa industry and seals dried cocoa bags for export.
2	Licensed Buying Companies (LBCs) [Main actors: Produce buying company, Federated commodities, Adwumapa Buyers Limited, Kuapa Cocoa, Amajaro Ghana Limited, Olam Cocoa Limited]	Internal marketing and purchasing of dried cocoa beans directly from the farmers and selling to statutory body.
3	Cocoa Producers [Main actors: Certified cocoa farmers and those who certification licensed has been revoked]	On-farm production and pre-harvest/industrial processing of cocoa for domestic markets and export.
4	Certification Organisations [Main actors: Cooperatives and LBCs, Rainforest Alliance, UTZ Certified, Fairtrade]	Certification, inspection, auditing, training, education, sensitisation, payment of premiums.

3.2.1 Funding and support for Ghana’s cocoa sector

Ghana’s cocoa production is ultimately funded from tax paid to the Ghana central government through the Ministry of Finance and Economic Planning (MOFEP) (Van Huellen and Abubakar, 2021). The MOFEP oversees the national budget and is responsible for the distributive justice based on the budgets received from COCOBOD through the Ministry of Agriculture. In 2020, the value of total exports including the cocoa sector was about \$14.5 billion compared to imports of \$12.35 billion according to a recent Ministry of Finance budget (2020) and a Bank of Ghana report (MOFEP Budget, 2020; Bank of Ghana, 2020). Interestingly, Ghana’s cocoa sector has, over the years, received significant attention regarding resource

allocation compared to other commodity sector budgets, due to the sector contributing 30% of Ghana's export earnings (MOFEP Budget, 2020).

Moreover, various commercial banks, such as the Agricultural Development Bank (ADB) and African Development Bank (AFDB), play key roles in the development of the cocoa sector in Ghana. These commercial banks support the cocoa sector and cocoa producers financially through their credit unions by giving them soft loans and other incentives to cocoa producers on a credit basis (Attipoe et al., 2020). They also receive support from individual funding between relatives and friends in the form of profit-lending agencies that lend money to cocoa-producing households in respective communities across cocoa growing areas in Ghana (Owusu-Antwi and Antwi, 2010; Sekyi et al., 2017). In addition, insurance firms also provide some sort of financial safety net for cocoa producers in Ghana by protecting them against natural disasters, illness, and small business failure. Besides, a variety of commercial companies provide both life and non-life insurance services for cocoa producers and other chain actors in the cocoa sector (Budhathok et al., 2019). There are also free public insurance schemes such as the Social Security and National Insurance Trust (SSNIT), which provides pension support for the elderly in the form of coverage, and the National Health Insurance Scheme (NHIS), which provides medical care for cocoa producers and others across Ghana (Okoroh et al., 2018).

3.2.2 Public and private initiatives in the Ghanaian cocoa industry

Cocoa production in Ghana has inevitably led to environmental and economic problems, and even social conflicts (Yamoah et al., 2021). Interestingly, River (1996) and Ikerd et al. (1997) argued that sustainable cocoa production is not a defined set of agricultural practices but rather a utopian and dynamic condition, and involves initiatives introduced into the cocoa

sector by both public and private stakeholders across developed and emerging economies. Meanwhile, Derpsch's (1998) study emphasised that these public and private initiatives have contributed immensely to sustainable cocoa production over the past years. According to the Cocoa Research Institute of Ghana, initiatives such as maintaining crop hygiene, using hybrid and disease-resistant varieties, managing shade, rational pesticide use, maintaining plant nutrients and other ethical production standards, mass spraying of cocoa, certification programmes, sustainability, and climate-smart intensification programmes are all other initiatives introduced by the COCOBOD and other private stakeholders to encourage sustainable cocoa production in Ghana (Amankwah-Amoah et al., 2018).

3.2.3 Ghana's cocoa sector in the fourth revolution

Many studies have been conducted to show how new technologies have evolved in Ghana's cocoa sector over the past decades (Aneani et al., 2012; Siaw et al., 2022). According to Laryea (1982), technology in the cocoa sector involves the whole store of knowledge, which includes traditional skills required on the farm for cocoa production, processing, and marketing. To this end, many technologies and models have been developed to provide direction to the development of Ghana's cocoa industry (Dormon, et al., 2007). The Cocoa Research Institute of Ghana (CRIG) carries out research on pest management using the transfer of technology (ToT) model (Chambers and Ghildyal, 1985; CRIG, 2014). The study draws on the application of synthetic pesticides to control the issues with capsids, fungicides, and black pod disease that cocoa production in Ghana faces. The research findings emphasised how COCOBOD, and cocoa producers can invest in synthetic pesticides to control black pod disease. However, the available technology fuels innovation, which requires organisations to develop the technical and financial capability to access these evolving technologies.

On the other hand, cocoa producers in Ghana are faced with challenges such as a lack of cash and credit facilities, as well as the high cost of necessary inputs such as pesticides and labour. As a result, even though most farmers are aware of the recommendations for cocoa production, they do not follow them. For instance, according to Toledo-Hernández et al.'s (2020) research, just 4% of cocoa producers in Ghana fully implement the suggested insect-management procedures.

Recently, cocopeat receptacles have been embraced as a novel technology for cultivating cocoa seedlings at nursery facilities (COCOBOD, 2021). The programme is part of COCOBOD's efforts to streamline its key tasks to align them with best practices for environmental protection and conservation. Cocopeat is a soilless organic medium made from coconut husks; it contains trace elements and can be used as a topsoil alternative, while the receptacles are plastic containers that replace the polybags that are commonly used to raise cocoa seedlings. This new technology aims to improve cocoa seedling cultivation and increase production because of the ongoing concerns of conservationists about the need to maintain biodiversity protection in cocoa farming and agriculture in general. The recent technological initiatives within Ghana's cocoa industry abound; cocoa extension officers used to use stamps after inspecting nursery cocoa seedlings, but eventually, cocoa producers and extension officers resorted to the use of agricultural drones for watering and inspecting instead (Iafrate, 2018; Jha and Sahoo, 2020). Some farmers have also resorted to the use of agricultural drones and other technological gadgets for monitoring certification practices and other initiatives in the cocoa industry. Then, in 2021, the government of Ghana introduced another technological and innovative approach to deal with issues of theft by purchasing clerks at the local depots. The introduction of a non-adjustable electronic weighing scale for purchasing cocoa aims to curb

the long-standing complaints by cocoa farmers on weighing scales being adjusted by purchasing clerks at the local depots.

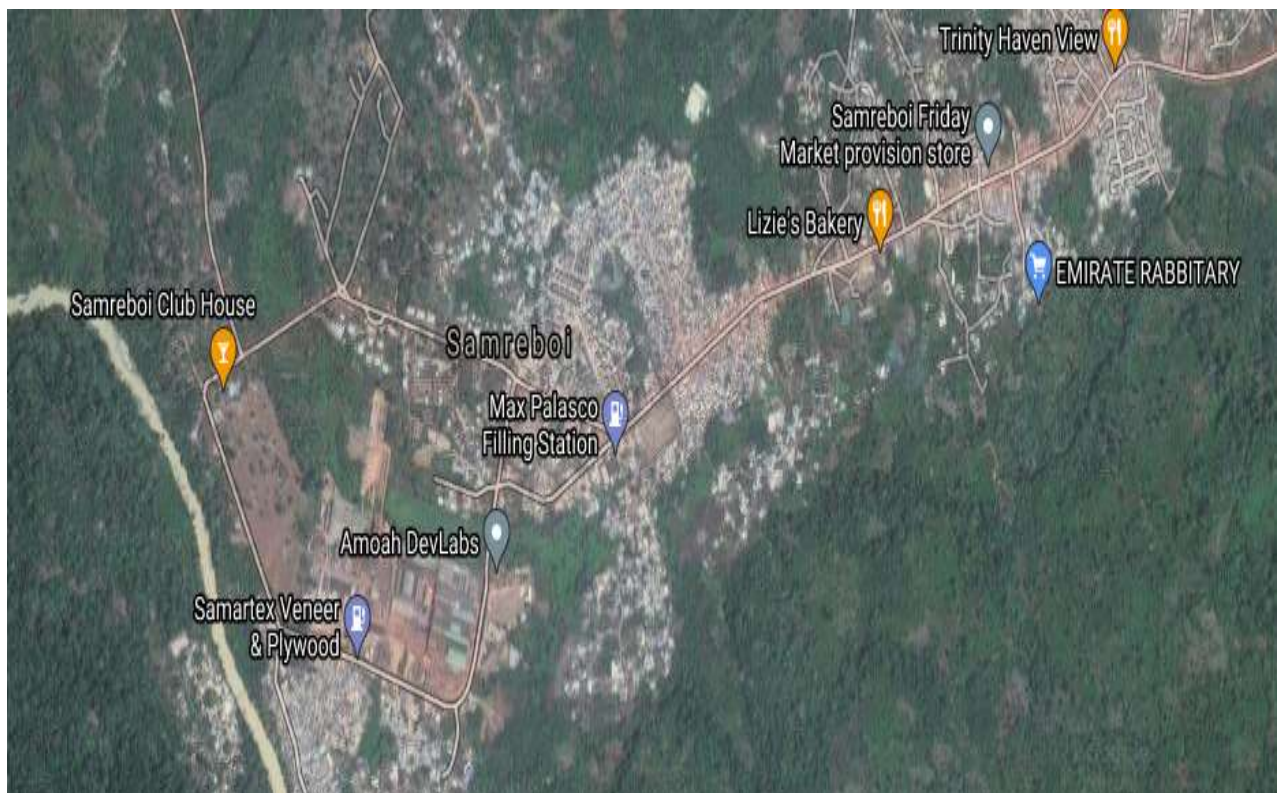
3.2.4 Empirical research sites

This study was conducted in three regions in Ghana, with two cocoa growing regions - the Western and Eastern regions – and with Greater Accra as the administrative site of the Ghana Cocoa Board and some of its subsidiaries. The research site in the Western region includes Samreboi (Wassa Amenfi West) and Aiyinase (Ellembelle District). Samreboi is known for high cocoa production and is the site of the plant of one of the biggest West African timber and plywood companies. The two districts were chosen as part of the research site because they are well known for high cocoa production. The Western region was part of the sustainable cocoa initiative, namely, the Mars Partnership for African Cocoa Communities of Tomorrow (iMPACT) that was being implemented in collaboration with the Rainforest Alliance certification body, which aimed to certify 10,000 cocoa farmers in forty communities in Ghana and Côte d'Ivoire (Toose, Elzakker, and Daniëls, 2013). In addition to cocoa production, the other socio-economic activities in the two districts are farming, trading, logging, and small-scale mining.

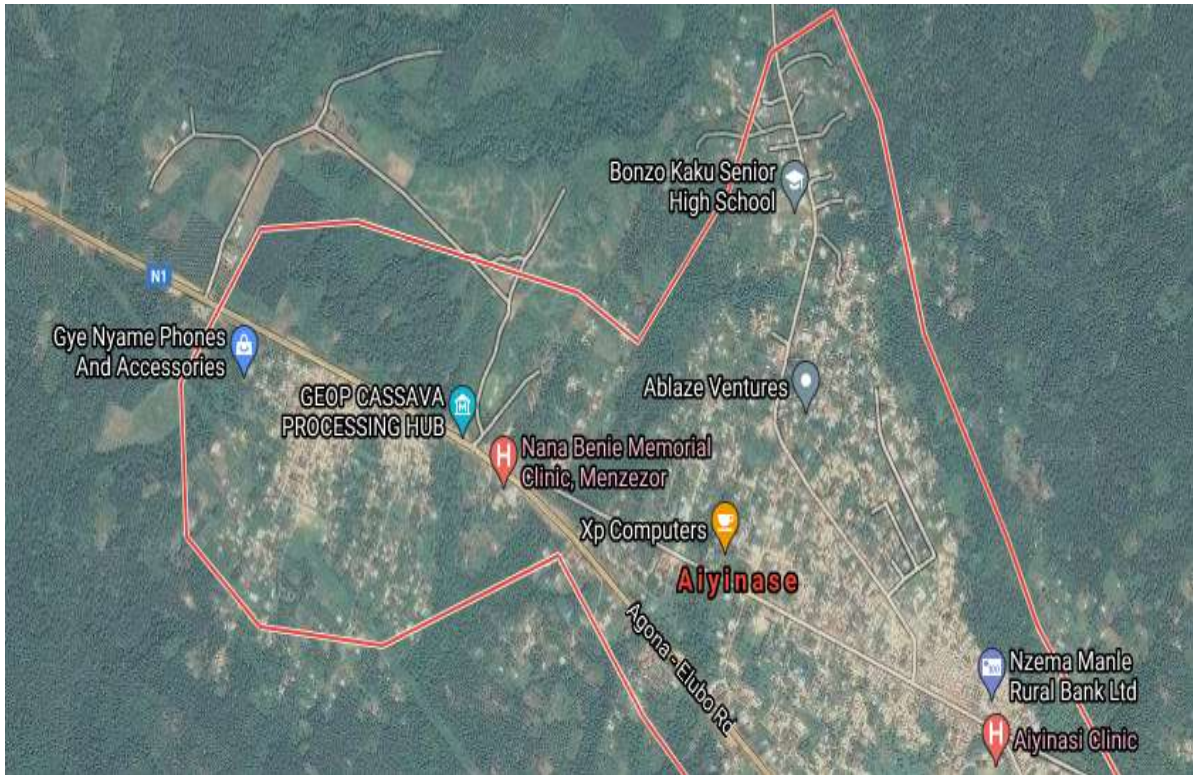
The Eastern region is an important cocoa production area of Ghana. It is also the first region where the cocoa crop was planted in 1879 (Hill, 1963). The districts selected for this study were Atiwa and East Akim, which produce the largest amount of cocoa in the Eastern region. The Atiwa district is in the north-western part of the region. It shares a boundary with the Kwahu West Municipal area to the north, East Akim Municipal area to the south, Birim Central Municipal area to the west, and Fantekwa to the east and south-west. The inhabitants are predominantly farmers cultivating cocoa, oil palm, plantain, cassava, yams, and various

vegetables, but cocoa and oil palm are the main cash crops. Interestingly, all the districts and communities selected as research sites were participating in one of the certification labels, that is, Rainforest Alliance, UTZ Certified, and Fairtrade. The Greater Accra region serves as the head office of the COCOBOD and some of its subsidiaries, such as the QCC. It is the first point of call for registration and approval for all certification bodies and international exporters who are keen to participate in certification initiatives. The following pictures and table (Table 3.1) offer a representation of the various research sites selected for this study. The next section discusses the research approach for this empirical enquiry.

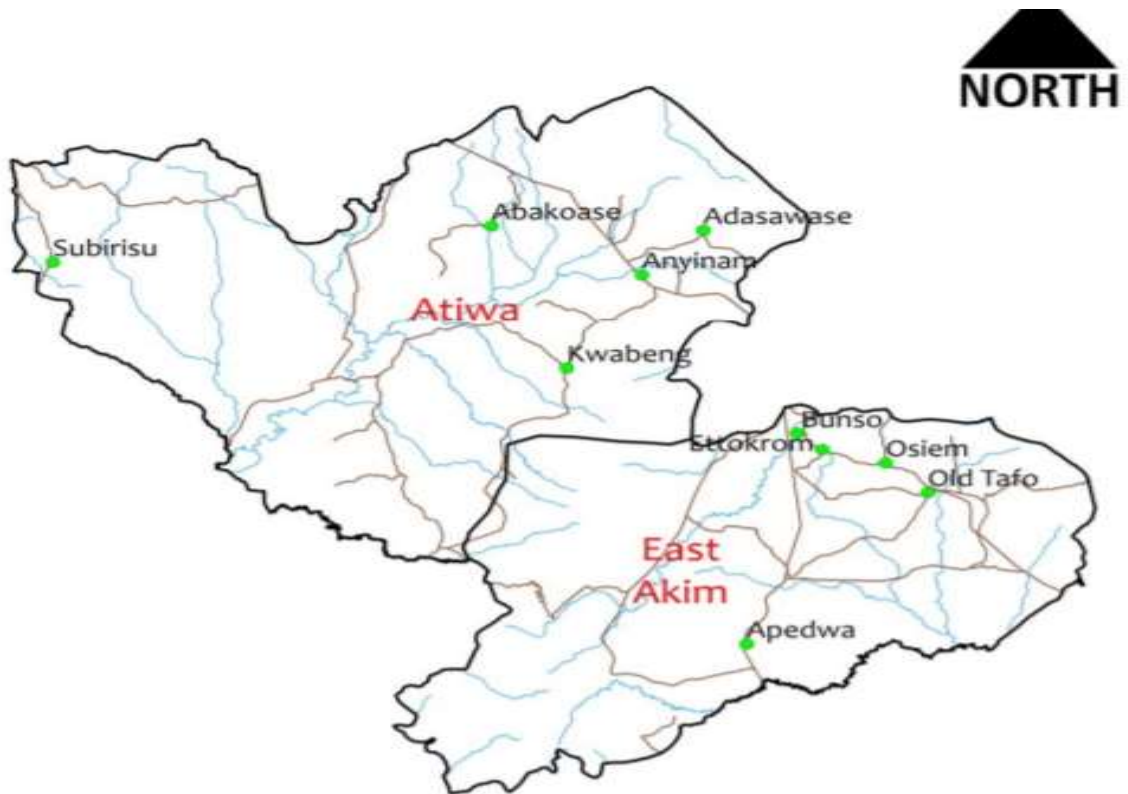
Figure 3.1 Map of study locations in Ghana



Source: maphill.com/Ghana/western/Amenfi/maps/satellite-map

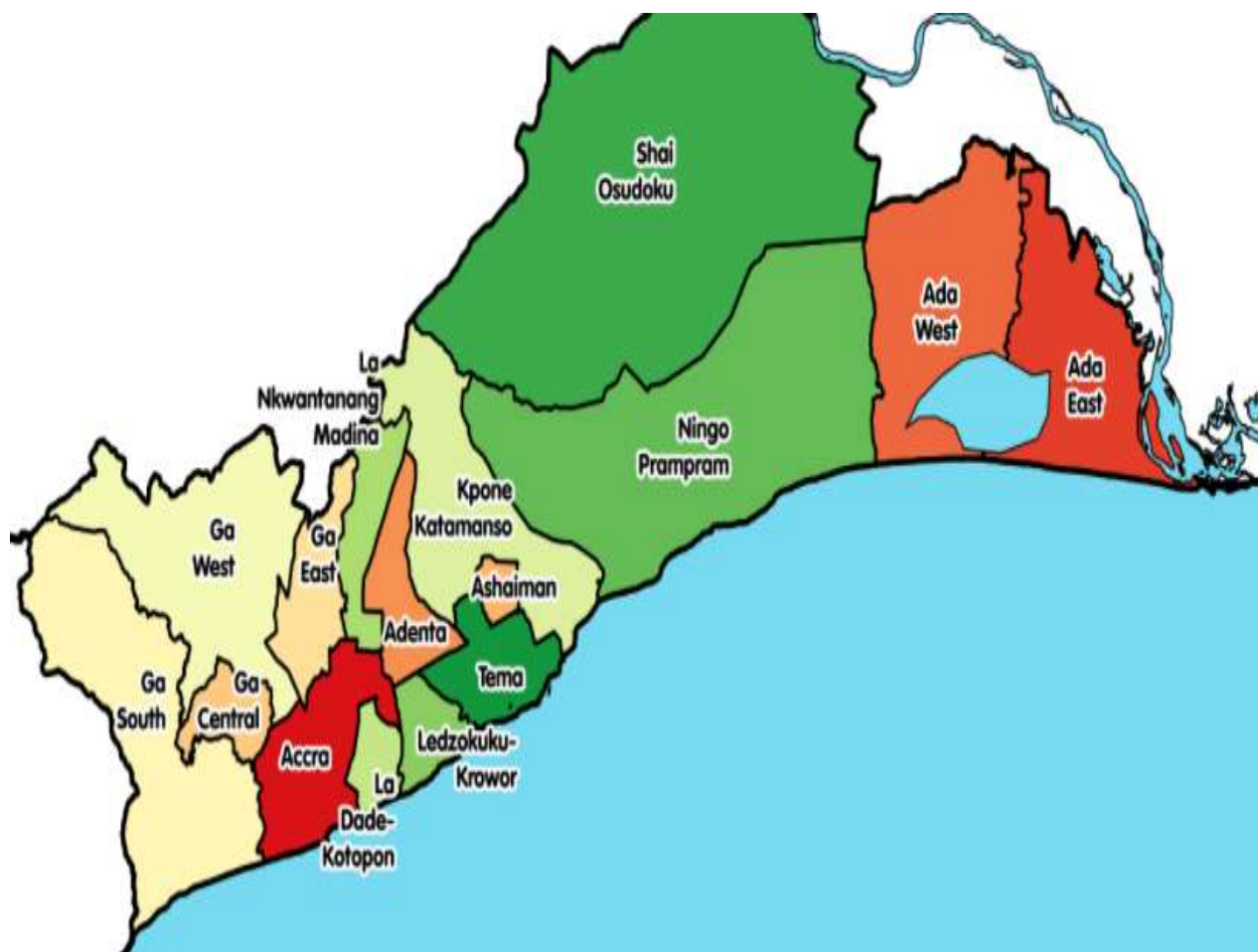


Source: maphill.com/Ghana/western/Aiyinasi/maps/satellite-map



Map of Atiwa and East Akim Districts Showing Selected Cocoa Growing Communities

Source: Ghana statistical service, 2016



Source: Ghana-maps.com /Greater Accra Region

Table 3.1 Regions, Districts, and Communities sampled in this study.

REGIONS	DISTRICTS	COMMUNITIES
Western	Wassa Amenfi West Ellembele	Samreboi, Mumuni camp, Kakrakrom Dadwen, Anyinase.
Eastern	Atiwa East Akim	Adasawase, Sekyere, Anyinam Akyem Apedwa, Nkorsu, Densuso.
Greater Accra	Accra Metropolitan	Accra Central (Ghana COCOBOD Head Office)

3.3 Research approach

3.3.1 Explorative qualitative design

There is a burgeoning body of empirical research that draws on third-party certification programmes in developed and emerging economies (Auld et al., 2008; Fortin and Richardson, 2013). However, only a few empirical studies have attempted to investigate certification programmes in CVCs across emerging economies (Ingram et al., 2014; Fenger et al., 2017; Weingarten et al., 2017; Ansah et al., 2020; Dietz et al., 2020). Owing to the paucity of study focussing on third-party certification programmes, an explorative qualitative research design was deemed useful for extending scholarly understanding on the practices of loosely coupled actors leading to the perceived floundering of certification programmes in CVCs (Creswell and Poth, 2016; Collis and Hussey, 2013). Such an approach enabled this study to become fully immersed in the participants' perspective and discover if there are any discrepancies amongst the participants' answers (Creswell and Poth, 2016; Collis and Hussey, 2013). Therefore, this study adopted the use of semi-structured interviews and focus group discussions as the data collection method, which was accompanied with an examination of the field notes and policy documents. These data collection methods were also supported with archival documents from various certification websites and social media documentaries on certification practices. The semi-structured interviews and focus group discussions were the most desirable data collection methods since the study could gather current insights from loosely coupled actors on certification practices in Ghana's cocoa sector (Creswell and Poth, 2016).

3.3.2 Explorative qualitative approach

Owing to the paucity of research examining third-party certification programmes in CVCs in general, and specifically Ghana's cocoa industry, this study adopted an exploratory

qualitative research approach (Collis and Hussey, 2013; Hennink et al., 2020; Maxwell, 2021), enabling the researcher to develop a comprehensive theoretical insight into the organising practices of commodity certification programmes and how TM plays out in such practices. Though a significant number of qualitative studies over the past decades have drawn on the contribution of third-party certification programmes in commodity sector across developed and emerging economies, very few existing empirical works (Clapp, 2017; Oya et al., 2018; Ansah et al., 2020) have gone further to explore how loosely coupled actors responds to certification programmes in commodity value chains, with an emphasis on their situated organising practices. Interestingly, this study approach could potentially help participants, both on-farm and off-farm, to tell their own stories in an unexpurgated manner to reveal the intricacies in the implementation of third-party certification programmes in Ghana's cocoa sector.

3.3.3 Theoretical sampling strategy

To be included in this study, eligible participants needed to satisfy the following purposive and snowballing sampling criteria.

- (a) They must have been a certified (Rainforest, UTZ Certified, Fairtrade) cocoa farmer or producer in the Western and Eastern regions of Ghana for a period of two years or had their licence withdrawn from the certification programme.
- (b) The withdrawal and certification status of cocoa producers should be accessible and verifiable via LBCs' or cooperatives' certification database at the research site in Ghana.
- (c) The withdrawal and renewal of certificates by certification bodies for cocoa farmers and approval of labels by Ghana Cocoa Board must be centred around both on-farm and off-farm certification practices.

(d) They must be a licensed certification officer, external auditor, sustainability manager/officer, IMS manager, purchasing clerk, or quality control officer, and should have worked in a related field for over 6 months in Ghana's cocoa industry.

(e) The certification body, that is, Rainforest Alliance, UTZ Certified, Fairtrade, should be accredited by international public and private institutions, such as the International Federation of Organic Agricultural Movements (IFOAM) with approval from Ghana Cocoa Board.

(f) The LBCs or cooperatives should have met all the certification standards with approval from Ghana Cocoa Board.

3.3.4 Participant recruitment strategy and procedures

A purposive and snowballing sampling strategy was adopted to recruit participants who provided an explicit response to answer the research questions driving this empirical inquiry. Specifically, they provided responses regarding the floundering of certification programmes in Ghana's cocoa sector (Coyne, 1997; Glaser and Strauss, 2017). Most importantly, the purposive sampling approach was critical in developing a conceptual understanding of the organising practices of various certification labels in Ghana's cocoa sector. In this regard, this study developed a strategy to identify some specific loosely coupled actors within Ghana's cocoa sector, whose activities have a direct impact on Ghana's cocoa certification programmes, such as LBCs, the QCC, the Research and Evaluation division, and other private certification bodies - UTZ Certified, Rainforest Alliance, Fairtrade - and their respective cooperatives. To be able to reach out to these actors in the Ghanaian cocoa sector, a local contact was established with a leader of a farmer group. The local contact helped to reached out to other farmer groups and the local produce buying companies engaging in certification and those who license have

been revoke in the Eastern and Western region of Ghana. Other loosely coupled actors such the certification officers and their cooperatives/associations contacts were established through their LinkedIn page. The researcher introduced himself and shared the objective of the study through their emails and others who provided their phone number were also contacted on phones prior to the interviews. The LinkedIn contact proved useful for establishing more contacts with certification/sustainability officers in the regions. For the regulator, thus the Ghana cocoa board, an official letter was written to the Head office for approval prior to the interview. All those who consented to participate in the research either face- to-face, phone call or on zoom were then sent a participant information sheet which clearly set out the research objective. As indicated, some participants, such as certification field auditors, and cooperatives leaders were given a brief phone call to further explain the objective/aims of the study which was followed with an email that had the participant information sheet attached to support the discussion held during the phone call. The selected actors added new insights to the subject of discourse (Eisenhardt et al., 2016). Additionally, to have a different perspective on the certification practices in Ghana's cocoa sector, a snowballing research technique (Etikan et al., 2016) was further employed to reach out to and recruit participants such as cocoa farmers who were scattered across the cocoa growing communities in the research sites in Ghana. In the first instance, three cocoa farmers were approached in Samreboi (Wassa Amenfi West) and in Akyem Nkorosu (East Akyem) and were invited to take part in this study. The three cocoa farmers also identified other persons who qualified for inclusion in the study sample. The referral procedure continued in Akyem Nkorosu until a significant number of cocoa farmers who were beneficiaries of a particular certification label were identified. Interestingly, all the cocoa producers identified were participating in one certification programme under cooperatives or LBCs and others, whose licence from the

certification programme have been revoked and had moved on to join other LBCs or cooperatives, were found to meet the theoretical sampling technique. Even though the research was carried out during the Covid-19 period, all covid protocols were communicated to the participants prior to the interviews and the focus group discussions.

Table: 3.2 Biographical sketch of loosely coupled actors and their certification practices

No.	Pseudonym (Gender)	Age	Role	Certified Actors (Cooperative/License Buying companies-LBC)	Years of practice	Certification Type	Certification practices
1	INC0121(M)	37	Certification manager	Cocoa Abrabopa cooperative	9	Rainforest Alliance	training/education
2	INC0122(M)	40	Certification manager	Cocoa Abrabopa cooperative	6	UTZ-R. Alliance	education/training
3	INC0123(M)	36	Certification auditor	SAN Accredited Auditor	8	Rainforest Alliance	inspection/auditing/sampling
4	INC0124(M)	38	Cert. coordinator	Cocoa Abrabopa cooperative	6	Rainforest Alliance	training/education/mapping
5	INL0321(M)	46	Certification manager	Olam Ghana Limited (LBC)	9	Rainforest Alliance	training/management
6	INL0322 (M)	38	Cert/Sust. manager	Olam Ghana Limited (LBC)	6	Rainforest Alliance	training/ education/ inspection
7	INC0125 (M)	42	Technical coordinator	Cocoa Abrabopa cooperative	12	UTZ-R. Alliance	training/inspection/mapping
8	INL0323(M)	34	Internal mgt. service.	Federated Commodities (LBC)	5	UTZ Certified	training/csr/purchases
9	INL0324 (M)	52	District officer	Federated Commodities (LBC)	5	UTZ Certified	depot manager/purchases
10	INC0126 (M)	48	Technical coordinator	Cocoa Abrabopa cooperative	12	UTZ-R. Alliance	training/inspection/mapping
11	INR0221 (M)	45	District director	Ghana Cocoa Board	15	CHED	pruning/education/mass spraying
12	INL0325 (M)	40	Sustainability cord.	Cocoa merchant (LBC)	9	Rainforest Alliance	mapping/training/purchasing
13	INL0326(M)	43	Certification manager	Cocoa merchant (LBC)	6	Rainforest Alliance	training/ management
14	INL0327 (M)	35	Certification officer	Cocoa merchant (LBC)	8	Rainforest Alliance	mapping/inspecting/sensitisation
15	INL0328(F)	38	Data entry officer	Cocoa merchant (LBC)	9	Rainforest Alliance	registration/record keeping
16	INR0222 (M)	47	Research director	Ghana Cocoa Board	15	COCOBOD	registration/licensing/monitoring
17	INR0223 (M)	42	Marketing manager	Cocoa marketing company	12	COCOBOD	marketing/export/inspection
18	INC0127 (M)	49	Purchasing clerk	Asetenapa farmers' cooperative	4	Fairtrade certified	purchasing/education
19	INC0128 (M)	35	Technical field officer	Asetenapa farmers' cooperative	2	Fairtrade certified	farm mapping/ inspection
20	INR0224 (M)	44	Quality Control Officer	Quality Control Company Limited	10	COCOBOD	inspection/ grading/ sealing
21	INR0225 (M)	48	District principal officer	Quality Control Company Limited	18	COCOBOD	inspection/ sealing
22	INF0421 (M)	46	Farmer	Gyeasu farmer group	4	UTZ -R. Alliance	On-farm practices
23	INC0129 (M)	37	Sustainability Manager	Agro Eco Ghana	10	UTZ-RA/ Fairtrade	inspection/training/education

24	INR0226 (M)	44	Sus/cert. manager	Produce Buying Company (PBC)	8	COCOBOD	training/ inspection
25	INC0130 (M)	52	Ex certification Auditor	Rainforest Alliance/Fairtrade	10	Solidaridad certification	training/inspection/education
26	INL0329 (M)	33	Sustainability cord.	Cargill Ghana Limited (LBC)	4	Rainforest Alliance	training/ education/mapping
27	INL0330 (M)	44	Sustainability manager	Cargill Ghana Limited (LBC)	8	Rainforest Alliance	education/ training/inspection
28	INR0227(M)	28	Technical officer	Ghana Cocoa Board	2	COCOBOD	training/inspection
29	INF0422 (F)	32	Farmer	Amajaro Ghana Limited	3	UTZ-R. Alliance	on-farm practices
30	INL0331 (M)	54	District officer	Kuapa Kooko (LBC)	12	Fairtrade/UTZ-RA	depot manager/ purchases
31	INF0423 (F)	72	Farmer	Amajaro Ghana Limited (LBC)	2	UTZ-R. Alliance	on-farm practices
32	INF0424 (M)	32	Farmer	Amajaro Ghana Limited (LBC)	4	UTZ-R. Alliance	on-farm practices
33	INF0425 (M)	54	Farmer	Federated Commodities (LBC)	4	UTZ Certified	on-farm practices
34	INF0426 (M)	78	Farmer	Federated Commodities (LBC)	5	UTZ Certified	on-farm practices
35	INF0427 (F)	51	Farmer/Cooperative Ex.	Asetenapa farmers' cooperative	4	Fairtrade certified	on-farm practices
36	INF0428 (M)	58	Farmer/Cooperative Ex.	Asetenapa farmers' cooperative	5	Fairtrade certified	on-farm practices
37	INF0429 (M)	62	Farmer	Asetenapa farmers' cooperative	5	Fairtrade certified	on-farm practices
38	INF0430 (F)	48	Farmer/Cooperative Ex.	Asetenapa farmers' cooperative	5	Fairtrade certified	on-farm practices
39	INF0431 (F)	55	Farmer/Cooperative Ex.	Asetenapa farmers' cooperative	5	Fairtrade certified	on-farm practices
40	INF0432 (M)	61	Farmer/Cooperative Ex.	Asetenapa farmers' cooperative	5	Fairtrade certified	on-farm practices
41	INF0433 (M)	73	Farmer	Cocoa Abrabopa cooperative	8	Rainforest Alliance	on-farm practices
42	INF0434 (M)	52	Farmer	Cocoa Abrabopa cooperative	3	Rainforest Alliance	on-farm practices
43	INF0435 (F)	52	Farmer	Amajaro Ghana Limited (LBC)	2	UTZ -R. Alliance	on-farm practices
44	INF0436 (M)	58	Farmer	Modenbo farmer group (LBC)	5	UTZ Certified	on-farm practices
45	INF0437 (M)	61	Farmer	Modenbo farmer group (LBC)	6	UTZ Certified	on-farm practices
46	INF0438 (F)	54	Farmer	Federated Commodities (LBC)	3	UTZ Certified	on-farm practices
47	INF0439 (M)	64	Farmer	Federated Commodities (LBC)	5	UTZ Certified	on-farm practices
48	INF0440 (F)	30	Farmer	Gyeasu farmer group (LBC)	5	UTZ -R. Alliance	on-farm practices
49	INF0441 (F)	78	Farmer	Modenbo farmer group (LBC)	8	UTZ Certified	on-farm practices
50	INF0442 (F)	48	Farmer	Modenbo farmer group (LBC)	3	UTZ Certified	on-farm practices

51	INF0443 (M)	58	Farmer	Asetenapa farmers' cooperative	2	Fairtrade certified	on-farm practices
52	INF0444 (M)	57	Farmer	Asetenapa farmers' cooperative	3	Fairtrade certified	on-farm practices
53	INF0445 (F)	43	Farmer	Cocoa Abrabopa cooperative	5	Rainforest Alliance	on-farm practices
54	INF0446(M)	58	Farmer	Asetenapa farmers' cooperative	4	Fairtrade certified	on-farm practices
55	INF0447 (F)	48	Farmer	Asetenapa farmers' cooperative	4	Fairtrade certified	on-farm practices
56	INF0448 (M)	74	Farmer	Asetenapa farmers' cooperative	4	Fairtrade certified	on-farm practices
57	INF0449 (M)	74	Farmer	Asetenapa farmers' cooperative	4	Fairtrade certified	on-farm practices
58	INF0450 (M)	73	Farmer	Nyamenti farmers' association (LBC)	4	UTZ-R. Alliance	on-farm practices
59	INF0451 (F)	66	Farmer	Asetenapa farmers' cooperative	4	Fairtrade certified	on-farm practices
60	INF0452 (F)	55	Farmer	Asetenapa farmers' cooperative	4	Fairtrade certified	on-farm practices
61	INF0453 (M)	71	Farmer	Asetenapa farmers' cooperative	4	Fairtrade certified	on-farm practices
62	INF0454 (M)	66	Farmer	Asetenapa farmers' cooperative	5	Fairtrade certified	on-farm practices
63	INF0455 (M)	72	Farmer	Asetenapa farmers' cooperative	4	Fairtrade certified	on-farm practices
64	INF0456 (M)	68	Farmer	Asetenapa farmers' cooperative	4	Fairtrade certified	on-farm practices
65	INF0457 (M)	48	Farmer/Cooperative Ex.	Kuapa Kooko cooperative	8	Fairtrade /UTZ-RA	on-farm practices
66	INF0458 (M)	62	Farmer	Kuapa Kooko cooperative	6	Fairtrade /UTZ-RA	on-farm practices
67	INF0459 (M)	54	Farmer	Kuapa Kooko cooperative	8	Fairtrade /UTZ-RA	on-farm practices
68	INF0460 (M)	71	Farmer	Asetenapa farmers' cooperative	5	Fairtrade certified	on-farm practices
69	INF0461 (M)	68	Farmer	Kuapa Kooko cooperative	12	Fairtrade /UTZ-RA	on-farm practices
70	INF0462 (M)	72	Farmer	Kuapa Kooko cooperative	12	Fairtrade/ UTZ-RA	on-farm practices
71	INF0463 (F)	64	Farmer	Kuapa Kooko cooperative	12	Fairtrade /UTZ-RA	on-farm practices
72	INF0464 (M)	62	Farmer/Cooperative Ex.	Kuapa Kooko cooperative	12	Fairtrade/ UTZ-RA	on-farm practices
73	INF0465 (M)	40	Farmer	Kuapa Kooko cooperative	4	Fairtrade /UTZ-RA	on-farm practices
74	INF0466 (M)	38	Farmer	Asetenapa farmers' cooperative	2	Fairtrade certified	on-farm practices
75	INF0467 (F)	48	Farmer	Asetenapa farmers' cooperative	4	Fairtrade certified	on-farm practices
76	INF0468 (M)	56	Farmer	Water Matter (FEDCO)	5	UTZ Certified	licence revoked
77	INF0469 (M)	72	Farmer	Water Matter (FEDCO)	5	UTZ Certified	licence revoked

78	INF0470 (M)	68	Farmer	Water Matter (FEDCO)	5	UTZ Certified	licence revoked
79	INF0471 (M)	64	Farmer	Water Matter (FEDCO)	5	UTZ Certified	licence revoked
80	INF0472 (M)	55	Farmer	Water Matter (FEDCO)	5	UTZ Certified	licence revoked
81	INF0473 (M)	47	Farmer	Water Matter (FEDCO)	5	UTZ Certified	licence revoked
82	INF0474 (F)	52	Farmer	Water Matter (FEDCO)	5	UTZ Certified	licence revoked
83	INF0475 (F)	43	Farmer	Water Matter (FEDCO)	2	UTZ Certified	licence revoked
84	INF0476 (M)	46	Farmer	Water Matter (FEDCO)	3	UTZ Certified	licence revoked
85	INF0477 (F)	68	Farmer	Water Matter (FEDCO)	5	UTZ Certified	licence revoked
86	INF0478 (M)	52	Farmer	Water Matter (FEDCO)	5	UTZ Certified	licence revoked
87	INF0479 (F)	48	Farmer	Water Matter (FEDCO)	3	UTZ Certified	licence revoked
88	INF0480 (F)	51	Farmer	Nyamenti farmers' association (LBC)	4	UTZ-R. Alliance	on-farm practices
89	INF0481 (F)	54	Farmer	Modenbo farmer group (LBC)	5	UTZ Certified	on-farm practices
90	INF0482 (M)	38	Farmer	Modenbo farmer group (LBC)	5	UTZ Certified	on-farm practices
91	INF0483 (M)	47	Farmer	Modenbo farmer group (LBC)	5	UTZ Certified	on-farm practices
92	INF0484 (M)	49	Farmer	Asetenapa farmers' cooperative	6	Fairtrade Certified	on-farm practices
93	INF0485 (M)	66	Farmer	Nyamenti farmers' association (LBC)	2	UTZ-R. Alliance	on-farm practices
94	INF0486 (M)	50	Farmer	Nyamenti farmers' association (LBC)	4	UTZ-R. Alliance	on-farm practices
95	INF0487 (M)	58	Farmer	Nyamenti farmers' association (LBC)	4	UTZ-R. Alliance	on-farm practices
96	INF0488 (M)	52	Farmer	Nyamenti farmers' association (LBC)	3	UTZ-R. Alliance	on-farm practices

3.3.5 Data collection—semi-structured interviews and focus group Discussions.

This study was conducted using in-depth semi-structured interviews with a wide range of loosely coupled actors in Ghana’s cocoa sector. The adopted approach helped the empirical enquiry by providing an in-depth understanding of the floundering of certification programmes in Ghana’s cocoa value chains. The data collection took place in six months period in Ghana. Semi-structured face-to-face interviews were conducted with the participants in a quiet area which they were comfortable with, such as workplaces at the district office of the QCC, the district offices of LBCs, and, for some cocoa producers, in their home and on their cocoa farms.

Figure 3.2: Photographs of some cocoa farmers interviewed in the Eastern region of Ghana



A few participants could not be reached to conduct face-to-face interviews, so interviews were instead conducted via Zoom and by phone. Nonetheless, the approach of visiting most participants in their natural work settings, homes, farms, and other comfortable environments increased the internal validity of the study, as the participants felt more comfortable and so were inclined to answer the research questions freely (Galletta, 2013; Hesse-Biber and Leavy,

2011). The majority of the interviews lasted between 45 to 60 minutes, yet there were a few instances when the interview lasted between 90 to 120 minutes especially with the managers and cooperative executives of the various certification labels. The length of the interviews was appropriate for this study because it helped the researcher to have first-hand information from the main subjects of discourse and from the loosely coupled actors. Each interview began by first issuing a participant information sheet to the eligible participants, which clearly set out the purpose of the study and why it was important for these loosely coupled actors to take part in the study.

Following this, the participants were informed that confidentiality was guaranteed, so while their voices would be recorded, they would be given a pseudonym in the write-up of the main thesis, so they could not be identified. In addition, they were told how the data would be stored, processed, and used after the interview. In terms of the actual interview protocol, the interview was divided into three main sections based on the three research questions driving the empirical inquiry. Each research question had ten sub questions derived from the main research questions. Contextually, each question was designed to elicit more information from the participants but also, the way each question was couched was based on the sensitivity of the study areas being investigated. Thus, regarding the floundering of certification programmes in the Ghanaian cocoa sector, there was the need to build a strong rapport with each participant to obtain the needed information from them.

The first section of each interview captured the participant's biographical data, such as their age and gender, introduced their role, and specified how many years the participant had been working in the cocoa sector. Interestingly, the section gave more insight to on-farm and off-farm practices, where questions were asked about the selection criteria for acceptance onto

certification programmes, the associated practices after registering for the certification programme, and the procedures, structures, and underlying challenges they had encountered since they signed onto the programme. The section also helped the researcher to understand the situated practices of various loosely coupled actors in their routine certification practices. The contribution of the first stage and initial line of questioning to be addressed by participants also helped them to settle into the interview before the next section, which delved into the participant's certification status and into how the programme had contributed to their livelihood and their respective communities. The participants were then asked how the certification programme had been implemented over the years, and what had been the response from producers since it was introduced in Ghana. Information about the cost of registration onto the programme and its payment terms was requested at this stage of the study. Within the same section of questions, participants such as certification officers and other loosely coupled actors were asked if their participating labels – UTZ Certified, Rainforest Alliance, and Fairtrade - are seen in other emerging economies as struggling to meet their objectives and if it is the same in Ghana's cocoa industry. Through that line of questions, the researcher could allow participants to share their experiences in their certification practices especially regarding their training needs. Based on participants' responses, further questions were asked about internal and external inspection processes with certification bodies, such as the inspection of cocoa farmers to check compliance, renewal certificate procedures, and post inspection corrections.

The second section then touched on the factors that facilitate (or impede) certification programmes, and further questions were asked on why some certified cocoa farmers sometimes sell their cocoa beans to conventional buyers. This section also explored how

premiums are paid and distributed to certified cocoa farmers at the end of the cocoa season and the subsequent impact on the cocoa producers. Much emphasis was also placed on regulatory compliance, obstacles, and enablers to certification in practice.

The final set of questions focused on why some participants are still content with previous farm practices and have decoupled from the certification requirements. The questions in this section were designed to capture present certification practices and explore why managers of the programme have not learnt from their previous practices and whether they are able to incorporate the past and the present into their vision. Participants were further asked about their perspective regarding what factors have accounted for the collective turnover (departure) of the farmers (from the group), and the future prospect of the certification programme. It is worth mentioning that the semi-structured interview protocols evolved in tandem with the data collection process. Additional questions were added to the original scheduled questions, such as the issues on child labour and if any challenges have arisen in the aftermath of certification, and, if so, what form such challenges have taken. Also, participants were asked to share any corporate social responsibility initiatives from certification bodies and LBCs in their farming communities. To connect more effectively with the participants, not all the questions were asked as planned at first, and others were posed in a different order than in the initial proposed protocols.

A total of 96 in-depth semi-structured interviews were conducted including the focus group discussions; 5 were with COCOBOD officials, 10 with certification officials with LBCs, 5 with certification standard officials, 7 with officials of cooperatives (farmer group), and 25 with cocoa farmers across the research sites. In the semi-structured interviews, 23 interviewees were females and 73 were males. The reason for this gender disparity in the data is that

women comprise only 25% of those involved in cocoa production in Ghana (Danso-Abbeam et al., 2020). The industry is capital-intensive and fully dominated by men due to the traditional agricultural practices, which most women do not have the strength to implement. The few women in cocoa production are also elderly, that is, aged over fifty years, which also makes the sector male dominated. In addition, 12 participants (farmers) whose certification licence have been revoked by UTZ Certified were also included in this study. The semi-structured interviews took place in Ghana over a 24-week period from 22 November 2021 to 31 May 2022. To be up to date with the raw data collected, the interviews were transcribed, and the audio recordings of the interviews were listened to again within 24 hours of the interview being conducted to ensure they matched the transcriptions. Each interview recording was listened to multiple times to make sure that the content of the interview was accurately preserved.

Focus Group Discussions

Focus groups were held in four communities, namely, Kakrakrom, Akyem Nkoroso, Akyem Apedwa, and Adasewase, so as to both triangulate the research findings with communal discussions and to gain further insights into the floundering of certification programmes in Ghana's cocoa sector. The focus group meetings were very precise on the subject being investigated, thus, understanding from loosely coupled actors' perspective on the organising practices to certification programmes in commodity value chains, which aims to facilitate discussion between farmers in the Ghanaian cocoa sector. The focus groups were particularly useful for allowing selected cocoa producers in the research sites reflect on the social and environmental realities of their organising certification practices.

Figure 3.3: Focus group discussions with cocoa farmers in the Eastern and Western regions of Ghana



Participants were asked first to identify all the best farming practices advocated by certification bodies and LBCs within the cocoa sector, before discussing the benefits of the certification programmes for their livelihoods, their families, and their communities. This opening question on sustainable best farm practices consistently sparked debate among cocoa producers in all the communities visited for this study, encouraging an atmosphere whereby individual cocoa farmers were happy to share their thoughts on the certification practices and the aftermath of registering with the certification labels. The initial protocols were discussed with the cocoa farmers using separate tasks, which included first, the organising practices; second, the reasons for choosing a particular certification label under a cooperative or an LBC; third, the incentives derived from cooperatives and LBCs to support their on-farm and off-farm activities, and the 'price premium' as extra income for participating in a particular certification label; and, fourth, the challenges they encountered after signing with the certification label.

Drawing insights from Bryman (2008) as a means of providing internal validity to repeated questions on the subject, the farmer groups and cooperatives discussed several aspects of the cocoa certification programmes and the respective challenges. Cooperative executives and farmers present at the meeting were able to debate each other's points of view and advocate their own points of discussion through these focus group activities (Deans et al., 2018). For instance, at Akyem Nkorosu, Asetenapa Farmers' Cooperative were keen that after post-harvest a kilo of their cocoa beans sent to shed should be taken for their personal saving which will support their livelihood and their families in future. Interestingly, all prospective participants at the focus group exercises were affiliated with a cooperative (UTZ, RA, FLO) or an LBC. These included Asetenapa, Cocoa Abrabopa, Modenbo, Water Matter, Federated Commodities, Cocoa Merchant, PBC, Olam Cocoa Limited, Amajaro Ghana Limited, and Cargill Ghana Limited, who provided different perspectives on the organising practices for Ghana's cocoa certification programmes. These focus group discussions were less structured compared to the semi-structured interviews with certification managers, officials at the Ghana Cocoa Board, and other loosely coupled actors, enabling areas of interest to be explored in-depth.

In practice, this meant certified cocoa farmers were encouraged to provide a holistic view of their on-farm and off-farm practices, providing information on farmers' opinions related to their livelihood and the issues surrounding the certification programmes, their cooperatives, produce buyers, price premiums, and the future of the certification programmes across the four mapped certified cocoa growing communities explored in this study. A total of 44 farmers participated in the four focus group discussions from the Eastern and Western regions of Ghana.

Figure 3.4: Photographs of some cocoa farmers who participated in the focus group discussions



3.3.6 Field notes, policy documentation and archival data

It was also advantageous to gather field notes to synthesise and complement the data collected from the interviews to further eliminate bias. These were any notes gathered during the interviews and the focus group discussions. During the interviews, some participants were not comfortable having their voice recorded on certain questions but preferred for their comments to be 'off the record'; these comments were all written in the field notes and added at the end of the participant's transcripts. After completion of the interviews, participants such as farmers were asked if they could show their registration forms from when they signed up to the certification programme to grant the researcher further insight into the experiences of these cocoa farmers who were certified, and the certification body involved. The additional checks further complemented the M&E division of COCOBOD, a subsidiary division in charge of Ghana's cocoa certification and sustainability programmes, and from the various LBCs and the website of the various certification organisations and their participating

cooperatives in Ghana and abroad. These include Cocoa Abrabopa farmers association, Agro Eco, UTZ Certified, Rainforest Alliance, Fairtrade, Cocoa Merchant, Olam Ghana limited, Cargill Ghana limited, Amajaro Ghana limited, Kuapa Kooko, and Federated Commodities (FEDCO Ghana) to verify the participants and certifying bodies were genuine. Precisely triangulated (Heale and Forbes, 2013; Jick, 1979) the specific questioning about certification programmes in Ghana's cocoa sector.

Additionally, before entering the field, this study developed an account by examining multiple archival records and publicly available documents on certification programmes. These secondary data were retrieved from the website of the various certification bodies, such as UTZ certified-Rainforest Alliance, the Ghana Cocoa Board, and other news portal publications from Ghanaweb.com, myjoyonline.com, citynews.com, and YouTube documentaries on cocoa certification, to supplement the interviews and focus group discussions to have a holistic view on certification practices. The archival method enabled this study to critically follow the line of activities that led to the floundering of certification programmes in the Ghanaian cocoa sector, and to investigate the practices of some chain actors in context, which is the most difficult aspect to explore in practice, especially with the regulator (Essegbey and Ofori-Gyamfi, 2012). The supplementary data sources enabled this study to develop a rich and detailed insight into certification programmes in Ghana's cocoa sector, which could not have been achieved if the study had relied on a single data source (Spector, Dwyer and Jex, 1988).

3.3.7 Ethical Issues

This study was conducted in accordance with the Brunel Research Ethics Online (BREO) guidelines and an approval confirmation from the Brunel Ethics Committee. Adhering to

BREO guidelines and compliance procedures, once a participant had confirmed they would take part, they were provided with the participant information sheet, which clearly defined and outlined the research aim and objectives. Several participants, which included LBCs, certification officials, and other loosely coupled actors in the cocoa sector, were also given a brief phone call if they indicated they needed more clarification before participating, and in some circumstances, a few emails regarding the study were exchanged with the participants to ensure they understood the research objectives. Simultaneously, some participants, such as certification field auditors, were given a brief phone call to further explain the objective/aims of the study which was followed with an email that had the participant information sheet attached to support the discussion held during the phone call.

Prior to the interviews, both verbal and written consent was obtained, field notes were taken, and policy documentation was analysed. In certain situations where the interviews were conducted via phone calls and zoom, and not face-to-face, consent was obtained verbally from participants before the commencement of the interviews. Importantly, the participants sent their completed, and signed consent form to the researcher by email. Participants were then briefed about the interview questions and how the interview would be broken down and were asked if they were comfortable with the interview being audio recorded. They were told that the audio recording would be deleted at a later stage. Further, anything discussed in the interview would not be disclosed to any third party or even to other participants, and no names would be mentioned that would reveal their identity, any details of any certification bodies, and other loosely coupled actors involved in certification programmes or even a stakeholder in the cocoa industry.

In addition, participants were informed that they could withdraw at any time during the study and even after it was completed. And if they were uncomfortable answering any questions, they could speak as freely as they wanted without fear of being judged. It was reiterated that their personal information would be kept in strictest confidence and that anonymity would be ensured. All participants were told they would be assigned a pseudonym, which would promote the truthfulness of their responses to the interviews and focus group discussions. Furthermore, they were made aware that transcriptions of the interview would be stored on a secure Brunel server to which only the research team could have access. After that, participants were informed that selected quotations from the interviews would be used in the final copy of the thesis, and these quotations would be derived from the anonymised transcriptions that would be included in the thesis's appendices section. After the interviews, each participant was given a debrief sheet with the research team's contact information and additional information about the study. Table 3.2 shows the biographical data of loosely coupled actors who participated in the interviews and focus group discussions for this study. From the table 3.2, the interview transcripts were anonymised and pseudonym with codes; INC*, INR*, INL*, INF* which represents the various loosely coupled actors whose organising practices were studied. INC* represents participants from the certification bodies, cooperatives, auditors, and some sustainability officials who took part in the study. INR* represents the regulatory body, thus officials with the Ghana cocoa board and its subsidiaries. INL* is the officials who represented the produce buying companies, thus the license buying companies who are engaging in certification and also purchase both certified and conventional cocoa in Ghana. INF* are all certified and revoke

license cocoa farmers who took part in the main interviews and the focus group discussions from the research sites in the Western and Eastern regions of Ghana.

3.4 Data Analysis

3.4.1 Overview approach

This section draws from Miles and Huberman's (1994) and Bazeley's (2013) studies on qualitative research data analysis and how various processes can be rooted in the research design and objectives to contribute to a subject of discourse. The key interest of this section of the thesis is to explore certification programmes in Ghana's cocoa sector and to respond to the research questions driving the empirical enquiry, which is the focus of the analysis, by delving deeply into the state of the art in commodity certification programmes, the practices that facilitate (or impede) certification in organising, as well as how TM plays out in organising practices in commodity certification. Therefore, this study discovered that using a grounded theory technique was the best methodology for expanding the current theoretical conversation and incorporating the new field-based evidence from participants on certification practices in Ghana's cocoa sector rather than assumptions (Strauss and Corbin, 1990; Creswell and Poth, 2016).

Through symbolic interactionism, the grounded theory research technique draws on how individuals act within a given social context and the interpretations people give to the processes of human interactions. Thus, the empirical analysis of certification programmes in Ghana's cocoa value chain replicated a process of inductive, grounded theory development (Eisenhardt, 1989) that aimed to discover or construct theory from data collected from multiple sources and analysed using comparative analysis in a systematic and flexible manner (Strauss and Corbin, 1998; Gioia, Corley, and Hamilton, 2013). Given the multiple data sources

for this study, the grounded theory technique was applicable when comparing loosely coupled actors' practices, especially between cocoa producers participating in certification under cooperatives and LBCs.

Prior to conducting the actual data analysis, with insights from comparisons among the findings of previous literature, this study recursively developed emerging theoretical ideas by reviewing specific compiled data and the relevant literature (Saunders, Lewis, and Thornhill, 2009). Through constant comparison, the data were coded into various categories; this method connects data and the development of the data into a theoretical construct (Suddaby, 2006; Chamberlain-Salaun, Mills and Usher, 2013). The analysis process included coding, categorising, and abstracting (Gioia et al., 2013), and while the process was iterative, the study mainly followed the three-step process of open coding, axial coding, and selective coding (Strauss and Corbin, 1998).

3.4.2 Analysis stages

3.4.2.1 Stage 1: Recognising first-order codes.

The first-order codes analysis aimed to translate the descriptive phrases into theories, which are established authentically in the participants' stories from the field data (Strauss and Corbin, 1998). In the descriptive categories, this study began to identify relevant concepts from the field data and began to group them into categories based on the research questions and the stories from the participants. Here, the categorisation of the field data serves as an important intermediary in translating meanings from loosely coupled actors' perspectives into a theoretical context. Meanwhile, this study also relied on the theoretical literature on certification programmes in CVCs to stimulate our theoretical understanding in the first-order codes by providing theoretical concepts and relationships that can be directly checked against

the actual field data transcript rather than looking for comprehensive theoretical responses from the participants who were interviewed (Araujo, 1995, p. 97). In addition, the literature review, which drew on various arguments on certification programmes in CVCs, serves as a source of questions and of comparisons to the transcribed field data. Obviously, there is always the possibility that there would be an existing theory in the study that is appropriate to the categories and can serve as a complete theoretical explanation in first-order theoretical analysis. Comparatively, the literature review and the narrative from loosely coupled actors becomes more focused and theoretical at this stage of categorisation, bringing a new perspective to the overall depiction of the coding process.

Based on the multiple sources of the transcribed data, i.e., interviews, focus group discussions, and publicly available documents, this study examined the data in detail through reading all the data carefully several times. Interestingly, the clustering and the analysis of the transcribed data into various codes were done manually instead of using any qualitative comparative data analysis tool such as NVivo. The reason for performing manual coding was to have a deeper understanding of the field data and of what had been discussed in prior studies. The transcript analysis was further triangulated, with field notes that were available from the semi-structured interviews and focus group discussions with certified cocoa farmers, certification officers, LBCs, COCOBOD officials, and other chain actors. This was done to ensure that the data were rich and were coded correctly and that a thorough understanding of the data was obtained for this study. At the conclusion stage of the first-order codes, a list of codes and a table were formulated with annotations.

3.4.2.2 Stage 2: Forming the second order themes.

The second-order theoretical analysis proceeded with the axial coding, which is concerned with finding theoretical patterns from the open coding (Strauss and Corbin, 1998). At this stage, the focus was on finding categories of relationship data derived from the open coding and assembling them into higher-order themes that simply defined the stories obtained from the participants during the field interviews (Shkedi, 2004). In that regard, the study builds on the existing first-order categories to construct a new and distinct theoretical categorisation that fits into the open coding through the process of second-order theoretical analysis.

The constant comparison method was used once more to ensure a relationship that could provide a foundation for developing a grounded theory. This entailed comparing first-order codes with one another again, and re-grouping codes where necessary; the culmination of the theme and concept development process finally led to a theoretical saturation (Glaser and Strauss, 1967). The transcribed interviews from participants were therefore re-read to see if the relationships between the first-order codes were relevant and clearly fell under the appropriate categories in the second-order themes (Strauss and Corbin, 1998). For instance, the study compared the practices of certified cocoa farmers and those whose license had been revoked from a particular cooperative under Rainforest Alliance, UTZ Certified, or Fairtrade and had moved to join another farmer group under an LBC. This comparison allowed for the detection of any other behaviours among these cocoa farmers and the justifications for their described stories about certification practices. Most of these stories shared by cocoa farmers were documented in the field notes and the interview transcripts, which were coupled in the comparison to make a clear justification of the set categorisation in the first-order themes and to further arrive at the second-order theoretical analysis. In conclusion, the study made a

consistent comparison of the theoretical literature to generate theory-driven second-order categories. The analysis of the theoretical literature was drawn from prior studies on certification programmes in CVCs, which were combined to form the second-order theoretical theme. To achieve this, the study compared the first-order codes with one another again, and re-grouped codes where necessary; the identified segments were then analysed and interpreted iteratively until common themes emerged and became saturated (Suddaby, 2006).

3.4.2.3 Stage 3: Clustering conceptual concepts

As emphasised by Strauss and Corbin (1990), the third stage involves selective coding, which defines the selection of the most important categories. Here, a detailed development of categories, selection of core categories, integration of categories, and transformation of raw data into theoretical concepts are achieved (Strauss and Corbin, 1998; Creswell and Poth, 2016). This stage also requires re-assessing the relationships between the second-order themes and first-order codes to decide on a condensed category they could be a part of, as well as looking into the theoretical explanations for these concepts, and by utilising the constant comparison process once more to have clearly defined theoretical concepts. Here, the goal of the study was to bring together and integrate the emerging analyses. Thus, a core category would emerge as an idea from the first-order themes and a second-order theme, which then forms the aggregate dimension (Chetty, 2020). This stage also entailed re-evaluating the relationships between the second-order themes and first-order codes to decide on a refined category they could be a part of, as well as delving into the theoretical explanations for these concepts using the constant comparison method once more. To ensure that ideas for potential overarching categories were distinct from those for other overarching categories, they were compared to ideas for other overarching categories. These connections were also examined

with a holistic view of the anticipated findings before arriving at a set of aggregate dimensions that provided compelling stories on certification programmes in the CVC.

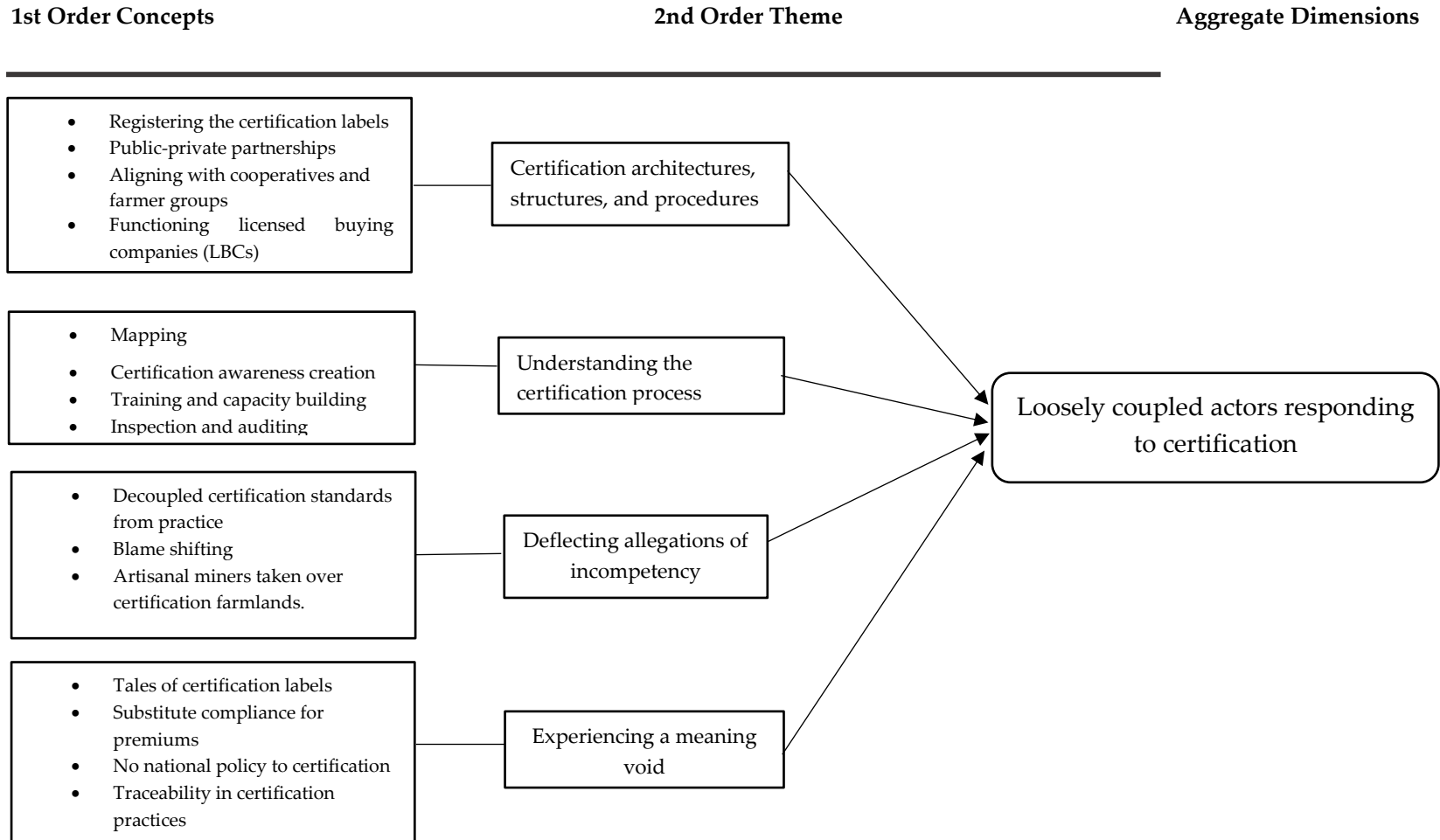
As indicated, the use of selective coding at this stage of the study made it possible to highlight the core category with emphasis on the three-research questions driving the empirical enquiry on certification programmes in CVCs, and how TM plays out in organising. The first category looks at how certification programmes are organised and the underlying challenges to such programmes. The second examines how TM plays out in certification practices. The third category explores the organising practices of loosely coupled actors that facilitates (or impedes) certification programmes in organising. Finally, a data structure framework (see Figure 3.5) that reflects the analysis from the data was constructed to complete the final stage of the data analysis (Gioai, Corely and Hamilston, 2013). A composition of first-order concepts, second-order themes, and aggregate theoretical dimensions make up the framework based on the findings of the empirical enquiry. The data structure not only allowed the configuration of the data into a visual aid, but it also provided a graphical representation of how the categorisation progressed from raw data to theoretical themes in conducting the analyses—as a key component of demonstrating accuracy in qualitative research (Pratt, 2008; Tracy, 2010; Gioai, Corely and Hamilston, 2013).

3.4.3 Data analysis outcomes

The outcomes of all the phases of data analysis are presented in the diagram below, which shows the connections between the codes and the suitable theory. Each aggregate dimension corresponds to a sub team, which answers a particular research question driving the empirical enquiry on certification programmes in Ghana's cocoa value chains.

Following on from the coding stages and the development of the data structure below, as part of the research method the most apt narratives from loosely coupled actors were selected as the main themes for the research findings of this study. These quotes are ones that best answer the research questions and were chosen after re-reading the data. The findings chapters also answer the research questions by referring to the theory developed from the data and relevant literature. The last chapter concludes with the development of a model (see Figure 7.1) of how temporal myopia (TM) plays out in certification programmes in organising by illustrating how TM induced loosely coupled actors in their situated certification practices.

Figure 3.5: Data structure

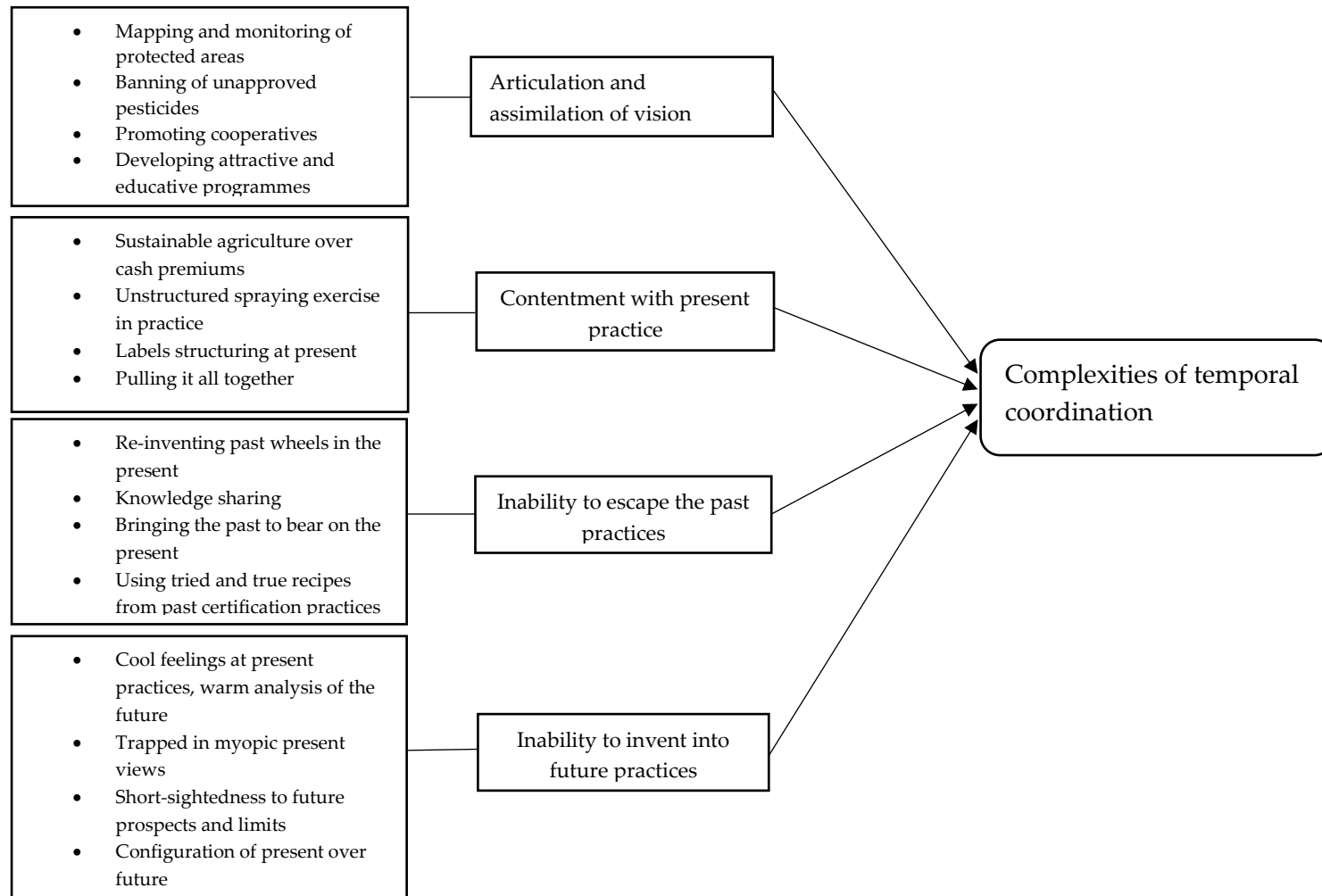


Data structure continued:

1st Order Concepts

2nd Order Themes

Aggregate Dimensions

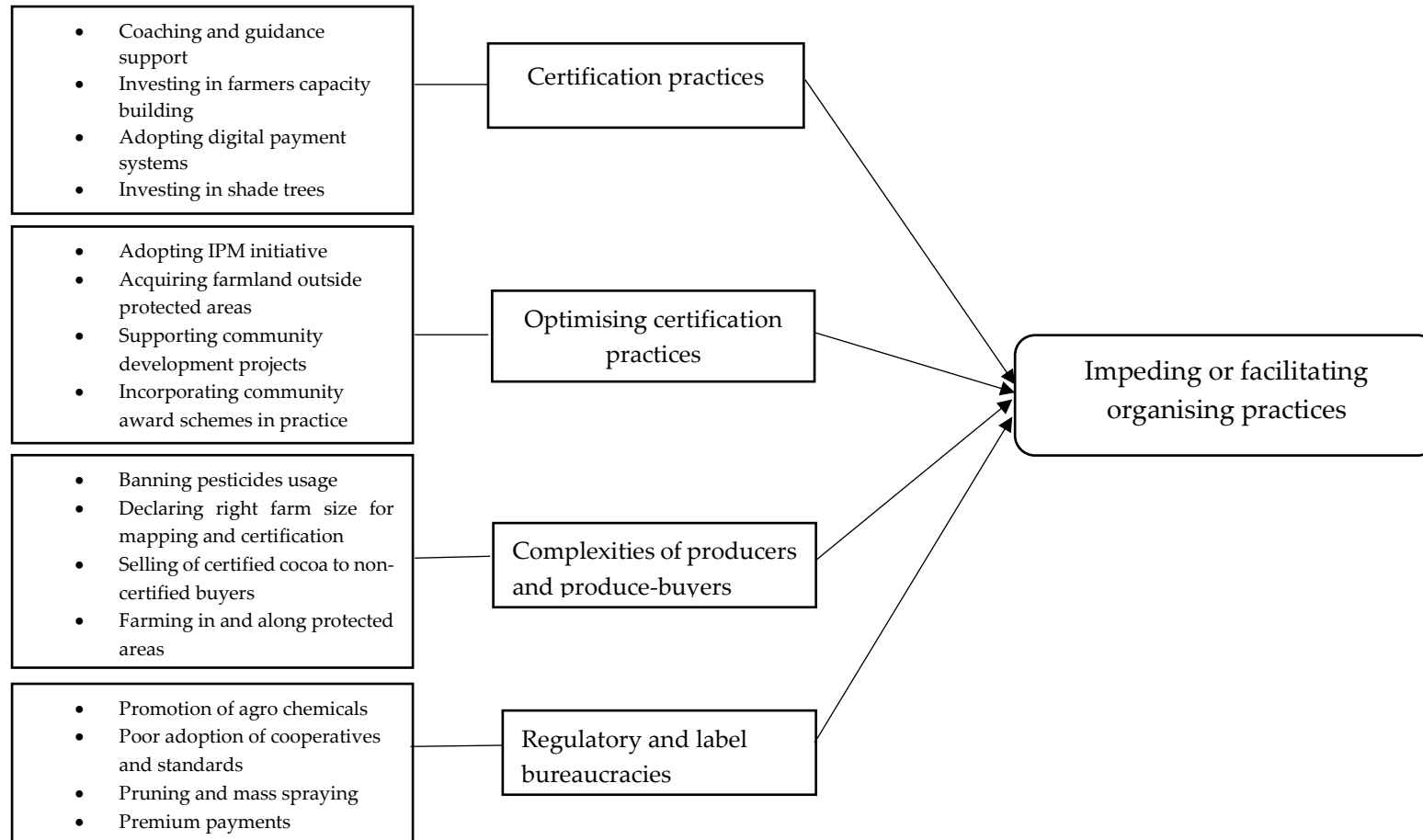


Data structure continued:

1st Order Concepts

2nd Order Themes

Aggregate Dimensions



3.4.4 Methodological limitations encountered.

This study methodology has several limitations. First, research was carried out during the Covid-19 pandemic, which decreased the number of participants who turned up for the focus group discussions and the interviews. However, even though the study could not achieve the expected number of interviews, looking at the amount of final data gathered from the interviews and focus group discussions was still encouraging. Second, the funding for the study put further constraints on the number of sites the researcher was able to cover during the data collection period. In that regard, the study sites were reduced to three. Third, regarding the semi-structured interviews and focus group discussions approach adopted to understand the floundering of certification programmes from the perspective of the participants, one cannot conclusively declare that these narratives from loosely coupled actors are therefore entirely accurate. It is critical to remember that some participants who had cancelled the certification programme and others who had moved to join other farmer groups may have had poor memory when narrating their stories in the present during the interviews and focus group discussions. Hence, it may not be a truly genuine depiction of the narrative of floundering certification programmes (Hesse-Biber and Leavy, 2011; Galletta, 2013).

Finally, as discussed previously, the study sites were in the Western region of Ghana; although there were samples from the population; the researcher further moved to the Eastern region where various participants were also identified through the snowballing technique and represented the population. Despite attempts made to have a mixture of opinions from other cocoa farmers who had not gone through certification but were registered and enjoyed the benefits of cooperate social responsibilities (CSR) due to adhering to certification practices in their respective communities, they were not willing to share their stories because they

believed they would not be recognised by cooperative leaders, as their farms were not mapped to pave the way for certification.

3.5 Chapter summary and conclusion

Overall, the research methodology and methods chapter has given the justification for the chosen empirical research setting followed by the reasoning for adopting the exploratory qualitative research approach and theoretical sampling strategy. The chapter then provided a comprehensive insight into how primary qualitative data were combined with secondary data for this research. The choice of approaching the research as a single case with embedded loosely coupled actors was also discussed, outlining how the broader case (i.e., the Ghanaian cocoa sector) and the embedded loosely coupled actors (i.e., the certification bodies, cooperatives, LBCs, cocoa producers, COCOBOD) covered by this study were chosen.

The chapter reviewed the chosen research sites and how the data were collected and managed, and it provided a theoretical rationale for the choices made. The recruitment processes and interview procedures were then described, and an outline of the chosen sample was given. Sequentially, an overview of the entire research procedure and ethical considerations were also discussed in this chapter of this thesis. Finally, the chapter reviewed how the data were analysed and coded into various categories and theoretical themes and provided a commentary of the methodological limitations. The next chapter will present the first findings in response to the first research question of this study: How have certification programmes come to be labelled and identified as floundering in the commodity value chains?

CHAPTER 4

THE STATE OF THE ART: HOW LOOSELY COUPLED ACTORS RESPOND TO CERTIFICATION PRACTICES IN COMMODITY VALUE CHAINS

This chapter aims to answer the first research question underpinning the empirical enquiry: *How have certification programmes come to be labelled and identified as floundering in CVCs?* It is structured as follows. First, it unpacks the structures involved in getting certification labels approved by the regulatory body, shedding light on the role and organising activities of the loosely coupled actors in the CVC. Second, it focuses on the on-farm and off-farm processes involved in implementing the certification labels in the CVC. Third, the underlying challenges in implementing the certification labels under two broad sub-themes, specifically, deflecting allegations of incompetency and experiencing a meaning void in commodity certification practices, are presented. Finally, a summary of the chapter is given.

4.1 Certification architectures, structures, and procedures

4.1.1 Registering the certification labels.

Registering the certification label as used in organising the research findings refers to the procedures where commodity-oriented certification bodies register their NGOs with the regulatory institutions in the host country. These are countries identified by international chocolatiers to undertake certification practices and purchase certified cocoa beans, while contributing to the development of the socio-economic wellbeing of commodity producers, their families, and the environment in which they operate (DeFries et al., 2017; Ansah et al., 2020). These certification practices are undertaken through an LBC or a cooperative, both of which are farmer groups in the CVC. Registering certification bodies and cocoa producers

into the agricultural commodity sector requires a collective effort of both the public and the private sector, thus forming a public-private partnership (PPP). When asked how the Ghana Cocoa Board (COCOBOD) approves certification institutions to implement certification programmes in Ghana's cocoa sector, INR0222 revealed the regulatory compliance processes to certification. He put it as follows:

These are the regulatory requirements which needs to be fulfilled before certification in Ghana. First, we take the names of the farmer groups, if they are cooperatives or an LBC, we take their names, their location, the tonnage the off taker intends to buy, the operational areas, the hectarage, and an established foundation with COCOBOD as member; if the certification body meets all these requirements, we approve and issue them licence to operate. (INR0222)

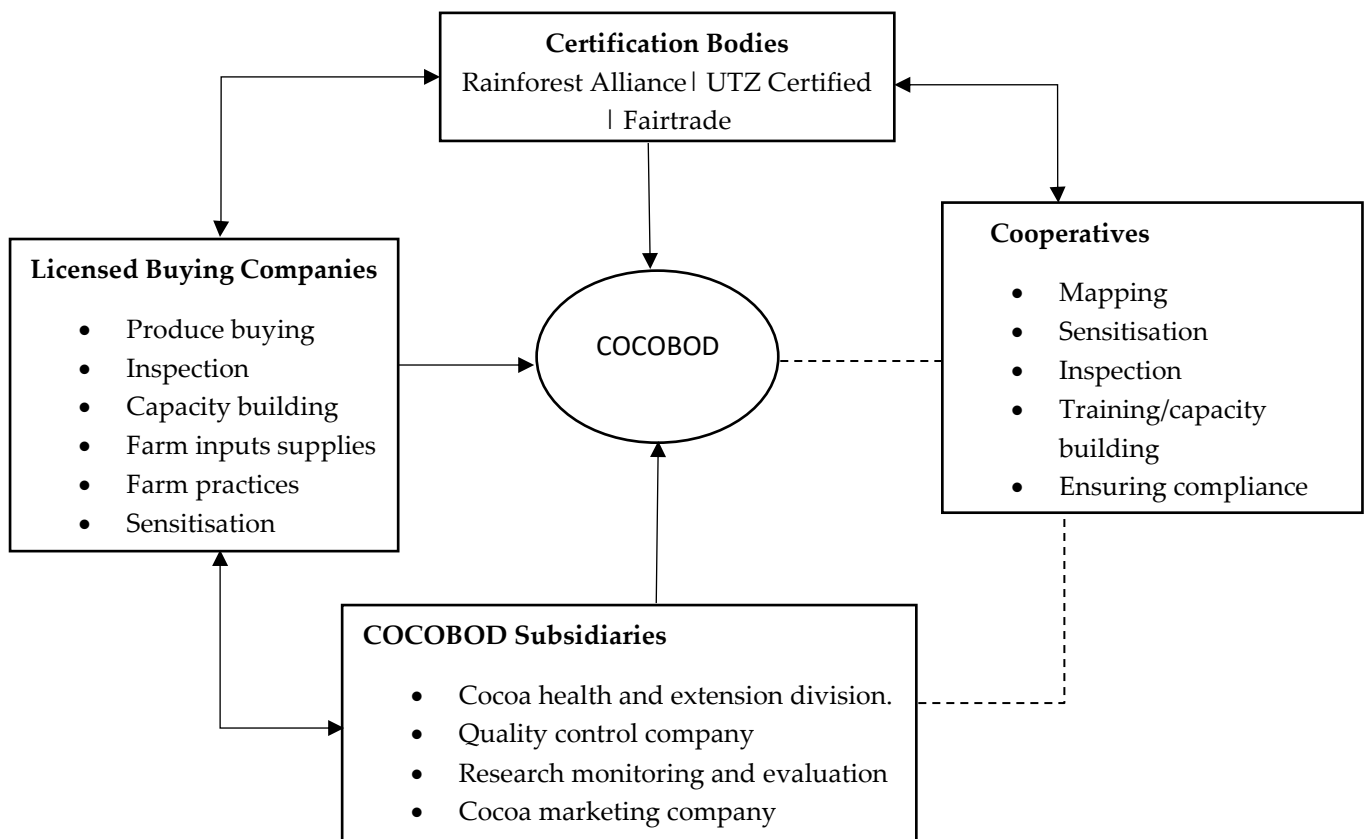
The interviews shed light on the current process used by organisations interested in implementing certification programmes in Ghana.

First, organisations go through a process of assessing potential cocoa producing partners (i.e., cocoa farming communities). If the leaders of the targeted cocoa-growing community approve of moving forward with a cocoa certification process, then the certifying organisation undertakes a community-wide dissemination exercise to communicate the objective of the certification label to prospective cocoa farmers in the communities. Cocoa farmers aged 18 years and above in the community are invited to join farmer groups and learn about and undertake the required certification processes. These farmer groups participating in cocoa certification in Ghana comprise cooperatives and LBCs and sometimes can be both a cooperative and an LBC (hybrid) undertaking certification together.

The interviews further revealed that farmers interested in joining a farmer group for certification purposes typically must pay a one-time membership registration and annual dues of GH C25 (~£2 - £3) depending on the cooperative, and cocoa producers must attend a minimum of two meetings a month. The focus group discussion also revealed that after the

cocoa farmers are registered under a participating certification label, such as the Rainforest Alliance, UTZ Certified, and Fairtrade, a technical field officer inspects the cocoa farms, which paves the way for mapping before the commencement of certification practices. Figure 4.0 below presents the organising structure of certification programmes in Ghana’s cocoa sector and shows the relationship between loosely coupled actors in their situated practice.

Figure 4.0: The cocoa certification organising structure.



4.1.2 Public- private partnerships

Over the years, the Ghana cocoa value chain has witnessed an increase in PPPs to deal with various intractable challenges, such as certification, sustainability, child labour, poverty alleviation, and other social and environmentally sustainable initiatives. The partnerships between COCOBOD (regulator), international cocoa buying companies, NGOs, local partners,

and cocoa producers are driven by mutual interests. The government of Ghana, through COCOBOD, wants to keep control of the cocoa industry as a means of consolidating political control whilst maintaining equal distributive justice among stakeholders and actors in the sector (Teye and Nikoi, 2022).

Arguably, achieving these certification, sustainability, and other initiatives in the cocoa sector requires the collaboration of multiple stakeholders' both public and private inputs (Alvarez et al., 2010). For instance, certification labels in Ghana and other emerging and developed economies require farmer groups and government institutions such as the QCC and the CHED at the local level to create and maintain a strong partnership with their international cocoa buyers and NGOs for the development of their label in the CVC.

An interview with officials at the Ghana Cocoa Board revealed that one important programme being implemented in the cocoa sector is the formation of a PPP in the sustainability and certification programmes to have sustainable and certified produce while improving the livelihood of cocoa producers, their families, and the environment in which they operate. Specifically, COCOBOD partners with farmer groups through LBCs to run certification and sustainability programmes in selected cocoa-producing communities to improve cocoa production in Ghana. They further emphasised that the aim of successful public/private partnerships among COCOBOD; nongovernmental organisations, such as the various third-party certification organisations; and cocoa producers is to share knowledge and resources to build a sustainable and resilient cocoa supply and value chain (Shapiro and Rosenquist, 2004). These are significant developments that have aided efforts to improve the economic and environmental standards within Ghana's cocoa value chains. As one senior official at COCOBOD revealed:

As a regulator of the cocoa industry, we partner with licensed buying companies, farmers' groups, and private organisations in implementing our sustainability programme, which forms part of the certification programmes; all is to ensure that the cocoa farmer is not short-changed and is producing cocoa free from any unethical practices. That's why we have our QCC and CHED and other divisions on the ground. This partnership is also to ensure some knowledge exchange between COCOBOD and their stakeholders. (INR0222)

The codes of conduct of the three studied certification bodies indicate that certified cooperatives and licensed buying companies are expected to be run based upon democratic principles (Ansah et al., 2020). However, evidence from the interview with Mike shows that the regulator, and thus the Ghana Cocoa Board and its subsidiaries, are very focused on sustainability initiatives than certification; even though COCOBOD confirmed they are working with all stakeholders in the sector, there is still a huge gap in their partnership with certification bodies.

4.1.3 Aligning with cooperatives and farmer groups.

Like in other West African countries, implementing certification programmes in Ghana requires the formation of local cooperatives or farmer groups. Cooperatives are formed by a group of farmers in the cocoa sector who play vital roles in organising practices on behalf of certification organisations who award certificates to that particular group of farmers. They disseminate certification requirements to various cocoa producers and other stakeholder within the agricultural CVCs. These cooperatives work hand in hand with other actors such as certification organisations (UTZ Certified, Rainforest alliance, and Fairtrade), multinational chocolate makers, multinational cocoa exporters, farm input suppliers, auditing firms, and a variety of other public and private service providers in implementing various certification requirements. Cooperatives working on behalf of the off taker are required as the certificate holder to provide additional services to cocoa producers; members such as technical field

coordinators help cocoa producers to administer the certification requirements (Snider et al., 2017). Additionally, they recruit technical field coordinators, internal auditors, and certification officers, who oversee the implementation and supervision of the certification requirements.

The interviews explored the role of the cooperatives participating in certification under the Rainforest Alliance, UTZ Certified, or Fairtrade. They revealed that before adhering to the global best practices set by certification bodies, cooperatives ensure that they always fulfil orders from international partners, whilst delivering the required tonnage of certified cocoa beans to their off taker. Through this strategy, most cooperatives in the cocoa value chain develop their own global network in their space; thus, cooperatives can sometimes have multiple exporters of certified cocoa (Uribe-Leitz and Ruf, 2019). As one farmer cooperative leader put it:

As a cooperative, we recruit technical officers, internal auditors, local and national executives, certification managers, and other staff who support in implementing the certification label. As a farmer-based association, we also ensure that most of our human resources are personnel who understand the General Agricultural Practices (GAP); in fact, most of our personnel are already into cocoa production. (INC0127)

The data further revealed that after the leaders of a cocoa growing community have agreed to participate in cocoa certification through a cooperative, a train-the-trainers approach is adopted in disseminating certification requirements to cocoa producers. The initial training participants (future trainers) are chosen from each farmer group with the goal of becoming part of the cooperative's internal management system. As one farm trainer commented:

After joining the cooperative, I was trained by our leaders to train the cooperative members on the Fairtrade certification requirements in the future. My role is centred on general agricultural best farm practices, which is in line with the Fairtrade certification requirements. (INC0128)

Again, the data revealed that the cooperative hires capacity-building sustainability and certification organisations to conduct these training programmes for eligible cocoa producers. It normally takes a period of six months to complete the training course. As capacity trainer stated:

As a sustainable agricultural organisation, we work with various stakeholders in the cocoa value chain. We train farmer groups, cooperatives, and LBCs on sustainable agricultural practices and certification. All the training is based on certification requirements. We are currently working with Fairtrade, Rainforest alliance, and UTZ standard cooperatives and LBCs in Ghana and other parts of Africa and the world. (INC0129)

Notably, in today's competitive commodity market, cooperatives build an extensive certification network through various contractual agreements with exporters and chocolate manufacturers; this enables them to connect with various actors in the cocoa value chain. These contractual agreements with actors within the chain enable cooperatives to channel their certified cocoa to other markets (Gboko et al., 2021). An interview with a cooperative which deals with multiple chocolate manufacturer reveals the following:

Our cooperative has a contract with another supplier abroad. In our contract with this customer, whenever they are willing to buy certified cocoa from us in a particular season, they specify the tonnage of certified cocoa beans to produce under a specific certification standard that they need, the level of certification premium they are willing to offer to farmers, and other activities in our communities for which they would like to offer support, with a budget to implement such community projects attached. (INC0122)

The data revealed that cooperatives form the base for various certification practices. The entire certification programme at the farm level is implemented and supervised by them. They ensure that cocoa producers are trained and supervised on the required certification practices from a certifying organisation.

Our cooperative ensures that we train and supervise cocoa producers to conform with the Fairtrade requirements. We also ensure that regarding any project our off

takers intend to offer to our community, we assist in executing such projects; we represent our off taker at the local level. (INF0444)

The study participants indicated that cooperatives do, in fact, incur the costs of certification audits and some external support services while implementing certification. Cooperatives, on the other hand, are often unable to pay these costs directly and sometimes rely on their off takers for support based on their contractual terms. As one external auditor put it:

I have been working for seven years in the cocoa value chain as an external auditor but am paid by my company abroad to audit the cooperative working under the UTZ Certified and Rainforest Alliance certification bodies in specific certification practice zones in Ghana. (INC0130)

Again, some certification managers under cooperatives indicated that the recent upscaling of various certification programmes and associated training and farm supports have contributed to extensive development in the livelihood of cocoa producers and their communities. To them, certified cocoa producers who have undergone various training and certification practices through their cooperatives have benefited from a range of farm incentives from the regulator (COCOBOD) and other stakeholders in the cocoa value chain. This includes access to crop protection supplies, fertilisers, and cocoa seedlings, as well as community social interventions, and access to premiums for adhering to certification requirements, in addition to the spectrum of related assistance services provided to cocoa producers. Meanwhile, a senior certification official working with UTZ Certified cooperative interviewed at Samreboi revealed that cocoa producers are being organised into cooperatives to function as group administrators to safeguard the long-term survival of the certification programme at the local level. This is an avenue to increase the capacity of cocoa producers to manage the internal management services of their cooperative. However, from the evidence gathered for this research, it does not appear that a cooperative comprised of cocoa producers will be able to

manage the internal management services and pass external audits without assistance from top management in the short and medium term. This is because of the low level of education of these cocoa producers who become the managers of cooperatives.

4.1.4 Functioning Licensed Buying Companies (LBCs)

The purchasing and conveying of dried cocoa beans from cocoa growing areas to the cities is a difficult task with repercussions for the crop's political economics (Nimako, 2020). Notably, the involvement of LBCs in solving this task affects the success of Ghana's cocoa reaching the global market to a significant extent (Ansah et al., 2018). Accordingly, it was identified from the field data that the PBC, over the years, has been the largest local licensed buying company in Ghana's cocoa value chain (Otchere et al., 2013; Monastyrnaya et al., 2016). The data findings reveal that recent deregulation and the liberalisation of cocoa purchasing have ushered in reforms through the Ghana Cocoa Board to curtail the monopolistic power of the PBC occupying the cocoa purchasing space (Ansah et al., 2018). Meanwhile, a multiple cocoa purchasing system was adopted by the Ghana Cocoa Board as a means of having competitive internal marketing. Ghana currently has forty-six (46) LBCs, such as Amajaro Ghana Limited, Federated Commodities, Adwumapa Buyers Ltd., Cargill, Akuafu Adanfo, Kuapa Kooko, and Olam Ghana Limited. These all emerged to break the monopolistic power of PBC. Also, it was revealed from the data that apart from the purchasing of dried cocoa beans from producers across various regions in Ghana, the Ghana Cocoa Board has granted most LBCs the mandate to run certification programmes. The private non-governmental agencies train these public and private licensed companies in best farming practices, and this training is further transferred to cocoa producers. For instance, Federated Commodities (LBC), is certified by UTZ Certified to implement their certification practices. Other LBCs, such as Amajaro Ghana

Limited, Cocoa Merchant Ghana Limited, Olam Ghana Limited, and Kuapa Cocoa Limited, are all implementing a certification label (UTZ, RA, Fairtrade). These LBCs provide on-farm training such as planting seedlings, applying fertilizer and weedicide, spraying pesticides, mapping, pruning, and other farming practices in cocoa production based on the certification organisation's codes of conduct and practice as well as education on environmental and social practices across the cocoa industry in Ghana. Some participants also revealed that LBCs implementing a certification programme purchase both certified and conventional cocoa based on their customers' demands. As one IMS manager of an LBC stated:

As a manager of the internal management systems (IMS), we train our farmers on the Generally Accepted Agricultural Practices (GAP) based on the UTZ standards, which include education on the pollution of the environment, child labour, chemicals approved by the regulatory body (COCOBOD), number of times farmers should spray their farms, chemical application, and health and safety. We also coordinate activities of field officers by monitoring compliance and non-compliance standards. (INL0323)

Again, some purchasing clerks and IMS managers revealed that the main objective of LBCs is to make profits from their purchases; as a result, they buy and deliver both certified and uncertified cocoa for their third-party partners. They added that there is a bigger market share for Ghana's conventional cocoa than for certified beans and that compels them to purchase both certified and conventional cocoa for their companies. As one LBC officer put it:

As an LBC, we buy both conventional and certified cocoa. We always ensure that the farmer is not short-changed. We believe cocoa certification is voluntary, and farmers who are not interested in such voluntary standards, we still buy their cocoa, but it comes without a premium. We always ensure that we label and separate the certified cocoa from the conventional beans at the depot. (INL0324)

On the other hand, some participants indicated that competition exists in the cocoa value chain but is closely controlled by the LBCs with larger market shares and that out of this emanate threats for the smaller LBCs in the sector. Officials of several LBCs indicated that they faced various challenges from the public LBCs because these LBCs have financial and

incentive support, which compels them to increase their capacity in buying and delivering certified and conventional cocoa. From their stories, it can be seen that other challenges stemming from the competition between the bigger LBCs and the small ones included unfair influence by the bigger LBCs, farmers' greater recognition of the bigger LBCs than the smaller LBCs, and the breach of agreements between LBCs and cocoa farmers.

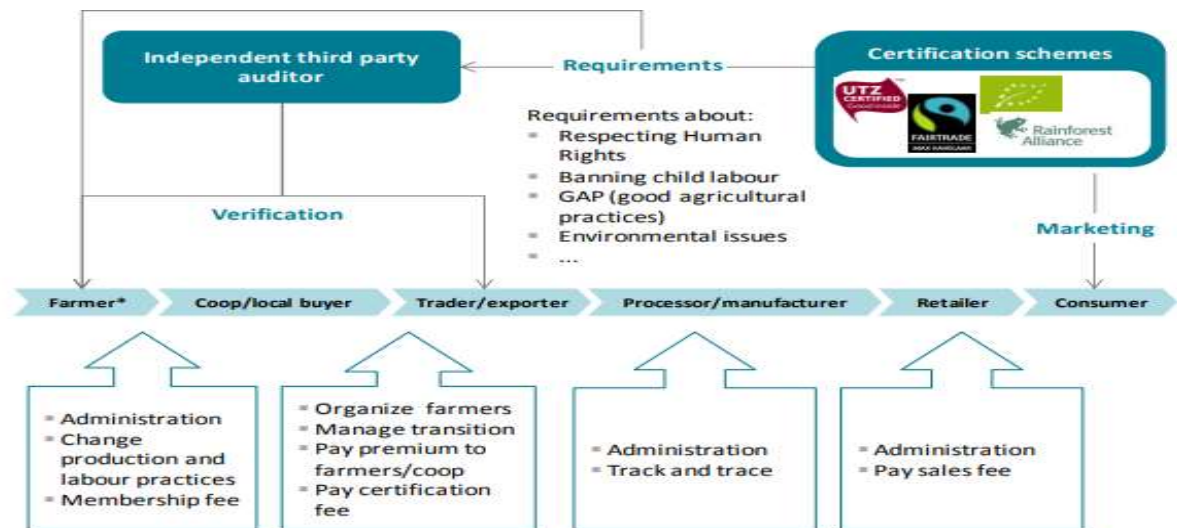
Despite the challenges stemming from the competition between the bigger LBCs and others in Ghana's cocoa industry, all the LBCs interviewed revealed that the advent of certification programmes in the cocoa sector has helped them to increase their export tonnage and the farmer's yield. Also, there is a premium for their certified cocoa farmers during the off season, while certification has also improved their traceability system, so they know the exact community where a particular cocoa bean was purchased.

4.2 Understanding the certification implementation processes.

Cocoa certification programmes grew out of initiatives undertaken by stakeholders in the cocoa economy to promote sustainable cocoa production, producing cocoa in ways that help mitigate economic, social, and environmental issues (Basso et al., 2012; Hütz-Adams and Fountain, 2012; Paschall and Seville, 2012). The most popular certification bodies in Ghana's cocoa sector include Fairtrade, UTZ Certified, and Rainforest Alliance. The other certification labels were not covered here as they contribute less than 2% of the total certified cocoa production in Ghana. As mentioned earlier, to be certified, cocoa producers are required to follow the labels' guidelines and undergo a verification process carried out by technical inspectors from the cooperative or an LBC and other external auditors from the certification bodies. Most initiatives for commodities reviewed in this study target the three pillars of sustainable development—economic, social, and environmental—to various degrees (DeFries

et al., 2017). According to the majority of the participants interviewed, to implement certification programmes in Ghana, the following processes must be followed.

Figure 4.1 Summary of cocoa certification process



Adopted from KPMG, 2012

Table 4.0 Summary of actors and their practices in Ghana’s cocoa certification processes.

No.	Certification Processes	Main Actors involved
1	Mapping	COCOBOD, certification bodies, cooperatives, licensed buying companies (LBCs), technical field officers, farmers
2	Label awareness creation	Cooperatives, LBCs
3	Training and capacity building	Cooperatives, LBCs, COCOBOD, farmers
4	Subscription and registration charges	Cooperatives, farmers
5	Inspections and auditing	Certification bodies, LBCs, cooperatives, farmers
6	Internal inspection	Internal management officers, farmers, cooperatives

4.2.1 Mapping

The Ghana Cocoa Board (regulator) and NGOs play a key role in certification implementation, providing lobbying, farmer training, research, and in some cases, direct funding to encourage certification adoption at the local level (Dompheh et al., 2021). These institutions also ensure

certification practices are carried out in designated mapped cocoa growing communities. The reason for choosing a designation is to meet the required tonnage of certified cocoa set by global partners and international chocolatiers, and by market demands. An interview with an official at the Monitoring and Evaluation division at COCOBOD revealed that they sometimes assist cooperatives and LBCs engaging in certification through their certification bodies in the mapping of the cocoa growing communities where they intend to implement a particular certification standard. This is to ensure that the certification body and its affiliated cooperative or LBC can meet the required tonnage as indicated in their registration stage. As one manager commented:

When we approve for a certification programme to be carried in a particular cocoa growing community, we also ensure that certification body outlines their area of operations, the farmers involved in the certification, hectareage, and a community which has a high volume of cocoa production to meet their required tonnage by their international partners. (INR0222)

All cooperatives and LBCs interviewed revealed that mapping is a key factor they consider first before communicating the objective of certification to cocoa producers. Thus, they do a visibility study to ensure that the communities in which they intend implement such a certification programme produce a greater volume of cocoa which will be able meet the required tonnage set by the LBC or the cooperative and their international partners.

4.2.2 Building the local networks: Certification-awareness creation.

Though some cocoa producers across the cocoa growing regions in Ghana are well aware of the contribution of certification programmes to their livelihood, their families, and the environment, the rate of adoption is still below 20%. More than 80% of cocoa producers in

Ghana have not understood the objective of certification programmes and are still producing conventional cocoa. As one manager of the PBC revealed:

Anytime we are doing a sensitisation exercise, we first make our cocoa farmers aware that Ghana still produces less than twenty percent (20%) of certified cocoa, due to the expensive nature of certification. Not all farmers can be put onto the programme, because the funds are less, and we have to make sure we reduce the numbers that produce the certified cocoa. So, in Ghana, out of about 800,000 cocoa farmers, less than 20% are producing certified cocoa; the rest are conventional. (INR0226)

The interviews and focus group discussions with various actors within the cocoa sector shed light on the current process used by cooperatives and LBCs interested in implementing cocoa certification at the local level. First, a cooperative or an LBC goes through a process of assessing potential cocoa-producing partners, that is, a cocoa farming community. If leaders of the targeted cocoa-growing community approve of moving forward with a cocoa certification process, then the certifying organisation, through their cooperative or farmer group which is associated with an LBC, carries out a community-wide information dissemination campaign to make their label visible in the community. Cocoa producers in the community aged 18 years and above are invited to join a cooperative or an LBC and learn and undertake the required certification processes as emphasised by a certification manager at Cocoa Abrabopa Cooperative (UTZ-Rainforest Alliance certified company).

Before we start the certification programme, our cooperative does a sensitisation exercise, where we go to various cocoa-growing communities to communicate the objectives of the certification programme to cocoa producers and explain its associated benefits. We also outline the code of conduct of the Rainforest Alliance with which cocoa producers need to comply. We also highlight the functions of the off taker, who ensures that the producer's cocoa is being purchased all year round. Those who are 18 years and above and are willing to join the certification programme - we sign a contract with them, which is subject to renewal every year. (INC0121)

Some participants also stated that visibility of the label in the local communities is the best way to disseminate their certificate objective, as most of the cocoa producers in Ghana are illiterate. In that regard, they ensure they go to every mapped community to communicate the certification objective. One technical officer revealed the following about their sensitisation exercise:

You know most of our cocoa producers in Ghana are not educated and only accept what they see physically, so we go to the communities in our branded Fairtrade T-shirts, cars, and our entire team. We give the farmers some of our T-shirts just to ensure our presence. Some cooperatives do same; it is just a way to create awareness of the certification label (INC0128).

4.2.3 Training and capacity building

The certification code of conduct and practices requires cocoa producers to undergo various developmental on-farm and off-farm training and education to implement a range of agricultural best practices. This general certification requirement among cocoa producers in Ghana makes a significant contribution to farming practices and has also allowed cocoa producers to gain access to various on-farm and off-farm resources that have enhanced their ability to implement certain certification requirements. As one sustainability official put it:

After the sensitisation exercise in a specific community where we intend to implement a certification programme, we train our farmers on the specific certification requirements. For instance, the Rainforest Alliance certification programme which we are implementing requires us to train our cocoa producers to adhere to various requirements, such as weedicide and pesticide usage, child labour, fermentation of the cocoa beans (six days), weeding the farms three times a year, pruning, collecting used containers from the cocoa farms, and many more. (INR0226)

According to some officials interviewed at COCOBOD, training cocoa producers on sustainability and certification standards improves product quality and safety; thus, the grading checks made by the QCC and other tasks before the certified or conventional cocoa is

exported increase the value of Ghana's cocoa on international markets. The training and education offered to cocoa producers by certification organisations also shape their organising practices and eliminate any unethical practices surrounding cocoa production in Ghana. As one senior official at QCC put it:

The capacity building training by various cooperatives and LBCs is to enhance good agricultural practices, which are outlined in the various codes of conduct and practice set by certification bodies such as UTZ, Rainforest Alliance, and Fairtrade, to mention just a few, for cocoa producers within certified mapped cocoa-growing communities. The farmers' ability to implement what they have been trained in is the reason why Ghana is still ranked second in cocoa production and first in quality in the world. (INR0224)

Conversely, the interviews with loosely coupled actors revealed that certification is an important innovation in Ghana's cocoa production system, which operates under several standards, and meeting these standards requires a significant amount of effort by various chain actors (Owusu-Amankwah et al., 2014). Arguably, these actors, such as cocoa producers, cooperatives, and LBCs, lack the level of skill and training required by standards bodies to operationalise certification and compete in the international markets, and so external assistance is needed in the medium to long term. In that regard, the data suggest that most cocoa producers implementing certification standards have refused to sign contracts with certification organisations because producing certified cocoa may increase their farming workload. However, most cooperatives and LBCs are not willing to extend the support needed to address the training requirements offered to these key stakeholders, and this has caused most cocoa producers to withdraw from the certification programmes in various farming communities in Ghana. A dialogue with one cocoa producer in Adasawase revealed the following:

The certification organisation came to our community to train us on best agricultural practices, such as farm management, use of recommended

chemicals by COCOBOD, which was very extensive and good for my farm if I adhered to it, but after the three months training, they did not give me any incentive to support what they had taught me; certification is expensive and extra work for me. I don't have enough money to buy all the required inputs, and the cooperative is not willing to support me either, so after few months, I cancelled the contract I had signed with them. (INF0466)

The data suggest that such arguments by cocoa producers are not always applicable. Some cooperatives expressed an opposing view when interviewed. One certification manager revealed that the Rainforest Alliance certification programme had supported various farmer groups with farming inputs, which had enhanced their certification practices. He put it this way:

After training our farmers on sustainable agricultural practices based on the RA standards, we assist them with farm inputs and credit facilities in their farm management. This is in the form of farm incentives such as cutlass, PPEs, spraying machines, agro-chemicals, and other credit schemes to improve the livelihood of our cocoa farmers. (INC0122)

Again, evidence from the data suggests that certification organisations, such as Fairtrade certified cocoa producers, receive more technical training, devote significantly more labour resources to crop management and quality maintenance activities and implement improved farming and resource conservation practices. (Bacon et al., 2008; Ruben and Fort., 2012). Interestingly, the study suggests that Fairtrade economic incentives and training had led to an increase in production and an improvement in the quality of the cocoa beans (Barrientos, 2016; Vagneron and Roquigny, 2010; Krauss and Barrientos, 2021). As one senior official of a local LBC in Ghana put it:

Every year we train our cocoa producers on farm management and environmental conservation. Our field coordinators receive this training and transfer the technical knowledge to cocoa producers for implementation in the various farm clusters; this has yielded the best results. All cocoa that comes to our depot is quality grade; even the QCC confirms that. (INL0331)

Most importantly, all cocoa producers interviewed from the various research sites indicated that they had received some basic farm training in their certification practices.

4.2.4 Certification requirements

Certification requirements are the basic accepted standards every registered cocoa producer needs to fulfil in their on-farm and off-farm practices. The focus group discussions examined certified cocoa producers' level of agreement with and understanding of various certification requirements in the cocoa sector. Here, they were asked about their level of knowledge in the particular certification programme they had signed onto and the standard requirements. In fact, all the cocoa producers interviewed had a basic knowledge of the certification requirements, especially on farm-accepted standards. For instance, during the focus group discussions, some cocoa producers participating in the UTZ Certified, Rainforest Alliance, and Fairtrade certification programmes through cooperatives recounted their accepted on-farm and off-farm standards. As one cocoa producer participating in the UTZ-RA certification practices commented:

I was trained by my cooperative on the best accepted agricultural practices, such as weeding the cocoa farms three times a year, using pesticides approved by COCOBOD for spraying of the cocoa farm, e.g., 'confidor', fermenting of the cocoa for six days, pruning, planting shade trees, child labour, collecting used containers from the farm, safe keeping of agro chemicals, not spraying in the direction of streams on the cocoa farms. These were some of the practices we were taught, and I always ensure I implement them. (INF0461)

INL0327 was a technical field coordinator with an LBC (UTZ-RA certified) whose job was to train farmers their certification requirements. He stated:

All our farmers are trained regularly on the UTZ-RA acceptable standards, and we ensure compliance throughout the cocoa season. We do this so we don't fail when there is external auditing. (INL0327)

From the evidence from the study, it is clear that cocoa producers participating in UTZ-RA and Fairtrade certification programmes under both cooperatives and LBCs had fair knowledge with all certification requirements. On the contrary, a cooperative leader disclosed

that cocoa producers who do not comply with the standard requirements are taken off the certification programme. This is to ensure the cooperative does not lose their certificate after an external auditing has been done. He lamented:

We know in every society there are bad ones, but we take off the farmers who do not comply with the accepted standards; their license is not renewed, and their cocoa is bought as conventional. This is to ensure that as a cooperative, we don't lose our license with the certification body. (INF0457)

4.2.5 Subscription and registration charges

The data from the interviews and focus group discussions with cocoa producers and other loosely coupled actors across the research sites revealed that prospective cocoa farmers (producers) who are interested in joining a farmer group or a cooperative for certification practices need to pay a one-time membership fee and annual renewal dues of between 20- GH¢25 (£2 - £3) depending on the cooperative. As one certified cocoa producer at Akyem Apedwa commented:

Since I joined the cooperative in 2016, I pay monthly dues of two Ghana cedis, which is Gh¢24 a year, which I renew every year. We also pay Gh¢ 2 as a one-time registration fee for joining the cooperative. (INF0432)

In an interview, a purchasing clerk who also served as the president of the Asetenapa Cooperative (a Fairtrade certification organisation) in Akyem Nkorosu indicated that the cooperative charges registered cocoa producers a one-time registration fee of twenty-five Ghana cedis (GH¢ 25) which is approximately £2-£3. He added that they also charge every registered cocoa producer monthly dues of two Ghana cedis (GH¢ 2), which is less than £1 depending on the currency differentiation. They further confirmed that these monies paid by certified cocoa producers are used for running the internal management services of the cooperatives as well as for routine activities. He explained it in this way:

Sometimes, when we are going to the Annual General Meeting (AGM) or to a farmers' day celebration outside our community, we use some of the dues to hire buses to convey our farmers to the destination, so they don't pay any transport fare. We sometime go further and provide them with snacks and water when we travel for such programmes. (INF0430)

However, one certification manager with a Rainforest Alliance certified company (Cocoa Abrabopa) revealed that the reason for charging subscription fees was to attract cocoa producers who were serious about and committed to joining the certification programme. He believed that any serious cocoa producer would be keen to contribute something small to be part of a group, and that is the idea behind the cooperative charging the entrance or subscription fees. He put it this way:

It is required that a token be paid as a contribution for being part of this association. Certification is expensive to implement, and to attract serious cocoa producers, we ask them to pay twenty Ghana cedis so they can be committed to and implement the certification requirements. (INC0121)

In further discussions with participant INC0121, he indicated that almost all the cocoa producers are switching to join other cooperatives and LBCs because of some technical structure they are putting in place. He revealed that their cooperative is in negotiation with their off-taker, and from next year, they are going to cancel the payment of registration fees and monthly dues because of the number of complaints they receive from their farmers. He revealed that their farmers complain that their competitors, and thus the LBCs, are not charging any dues and registration fees, and that has compelled them to have a second look at such charges. The issue of paying dues also emerged during a focus group discussion with certified cocoa producers and others who had left a cooperative to join another farmer group. Some of these cocoa producers shared their sentiments on the dues and registration fees.

I was not given some of the PPEs, the cutlass, as an incentive because I did not have the money to pay my dues at the start of the year, and even when I paid at

the end of the season, they still didn't give it to me, so I left the cooperative. (INF0445)

According to INF0431:

I have stop attending the cooperative meetings because of the dues. I don't produce much cocoa like other farmers, but we are all meant to pay the same amount, and if you tell the executives about your inability to pay, even when they are sharing any farm input, they don't give you any. It was becoming like the executives focused more on the dues than even on our farm practices, so I stopped and am now with an LBC implementing similar practices, but it is free; we don't pay any dues there. (INF0431)

4.2.6 Inspection and auditing

Evidence from the study data shows that auditing and inspection form the core pillar of implementing certification programmes in the CVC. Both internal and external auditing are conducted by cooperatives, LBCs, and COCOBOD to ensure that actors within the chain are complying with the required certification standards.

Internal inspections

In this study, participants such as LBCs and cooperatives indicated that the certification guidelines call for well-documented internal inspections at least once a year to ensure that cocoa producers are complying with the certification requirements. Some LBCs indicated that internal inspections are conducted by the IMS manager and their team (local farmers), who go to check whether cocoa producers are complying with and implementing the certification standards; this is also done to pave the way for external auditing. They indicated that the inspection is normally done based on the calendar of the LBC. One IMS manager explained:

As an IMS manager, I select a number of internal inspectors from our farmer group. These inspectors will then go about inspecting each member's farms to ensure they are adhering to or meeting the certification requirements. After the inspection, we do a written test to check their level of understanding of the practice, (INL0323)

Mat shared a similar view on the importance of internal inspections to the LBCs:

As an LBC, we do internal inspections; we document the outcome and show it when external auditors request them during external inspections. We always ensure we have every detail of information about our producers before external auditors come for an inspection. (INL0324)

The study revealed that for cooperatives, an internal inspection is done once a year to show compliance with certification requirements. In an interview, a senior certification manager with a cooperative participating in the RA certification revealed that internal inspections are ways of examining a cocoa producer on compliance after they have been in the programme for a year. This exercise is based on the list of requirements the cocoa producer needs to fulfil.

He explained the internal inspection process and its importance in this way:

Since 2017, we went fully digital with a point of interest (POI) mapper, so we don't do our internal inspection in any form of activity by means of hard copy or document currently. In this way, we have reduced possible errors that might happen using the manual way of doing things. The digital method makes the work easier. Also, a more innovative software also captures geolocation data of our inspectors and farmers; it helps to ensure compliance, quality, and assurance with our farmers. After the internal inspection, we have a digital solution that carries out sanctioning and approval based on the performance of every single farmer. The software processes the data based on the command we issued; we then apply a scoring system, and non-conforming sanctions are allocated to the farmer based on the number of years of practice. (INC0121)

INC0128 shared a similar view:

Internal inspections are critical because of issues of traceability, deforestation; we deem these non-compliances very critical and dismiss any farmers who are involved in such acts, (INC0128)

Again, the narrative from participants shows clearly that the internal inspections are greater under cooperatives than LBCs. This is because there is a large number of farmer groups under cooperative than that of LBCs as the study suggest, and that calls for more internal inspections compared to that of LBCs. As one cocoa producer who had moved from an LBC to join a cooperative put it:

When I was with the LBC, the leaders would come only occasionally to check our farms because some of them said they had to cross big rivers before reaching our farms, so they rarely came to inspect our farms, but with this new cooperative, their technical officers are all round in every society, and they visit our farms regularly, sometimes even unannounced. (INF0484)

One interesting story that emerged from participants was that to avoid any conflict of interest, internal inspectors inspect participating farms outside of their community of residence.

External Inspections

The study also revealed that cocoa producers who participate in LBC certification programmes receive fewer external inspections compared to the cooperatives. One cooperative group described their internal and external inspection process:

As a farmer-based organisation, we have regular internal inspections to ensure that we are on track with our operations. We document every activity (both on-farm and off-farm) and ensure that we hand it over to external auditors when they request them during our external inspection. (INC0121)

In addition, after internal inspections, cooperatives carry out a pre audit risk assessment to determine which specific farmers will be involved or could potentially be at risk for the certification programme just to pave the way for an external audit with the certification bodies. Once the external audit is done, a certificate is issued to the cooperative. An external auditor with Rainforest Alliance (RA) described the external auditing process and its importance; he put it this way:

So, the external audit or inspection is basically on an annual basis. Thus, in the surveillance audit, cooperatives apply to RA, which are currently doing the allocations for audits. Once the allocations are done, the certificate holder (cooperatives/LBCs) will get in touch with the certification body to agree on audit dates, but before that, there are other documentations the cooperatives and LBCs share with the certification body. They will do the risk analysis of the system; this helps to get a good sample of farmers in the cooperatives or LBC's database. To settle on the farmer during the external audit, we consider so many things, that is the risk assessment, whether the farm is close to protected area, if there is any high risk of child labour and others. However, to source for evidence, external auditors consider three things: interviews, documents review, and observation. We give

cooperatives and LBCs ten weeks to close all non-conformance after the inspection before the certification body can have a final review and approve the cooperatives or LBC's licence; this licence is active for one year. (INC0123)

During the interviews, some cooperative executives revealed that they normally follow up after an external audit has been done to ensure the auditing processes were in line with the certification body's requirements. One certification coordinator with an LBC shared his view on the post-audit process.

Last year, after the external audit, we followed up to the farm to ensure all the non-conformance issues raised by the external auditors were in line with the RA standards and code of practice. This is also a way for the farmer to know we stand with them irrespective of any situation. (INL0329)

Further insights on compliance were also sought from the regulator (COCOBOD) as a partner institution and the regulator of the cocoa sector operations. One senior manager indicated:

We do an annual audit to check if our cocoa producers are conforming to sustainability requirements, but for certification, it is the duty of the certifying bodies to do their inspections. I know they have external auditors who check compliance requirements. (INR0222)

Overall, insights from loosely coupled actors in the findings of this study show that all cooperatives and LBCs implementing certification programmes in the cocoa industry must go through a series of structures and processes to disseminate the certification label and to have their licence approved. Typically, certification organisations such as UTZ, RA, and FLO, have a clearly defined code of conduct and practices that a cooperative or an LBC and their registered cocoa producers must comply with to get their status approved and their licence renewed. In the next section, the study draws on some underlying challenges to organising commodity certification.

Unpacking the organising challenges in commodity certification programmes

Certification programmes have proliferated in recent years across emerging economies and have become a significant and innovative avenue for global standard setting geared towards environmental controls and trade development (Gboko et al., 2021). Despite the importance of certification programmes to the development of the Ghanaian economy, various certification programmes in the cocoa sector continue to face a number of deeply embedded, interrelated challenges that threaten its sustainability in recent times. In that regard, this section of the study seeks to unpack some organising challenges in the implementation of various certification programmes in Ghana's cocoa value chain under two salient themes.

4.3 Deflecting allegations of incompetency

4.3.1 Decoupled certification standards from practice

The first category regarding allegations of incompetency among loosely coupled actors leading to the floundering of certification programmes in Ghana's cocoa sector is decoupling standards from practice. Decoupling is common in institutional sectors, where stakeholders have difficulties in distinguishing the characteristics of dominant organisational practices, establishing causal links between policies and outcomes, and assessing the precise results of the policy implementation (Wijen, 2014; Giuliani et al., 2017). To certification organisations and other loosely coupled actors in the cocoa value chain, this situation is regarded as an obfuscated situation in which it is difficult to understand, causally ascribe, or quantify congruence between certification requirements and real conduct by some loosely coupled actors. In the cocoa sector, this management threat has made it difficult for external auditors and other loosely coupled actors to monitor the on- and off-farm practices to identify the

differences between the standards and the actual practice due to incompetency of the regulator and other loosely coupled actors.

In the interviews and the focus group discussions with cocoa producers across various research sites, all participants commented that the incompetency by the regulator (COCOBOD), cooperatives, and LBCs in monitoring and providing the necessary farm supports in accordance with the global certification requirement has contributed to the floundering of certification programmes. This means most cocoa producers have shifted from the main certification requirements and implemented their own strategies to improve their farms rather than adhering to the global certification standards implemented by the certification bodies through their cooperatives and LBCs. These key actors spearheading certification implementation in Ghana's cocoa sector do not 'practise what the preach'; they have also not been able to supervise and monitor to see if the training offered to cocoa producers is being implemented as required and instead, they always assume everything is well with them in their certification farm practices. Due to the improper supervision and monitoring of the certification standards by these key actors, some cocoa producers have decoupled standards from practice and have resorted to the use of unapproved chemicals on their farms, which is against the certification requirements. One cocoa producer shared his view on decoupling in practice:

Once in a while, the technical officers from COCOBOD come to our community to educate us on farm management and the required pesticides to use. They sometimes come with some of the pesticides and even direct us to where to buy some in the market. Our problem is that they don't go to our farms to even see if we are applying the chemicals well, and sometimes, it is even difficult getting the exact type of pesticide to buy in the market. Because of their attitude, I buy any pesticide which is available on the market, even though I know it is not prescribed by COCOBOD or Rainforest Alliance. (INF0476)

Consequently, these compelling issues surrounding certification practices in the cocoa value chain have led to a reduction in certified cocoa production among producers and exports because of the shift by cocoa producers in not adhering to the set standards. Meanwhile, other certified cocoa producers are also selling their certified produce to uncertified buyers for cash due to the incompetency among loosely coupled actors in monitoring and ensuring that certified cocoa does not land in the hands of uncertified produce buyers (Ansah et al., 2020). Furthermore, in the cocoa value chain, monitoring and enforcement of voluntary certification requirements are less than ideal, owing to the fact that actors in the sector are numerous and geographically dispersed, especially across the remote areas in Ghana; this leads to noncompliance behaviour among these loosely coupled actors especially the cocoa producers who are the field implementers of the certification programmes (Blackman & Naranjo, 2012). Besides, while global purchasers awarding in-house socioenvironmental certification place equal emphasis on social and environmental issues and establish many norms and criteria to guide cocoa producers' behaviour, these regulations may be poorly defined, making compliance even more challenging for cocoa producers especially in emerging economies. This has led to deviant conduct among commodity producers, where cocoa producers have the option of choosing which certification requirements to adhere to and which to disregard. Some cocoa producers succinctly put it this way:

Our association leaders and COCOBOD are not helping us with any farm inputs, financial support, PPEs, and other incentives to help improve our farms; this has compelled most of us to shift our attention from the certification requirements introduced by our cooperative to implementing other practices just to sustain our farm and livelihood. It is obvious that certification is expensive, and if we have no support, it is difficult for us to continue implementing the standard requirements. (INF0481)

Although decoupling from practice may serve as a means to save some producers money because noncompliance or divergence from standards might lead to decreased investment in new or more demanding socio-environmental practices, it also makes it difficult for cocoa producers to benefit from certification programmes, which contribute to a reduction in their operating costs (Ortiz-Miranda and Moragues-Faus, 2015; Ibanez & Blackman, 2016). One cocoa producer who had been a victim succinctly offered this perspective during the focus group discussions:

Yes, I did not comply with most of the requirements which Rainforest Alliance through their cooperative officers trained me in because it was expensive to implement most of them, such as weeding the cocoa farms three times a year rather than spraying with weedicides, spraying the cocoa with their prescribed pesticides approved by COCOBOD, acquiring the required tool for pruning. All these are good for my farm, but I could not comply because they are expensive, and I can't afford them. I am over 60 years old, so I use other means to keep my farm moving. Well, the effect is that I had a very low yield at the end of the season, and some of the cocoa trees are also dying because of the pesticides, pruning, and the weedicide that I did not apply correctly. It also affected the amount of premium I received. (INF0422)

According to De Neve (2009) and Giuliani et al. (2017), decoupling standards from practice can have a variety of rationales among chain actors in a CVC; certain divergent practices by these chain actors may be established in good faith and influenced by local specificities that prevent the complete execution of the requirements. This has made some cocoa producers divert from the main certification standards introduced by certification bodies through various cooperatives and LBCs, and they have resorted to their traditional agricultural practices. One cocoa producer asserted:

I did not follow the pruning processes I learnt during my training with the cooperative; the training I was taught was not the best. I have my own way of pruning my cocoa farm and of helping the cocoa tree and improving the farm. Most of my friend farmers who implemented what they were trained to do, most of their cocoa trees are dying. (INF0423)

The global south presents an extra problem since, due to weak institutions and other failings such as weak chain governance, that characterise those environments, it can be difficult to monitor and establish links between standards and conduct by certifying bodies and other institutions in their organising practices (Jamali et al., 2017; Mezzadri, 2012; Hodgson, 2006; North, 1991). However, there are distinctions among different economies, especially in the cocoa and coffee sector due to the absence of strict supplier monitoring and support (Giuliani, 2016). As one participant with the regulator in Ghana's cocoa sector put it:

Certification is voluntary. We as a regulator cannot force the certification bodies or cocoa producers on what to do. The certification institutions, such as RA, UTZ, and FLO, have their own standards; the cocoa producers can choose to join or not. It is not by force, and we cannot tell the cocoa producers what they should do. Our mandate is to source sustainable cocoa for our global customers and not certified cocoa. (INR0222).

4.3.2 Blame shifting

Taking a retrospective view of the compelling stories from the field data, 'blame shifting' among actors has emerged as an attempt to shape chain actors' sensemaking of the failure to implement and supervise the required certification practices (Park et al., 2018). With the goal of managing others' sensemaking, when a shared task fails, both the organisation and its partner are concerned about the negative consequences and the threat that the failure poses (Park et al., 2018; Bruyaka et al., 2018; Jensen, 2006). The interviews with loosely coupled actors implementing certification programmes in Ghana's cocoa sector show some level of "blame shifting" among these actors. This act of 'blame shifting' among loosely coupled actors in the cocoa value chain emanates from the inability of these actors to enforce and implement the required certification standards at the farm level. Notably, this individual pattern among loosely coupled actors in Ghana's cocoa sector is seen as a key challenge and a contributing factor to the floundering of certification programmes over the past years. There are numerous

arguments by stakeholders in the cocoa value chain regarding the floundering of certification programmes. As a result, it is unclear to what extent chain actors in the cocoa sector continue to shift blame regarding their organising practices. During the focus group discussions and individual interviews with cocoa producers across the research sites, it was revealed how every single cocoa producer in Ghana blames other chain actors for their low contributions to the sector. They tell their stories about the challenging activities of the regulator (COCOBOD), cooperatives, and LBCs for their low contribution to farm practices, their livelihood, and their communities. They believe these key actors have not done much in the sector and that their lack of action has contributed to the floundering of most public and private initiatives, such as the cocoa certification programme. One senior certification manager with a cooperative under the Rainforest Alliance certification body shared a blame shifting story:

As a farmer-based cooperative implementing certification programmes under the RA standards, we believe our competitors, thus LBCs implementing certification has contributed to the 'unserious' cocoa producers we have in our system, and probably to a larger extent, all issues of cocoa traceability, deforestation, child labour, and banned pesticide use we are facing today in our cocoa sector here in Ghana. (INC0122).

At the same time, some certification officials with an LBC expressed concerns about some challenges they encountered with their IMS at the local level, which led them to stop implementing the certification programme in their mapped communities. When they asked their internal managers questions, the managers began to shift blame onto their international partners and tried to disassociate themselves from the cause of the failure of certification. One of the IMS officials pointed out:

We heard there were some contractual disagreements with our off-taker; the off-taker wanted to implement new policies which the local LBC was not in support of. They believed it a way to snatch their cocoa producers. Meanwhile, other managers were also of the view that the off taker was not able to buy the required tonnage agreed in the supply plan. Due to that misunderstanding and blame

shifting, we cancelled the contract and stopped the certification programme. (INL0323)

Some of the cocoa producers interviewed also mentioned that there had been several instances when they contacted their cooperative and LBCs for support with farm inputs, but they tried to shift all blame onto the regulator as the institution in charge. Some cocoa producers expressed their displeasure during the focus group discussions:

Yes, officer, our cooperative leaders promised us farm inputs, such as fertilizers and agrochemicals, to support our farm. However, any time we ask them when we are getting these inputs, they try to shift the blame onto COCOBOD as the institution which has not been able to provide them with the inputs. As we speak, there is shortage of cocoa fertilizer, and our cooperative is not doing anything about it; they all are saying it is COCOBOD who must provide them with the fertilizers. This is sometimes annoying, and it is not helping us to increase production. Me, I will stop the certification programme if nothing is done about this behaviour from our cooperative leaders; we know you as a cooperative and not COCOBOD. (INF0421)

This blame shifting among loosely coupled actors in the cocoa value chain continued during an interview with some cocoa producers at Kakrakrom, a certification mapped area in the Amenfi West District in the Western Region of Ghana. During the interview, some cocoa producers blamed CHED as the reason why most of their cocoa trees are dying. They disclosed that the substandard training they received from COCOBOD technical officers on pruning had contributed to this disaster. This is how one certified cocoa producer put it:

We received some technical officers (TOs) from COCOBOD; they came and trained us as on how to prune our cocoa farms. In fact, those of us who complied with their training, most of our cocoa trees have died. These technical officers are incompetent; they have less knowledge on agriculture, they just tell us what they learnt in books, and see the results! Their technical advice has caused disaster to our farms. These are some of the challenges we go through between our LBC and the regulators, which is against what we were told when we started to implement certification six years ago when I joined the programme. (INF0471)

Similar to the above views of cocoa producers' blame shifting, INF0439, a 64-year-old cocoa producer, reported during a focus group discussion that he believed that one of the organising

challenges to certification in Ghana is the irregular visits of international chocolatiers, the off-taker of cooperatives and LBCs to the mapped communities. INF0439 explained that if the off-taker can bring some of their staff from abroad to be part of the audit and monitoring operations of cooperatives and LBCs implementing certification on their behalf, it will keep the leadership and the cocoa producers implementing the programme on their toes and help to recruit competent people to manage the programme at the national and the local level. He expressed his opinion in this way:

We need a combined team made up of locals and foreigners in the implementation of the certification programme. Certified cocoa is not sold in Ghana; it is sent abroad. This means there should be equal representation in our practices, the local executives managing the programmes are not competent enough. The white people present will help improve the programme. If not, it is going to sink because as it is going, our local leaders are not telling us the truth, and they don't support us as such in our on-farm and off farm practices. (INF0439)

4.3.3 Artisanal miners taken over certification farmlands.

Farmlands being taken over by artisanal miners was a major concern expressed by cocoa producers, certification bodies, and LBCs in some certified cocoa mapped communities. These illicit mining activities were rampant in most of the communities visited. Notably, this type of mining also served as a job opportunity for most of the young men and women in the communities. A leader of a farmer group under the Rainforest Alliance cooperative explained how artisanal mining has taken over their cocoa farmland in the area and has made most cocoa producers sell their farms to these artisanal miners and stop the certification programme at the behest of the regulator (COCOBOD). These practices have emerged because of the level of incompetence shown by the regulator (COCOBOD) and other actors within the cocoa sector to monitor and regulate the sector. As he explained during a focus group discussion with other cocoa producers in Adasewase:

For some years now, some farmers have sold their farmland to artisanal miners or 'galamsey' people in our communities. They believe there is no motivation for farming, and they are still poor even with the introduction of certification programmes that aim to improve their livelihood and benefit their families. However, these artisanal miners are willing to offer ready cash for their farmland. This has compelled most of them to sell their land. We have reported to COCOBOD and asked our member of parliament to intervene but there are no answers. (INF0457)

Additionally, INF0465 shared a similar opinion on this subject during the individual interviews:

Most of the youth in this community are not interested in farming anymore and have resorted to artisanal mining. The miners buy the cocoa farmland and start digging for gold. The danger of it is that if you don't sell the land to them, they will intimidate you and begin to disrupt your certification practices, such as piling plastic bags on your farm, which is against certification requirements. Meanwhile, the negative effect is that it has left most of these farmers hunting for food; they go to other communities to buy cassava, plantain, and other crops. We have called on the authorities to intervene, but our cry has still not yielded any result. (INF0465)

In Ghana, artisanal mining employs about one million Ghanaians directly and has spawned millions of additional income-generating opportunities in the upstream and downstream industries (Hilson et al., 2014). However, over the years, attempts by various governments to ban artisanal mining have not been successful because of political interests. Given that some managers of the cocoa sector are appointed by a ruling government and linked to a political party, it has always been difficult for COCOBOD as a regulator to control and protect cocoa producers in such regions. Arguably, despite attempts by the current and previous governments to take a more hardline stance to curtail this environmental threat, yet this hard decision is seen to be backed by endemic clientelistic politics where key actors who help to contribute to overcome this menace, including the chief executive of COCOBOD, are affiliated to a ruling or opposition government in Ghana. One cocoa producer shared his sentiments on this matter:

I don't think we can get rid of these environmental issues in our community. We express our views to our leaders all the time, but we have seen that most of these

galemsey sites are even owned by the 'big men' in the cocoa industry who don't even support cocoa certification. Look at how we have suffered to implement certification practices, and now our landowners are selling the land to these artisanal miners; it is not good for some of us cocoa producers. (INF0438)

Other participants also expressed their views on the incompetence of the industry actors and the regulator (COCOBOD) to implement measures to overcome this environmental hazard, where certified cocoa farmland is taken over by artisanal miners in the cocoa growing communities. As one certification manager put it:

We have spent much money to train our cocoa producers on Rainforest Alliance certification standards, but because COCOBOD does not recognise certification, they have not even made any attempt to draw any policies or even regulate the sector in order to overcome this environmental degradation, even though farmers are free to sell their farmland to these artisanal miners because in Ghana there is no policy which prevents cocoa producers from selling their cocoa farms or cutting them to grow other produce. All this is the responsibility of COCOBOD; if we fail as a cooperative under a certification body championing environmental conservation, then we have no course but to blame the regulator, that is, COCOBOD, which is the manager of the sector. (INC0121)

INC0130, an external auditor, and an industry player held a similar view on how the activities of artisanal miners have contributed to the floundering of certification programmes in most cocoa growing communities. He commented:

The number of certified cocoa producers keeps reducing every year because of artisanal miners taking over cocoa farmland. Environmental conservation is an important factor to consider, and if the regulator and government do not do anything about it, we shall drop from being second in world cocoa production. We have sent reports to the actors managing the sector and are waiting for consideration by policy makers. Their activities are really undermining our operations and are a major challenge to certification practices in Ghana. (INC0130)

Evidence from this section has demonstrated some underlying challenges to commodity certification practices, and further shows how incompetency among the loosely coupled actors in the cocoa value chain contributes to fuel the floundering of certification programmes regarding their organising practices. Opinions from participants regarding this issue show

that the challenges to certification practices in Ghana's cocoa sector are based on multiple actors' organising practices and not just cocoa producers, who are key stakeholders in the industry.

4.4 Experiencing a meaning void in commodity certification practices.

4.4.1 Telling the stories behind the certification label.

Accordingly, the objective of third-party certification programmes in the CVC is to source certified cocoa while improving the livelihood of cocoa producers, their families, and their communities. However, it appears from the study that the stories of various certification labels have not been clearly communicated by loosely coupled actors in Ghana's cocoa sector. The cocoa sector is a huge industry, and the effort of all stakeholders, especially loosely coupled actors, is required to disseminate the certification label's requirements effectively to farmers. Arguably, most actors in the industry still believe certification bodies and the regulator (COCOBOD) have not done much to champion the objective of certification in the cocoa sector. One participant shared his view on this challenge as follows:

I joined the certification programme through the Cocoa Abrabopa Cooperative five years ago. You know, the majority of cocoa farmers are illiterate and cannot read or write, so many cocoa producers in this area are not joining the programme because they have not understood the objective, and the cooperative is also not doing any publicity for the cocoa producers to know what the programme is about. We believe the number of participants should have increased by now, but it is still the old people that we started with; there are no new members joining because of the low sensitisation from the cooperative's executives. (INF0434)

Other participants like INF0435 shared similar thoughts on this challenging issue in certification practices; she stated:

Few people are joining the certification programme. Even in our community, when you ask cocoa producers here if they have heard of our cooperative, they will tell you they are not aware [of them] and do not know what they do. I believe much work has not been done to disseminate the objective of certification programmes in the cocoa growing communities. We started with thirty members in this community, and over two years, no single producer has joined. [It is] still

the old members; we are not seeing any improvement in the membership base. Well, I believe the certification bodies and COCOBOD must do more to encourage more cocoa producers to join the programme. We are over a thousand people in this community, and only thirty people have joined the programme. (INF0435)

Some of the cooperatives and LBCs interviewed recounted their stories on why they have not been able to disseminate the certification label to all cocoa producers - both certified and uncertified - in Ghana. INL0327 a certification manager with Rainforest Alliance operating under an LBC shared his view on this:

Ghana is the second leading producer of cocoa in the world. It would have been great if we had an equal percentage of certified and conventional cocoa. However, there is a low geographical reach in disseminating the RA label because of the low tonnage of certified cocoa purchased by our international partners. There are also financial constraints. You know, certification is expensive to implement, and all funds come from the off taker who buys the certified cocoa. We also have to pay our staff and officers in the field. All this comes from the funds we receive from the off taker. These are some of the reasons why we have not been able to communicate the RA label across all the cocoa growing regions. (INL0327)

INC0128, a technical field coordinator with Asetenapa Cooperative (Fairtrade), shared his view of this challenge from a different perspective:

For me, I think COCOBOD is the major cause of all these challenges we are facing in our certification practices. They don't even recognise certification. COCOBOD has regional offices across the entire country but do not support us in championing the certification label; all they tell us is that certification is voluntary. Our visibility in the Ghanaian cocoa sector is low, and we need the support of COCOBOD to champion the certification labels. (INC0128)

4.4.2 Substitute compliance for price premiums

Evidence from the field data shows how loosely coupled actors in the cocoa value chain have substituted certification objectives for cash premiums. Interestingly, several participants interviewed, such as cocoa producers, could not see the benefit of certification programmes to their on-farm and off-farm practices but saw it as a mechanism to capture premium prices, and for other farmer groups such as cooperatives and LBCs, it serves as a means to "capture

farmers' mind" to sell their produce to them. One senior external auditor with Kuapa Kooko and the UTZ-RA certification organisation shared his view as follows:

I personally speak against the sharing of cash premiums because it just a peanut, as early day officers and certification organisations use the premium as a basis to get the farmers to sign onto the certification programme rather than educating the farmers on compliance. The premium is a good thing; it sometime relieves these cocoa producers during the cocoa off season but should not be subject to attention but rather to compliance with the standard requirements. (INC0123)

Other certification officials shared their thoughts on why they have focused on price premiums rather than educating cocoa producers on adhering to the label's objectives and requirements. INC0128, a technical field coordinator with Fairtrade, shared his view:

We know it is difficult to ask cocoa producers to adhere to new standards they are not familiar with. We also know some cocoa producers will resist this new initiative since it is new to their practice. There is competition between certification under cooperatives and LBCs, so for us to penetrate the cocoa industry is the promise based on the price premium for cocoa producers. The only problem is that the certification objectives have been substituted with the premium; we have made the premium the objective rather than the certification standards. This is really a big issue for us and also the reason why our certification programme is floundering. This time, our biggest problem is even asking this cocoa producer to attend any training programme; they don't attend because they think our premium is not enough. (INC0128)

There were heated arguments between a purchasing clerk (PC) and some certified cocoa producers during one focus group discussion. Some cocoa producers expressed their views on premiums:

Our leaders have made me aware that at the end of the year, I will be paid a premium based on my produce; our PCs have capitalised on that rather than reviewing compliance practices. I think our PCS have their cash share in the premium. (INF0486)

For INF0453:

My brother, there are so many farmers here that when you ask them to tell you the certification requirements, they don't know them; all they know is the premium. They are not educated, so how do you want them to implement such requirements? For instance, there is one *kusasi* man in our farmer group who can't even speak Twi or English. How do you expect this person to implement these

requirements when he even has a language barrier? He is interested only because of the price premium and not in implementing the certification standards. I think our leaders should do something about it; if not, the certification programme will continue to sink. (INF0453)

In addition, INC0129, a sustainability manager with Agro-Eco, indicated that noncompliance and premium issues in certification practices start during the sensitisation stage of certification. He explained further:

When we are starting a certification project, we have clearly in our minds that the farmers, when they are certified and sell their cocoa beans, can get a premium. But that is not our selling story; that is not what we use to get the farmers interested in the programme. We use other benefits which are bigger. For instance, the benefit of productivity increase, where a farmer harvesting two bags of cocoa in an acre has the potential to harvest eight bags of cocoa in an acre when they implement best practices. So usually, this is how we sell it. But, of course, if it is the LBCs who are business oriented, who will have to buy the beans at the end of the day, then they want to go with the stories of the premium; in that way, the premium becomes the selling point. Certifying organisations miss out the clear sensitisation exercise, which is mostly about getting the required number of farmers certified without looking at the very good outcome and impact. That is why most farmers are not complying with the certification requirements. (INC0129)

4.4.3 No national policy to certification

Evidence from the data suggests that there is no national policy regarding certification practices in Ghana's cocoa sector, and that has contributed to the major challenges in organising. During the main interview with some loosely coupled actors in the cocoa sector they confirmed this national issue. One sustainability manager commented:

As we speak, there is no unit or department at COCOBOD which sees to certification in Ghana and even to talk of drawing up a national policy to our practices. All this is because they think certification is voluntary. As a regulator who has given approval to implement our standards, we believe you should have significant interest in our activities and have policies which will bind our operations. (INL0330)

Other participants, like INR0225, also shared a similar view:

I think COCOBOD is the cause of our problems in implementing certification. In the 21st century, you have no national policies for every activity in your space; that is why we still have cocoa producers selling their farmlands to artisanal miners,

and even certified cocoa producers diverting their cocoa beans to uncertified buyers. (INR0225)

In an interview with some officials at COCOBOD, they confirmed that there is no unit purposely made to oversee certification; instead, most of their divisions are only slightly involved in certification, and their mandate as a regulator is to source sustainable cocoa for the global market and not certified cocoa. One senior official revealed:

Certification is voluntary, and as a regulator, we monitor the activities of the various certification bodies annually, but we don't ensure compliance to the certification requirements; that is the duty of the certification bodies. That is why they have their auditors; we have our sustainability requirements that we use to ensure compliance and not certification. All policies about certification lie in the hands of the various certification bodies whether it's RA, UTZ, Fairtrade, Organic, and others, and not COCOBOD as a regulator. (INR0223)

All participants involved with certification bodies revealed that the inability of COCOBOD to have a national policy backing certification practices is a contributing factor to the floundering of certification programmes and a huge challenge to their operations. Certification organisations rely on their own policies, such as on-farm training and a chain of custody, which has also become their national document or guide to certification implementation in Ghana's cocoa sector. One certification consultant with Agro-Eco indicated:

If there is a national standard, where the entire cocoa value chain decides to be X or Y certified, then the cocoa producer will be forced to implement best practices because that is the only way they could be certified to sell their beans. The farmer is a businessperson and always wants to have options for their operations, so if you want the farmer to implement X or Y practices, then there should be a national policy, because if a farmer produces their cocoa and still has a buyer, then why should they be worried about implementing certification? So, there should be a national policy binding these farmers. (INC0129)

4.4.4 Traceability in certification practices

One organising challenge to certification in Ghana's cocoa value chain is issues of traceability; the information about the conditions under which the cocoa was produced and transported would be useful to consumers, the cocoa marketing company, LBCs, cooperatives, and

certification bodies. This study's findings suggest that loosely coupled actors in the cocoa value chain have not been able to develop any effective measures in identifying the sources of the cocoa produced and farmers' adherence to certification practices. During the interviews, some participants emphasised how issues of traceability are affecting their certification practices. For LBCs, one external auditor with the Rainforest Alliance indicated that there are cocoa producers who have been moving from one LBC to another and that makes it difficult to monitor their certification practices and the source of the cocoa they are producing. He shed further light on this behaviour among the cocoa producers participating in certification programmes under LBCs:

As an auditor, when we go to conduct a field audit, it is sometimes difficult to get data on farmers implementing certification under LBCs; they keep moving from one LBC to another, and this makes it difficult to know and monitor the condition under which their cocoa was produced as per the certification requirements. (INC0130)

Regarding the regulator (COCOBOD), some participants complained that COCOBOD does not have accurate data on cocoa farmers and that there is a clearly defined boundary between their operations and those of certification bodies, which makes it difficult to trace the sources of the cocoa produced and even to monitor the activities of these farmers as certification requires. For INC0125, there is an open market system in the cocoa sector, and he believed COCOBOD has not done enough to regulate the system or even to trace the source of agro chemicals used by cocoa producers on their farms as well as having clearly defined protected areas. He stated:

Certification requirements give a list of banned agro chemicals, but COCOBOD supplies these chemicals as approved chemicals, and there is always a conflict there between certification bodies and what COCOBOD is saying. Also, when you go to do farm mapping on the shade farms you have available, when you plot your GPS point, it will show that those farms are in protected areas, but COCOBOD will tell you that this place has been re-gazetted. There are no clearly defined boundaries of the protected areas, and it is now the responsibility of the

regulator to get the Forestry Commission involved to re-gazette and give the certification bodies new data to work with, and this is a big challenge to our operations because the buyer would like to source cocoa from non-protected areas. (INC0125)

This study finding argues that the conditions under which cocoa is sourced is not the major focus of the regulator in Ghana's cocoa sector. Further, this is making certification bodies' and other loosely coupled actors' operations difficult, as the certification requirement suggests. As a result, many stakeholders in the cocoa sector are calling for reforms by the regulator and certification bodies to curtail some of the challenges confronting actors in their certification implementing processes.

4.5 Chapter summary and conclusion

This chapter has presented several important and exciting discoveries about commodity certification in organising. Based on the research question and the field data, four salient themes were analysed to provide insights into the organising practices and underlying challenges to commodity certification programmes in Ghana's cocoa value chains. The first theme unpacks certification structures and procedures in the CVC and shed light on how certification bodies and other loosely coupled actors are involved in getting the certification label approved by the regulatory authorities. The data show that, to be approved by a certification label requires a PPP and the inputs of various loosely coupled actors, such as certification bodies, cooperatives, and LBCs in the cocoa value chain.

The second theme draws on the processes in disseminating the certification label to cocoa producers and other loosely coupled actors in the cocoa industry. It places further emphasis on the on-farm and off-farm processes involved in implementing the certification labels in Ghana's cocoa sector. Evidence from the field data shows that cooperatives and LBCs

implementing certification programmes must go through a series of processes, such as internal and external inspections, to get their certificate approved and renewed.

The third theme looks at some of the challenges involved in implementing certification labels in the CVC under two salient themes, namely, deflecting allegations of incompetence and experiencing a mean void in certification practices. Insights from participants show how the incompetence among some loosely coupled actors has made some cocoa producers decouple certification standards from practices and led to blame shifting among actors while highlighting the incompetence of the regulator in controlling other environmental threats, such as artisanal mining, which is a huge challenge to certification practices in Ghana's cocoa sector. Large portion of the cocoa were dying due to the erratic rainfall. Other factors, such as stories about the certification labels, the lack of any national policy for certification. The substitution of compliance requirements for price premiums, and issues of traceability, were revealed in this study to be some of the underlying challenges to certification practices.

To conclude, the purpose of this chapter was to unpack the state of the art of certification programmes in the CVC and to understand how loosely coupled actors respond to certification practices. Further emphases were made on the structures and procedures for implementing the certification labels in the cocoa value chain, as well as a better understanding being given of how the activities of various loosely coupled actors contribute to those structures and procedures, which improves understanding of the organising practices required in certification programmes. The study data suggest that the beneficial outcome of commodity certification for cocoa producers and other loosely coupled actors is the premise to adopt the various standard requirements of a particular label. As previous studies on the organising practices of certification programmes were less than conclusive, this contribution sheds light on the

organising practices of loosely coupled actors and the underlying challenges to commodity certification programmes in Ghana's cocoa value chain. Further, the findings offer insights into how internal and external inspections are conducted and how these do not occur as often as indicated in the labels' code of conduct and practices or even as frequently as previous studies suggest (Fenger et al., 2017; Ingram et al., 2018; Owusu-Amankwah et al., 2014).

Moreover, it was evident from the field data that cocoa producers participating in certification under LBCs have fewer internal and external inspections compared to certification programme under cooperatives. In any event, it appears from the data that there are fewer inspections than expected under LBCs participating in cocoa certification. It is possible that cocoa producers and other loosely coupled actors may not adopt practices that generate the programmes' desired outcome. Thus, cocoa producers may not properly adopt or maintain practices that achieve the programme's aim to improve their livelihood and that of their families, and overcome socio-environmental challenges, which does not look good for international chocolatiers and off-takers paying premiums to support such a course of action. The study further revealed that there are no accurate data on the boundaries of protected areas, which has led to arguments between certification bodies and the regulator (COCOBOD) over re-gazetted areas for certification. In turn, consumers and buyers would like to source from non-protected areas, and if, during mapping, GPS shows that those areas are protected, it does not reflect well on the certifying organisations and the regulator. While this study substantiated prior studies' findings, there are still some gaps that need to be filled.

First, the study has shown that cocoa producers may not have adequately adopted some requirements that yield the programme's anticipated contributions. As the study reveals, if there are no adequate inspections of and compliance by participating cocoa producers under

LBCs, consumers may lose trust and stop buying certified cocoa, thereby bringing the certification programme under a particular label to an end. Therefore, future researchers can investigate the frequency of inspections under the LBCs participating in certification programmes in the CVC. Secondly, the methodology revealed the bottlenecks in terms of the organising practices of certification programmes. However, the study is based on prior literature combined with a small number of interviews with loosely coupled actors. Hence, the study should be seen as an initial step towards understanding the organising practices of certification programmes in Ghana's cocoa sector. A more exhaustive investigation is needed to develop the of the state of certification programmes in greater detail to address the deficiencies in the relevant organising practices.

The next chapter presents the findings of how temporal myopia account for the floundering of certification programmes in the CVC.

CHAPTER 5

THE PAST, PRESENT AND FUTURE: COMPLEXITIES OF TEMPORAL COORDINATION

This chapter examines the link between commodity certification programmes and temporal myopia (TM) in organising practices. It aims to answer the second research question underpinning the empirical enquiry: *How does temporal myopia account for the floundering of certification programmes in CVCs?* This study will further provide a fine-grained understanding of how TM accounts for the floundering of certification programmes in organising. It is structured as follows: First, emphasises how TM induces certification bodies and produce buyers to lose sight on the aims and objectives of commodity certification programmes under articulation and assimilation of certification vision. Second, it focuses on how the syndrome (TM) induces loosely coupled actors in their past, present, and future situated practices under three main themes — contentment with present certification practices and performance, inability to escape past certification practices, and inability to invent into future practices. Finally, a temporal myopia framework representing the findings and a summary and conclusion of the chapter is presented.

5.1 Articulation and assimilation of certification vision

5.1.1 Mapping and monitoring of protected areas.

Protected areas are designated areas where agricultural or infrastructure expansion efforts are subject to stricter regulations, and human encroachment is closely monitored by regulatory institutions and other agricultural commodity chain actors (Joppa et al., 2008; Pullin et al., 2013). However, over the past decades, human activities have transformed the world's landscape by expanding agricultural land, and, more recently, the urban infrastructure (Foley

et al., 2005). In addition, in emerging economies, unsustainable production methods have driven cocoa producers across most cocoa growing regions to extend into forest areas (Aidoo and Fromm, 2015). Importantly, setting aside protected areas is one way to protect habitats, ecosystems, and vulnerable across developed and emerging economies (Ritchie and Roser, 2021). Evidence from this study revealed that, over the past decade, certification bodies (Rainforest Alliance, UTZ Certified, Fairtrade) and the regulatory bodies (Ghana Cocoa Board, Forestry Commission of Ghana) have articulated their vision to map and monitor protected areas across the cocoa growing areas in Ghana, but the data suggest that these regulatory institutions do not integrate the vision into practice (Sarpong, Maclean and Davies, 2013). Arguably, what prevents these loosely coupled actors from integrating their vision in practice is that these institutions tend to overlook at the future implications of farming in and along protected areas through a narrow aperture (Wittmann and Sircova, 2018; Sarpong, Eyres and Batsakis, 2019). The regulatory institutions could not foresee the importance of integrating the vision of protecting forest areas in practice. The missing link is the blocking mechanism; thus, TM prevents these regulatory institutions from integrating their regulatory and certification objectives into practice. Meanwhile, the certification standards and guidelines call for well-documented mapped and protected areas across certified cocoa producing communities. One Rainforest Alliance official explained:

Yes, it is part of our vision to mapped and monitor protected areas as the certification standards call for, but we have not been able to fully put it into reality because there is less regulatory support from the government agencies. (INC0123)

Even though some officials from the certification bodies believed the Ghana Cocoa Board (COCOBOD) and the Forestry Commission of Ghana do not share their vision of mapping and monitoring protected areas, it is obvious how COCOBOD have, over the years,

championed sustainability initiatives which prohibit farming along and within protected areas. From this perspective, it is clear that all the regulatory institutions in the cocoa value chain have a long-term vision of mapping and monitoring protected areas but have not been able to integrate the vision into their situated practices. One sustainability coordinator interviewed revealed why this environment challenge persists in the cocoa sector:

In fact, all the regulatory institutions, LBCs, and cooperatives are interested only in the positive financial returns on their investments, thus getting the required yield of cocoa to meet the global market demands. They have ignored the implications of sourcing from these protected areas and the future implications. Anyway, some of the senior employees of these regulatory institutions are even selling some of the forest to private individuals for artisanal mining and even farming, so no wonder the vision has still not been accomplished over the years. (INL0325)

According to Ecometrica, a UK space agency, as part of their international partnership programmes (Forest 2020) on combating deforestation emphasised that the Forestry Commission of Ghana should be expanded to trace and monitor the remaining forest patches, particularly those in off-reserve areas (Forest, 2020). The crucial component of Forests (2020) was engaging with private sector players working in these agricultural supply and value chains to provide services that assess the danger of deforestation when sourcing areas and to monitor the success of initiatives to minimise deforestation. Therefore, there is a clear need for government agencies to monitor and implement policies that will help restore the forest and not to source agricultural produce such as cocoa around and within the forest landscape.

In response to Ecometrica's initiative and the global market requirements for cocoa produce from Ghana, it is obvious that consumers have a significant interest in produce from the global south. However, evidence from this study data shows that despite the advocacy by the Ecometrica, the Forestry Commission of Ghana and the COCOBOD have not been able to integrate the initiative into practice since it was launched in Ghana. In an interview, an official

at COCOBOD revealed that the project has not yet started but it is hoped that it will be initiated on a pilot basis in near future. As on senior officer shared in this study:

Even though we know the programme will help prevent deforestation and help monitor protected areas, we have not yet set it in stone. I know is part of the Forestry Commission and COCOBOD's plan. (INR0221)

This finding is consistent with Blagoev et al. (2021) regarding, how institutions can make long-term, distant future goals related to sustainability actionable in the short-term and near future. It appears from the interviews that TM has become a blocking mechanism inducing these loosely coupled actors to foresee the importance of integrating the mapping and monitoring of protected areas as a major initiative in their ongoing certification and sustainability programmes in the cocoa value chains.

5.1.2 Banned unapproved pesticides.

According to Friedrich (1996), cocoa producers in developing countries are still spraying their farms with many highly toxic pesticides. The high proliferation and open market system of the agrochemical industry has given rise to significant sales and usage of unapproved pesticides in the cocoa industry in Ghana and other emerging economies (Denkyirah et al., 2016). However, over the years, attempts by the Ghana Cocoa Board and the various certification bodies to prohibit the usage of banned pesticides by cocoa producers have not been successful because of the open market system in the agrochemical industry (Denkyirah et al., 2016; Fosu-Mensah et al., 2022). Given that the cocoa sector is dominated by large stakeholders, it has always been difficult for these stakeholders, especially loosely coupled actors, to ban unapproved pesticides in the sector, even though it has always been part of the long-term vision of these actors in this sector (Ecobichon, 2001). The various certification codes of practice prohibit the use of banned pesticides on cocoa farms; however, this vision to stop

cocoa farmers from using banned chemicals on their farms has not been integrated into practice, as some uncooperative cocoa producers in Ghana still use banned pesticides on their farms (Fosu-Mensah et al., 2016). The interviews and focus group discussions with various loosely coupled actors in the cocoa sector highlighted diverse views on why certification bodies and COCOBOD as a regulator have not been able to integrate this vision into reality. In the focus group discussions, cocoa producers were asked which banned pesticides are still in use in the study area; although most cocoa producers interviewed indicated that they did not use banned pesticides, some farmers at the research sites mentioned that some cocoa producers still use some of the banned pesticides, such as Gammalin 20, Dursban, and Ridomil Plus on their cocoa farms. Some cocoa producers revealed the following information:

For me, I am not aware of the list of pesticides banned by COCOBOD, so I buy any cheap one that my money can afford. Until COCOBOD stops agrochemical sellers, we will continue to use them. If they want farmers to stop, then they should come out with a list of all the banned pesticides and arrest those selling them first. (INF0425)

For INF0479:

Yes, we still have farmers who use banned pesticides and the regulatory body and COCOBOD officials see them every day. Anytime their technical officers come for inspections, they only say banned pesticides are not allowed to be used, but farmers are still using them; they have not been able to even arrest any farmer over the years. But it is their duty to ensure that they get rid of all these unethical practices which cause damage to our cocoa and environment. (INF0479)

According to the Conservation Alliance of Ghana, a non-profit organisation that serves as a catalyst for biodiversity and conservation and for improving the socioeconomic conditions of cocoa farmers and their communities, there is a high advocacy for less application of pesticides on cocoa farms to avoid a global ban on cocoa produce from Ghana (Conservealliance, 2022). In that regard, the Conservation Alliance is calling for a review of the Cocoa Pest and Disease Control (CODAPEC) programme to prevent agrochemical dealers

importing pesticides that have been banned in Europe from entering the Ghanaian market.

One senior official of the Conservation Alliance indicated:

Some of the pesticides supplied to cocoa farmers in Ghana have been phased out in the European Union due to the dangers associated with those pesticides. What we are saying to the COCOBOD is: look at your policies. Look at other countries policies like the European Union (EU). If the EU is producing these pesticides but says they are hazardous, why are we importing them? COCOBOD as a regulator should find a way to phase them out of the Ghanaian market. (Conservative Alliance.org)

Evidence from this study shows that the regulator, COCOBOD, has not been able to integrate the long-term vision of banned pesticide usage by cocoa producers into practice despite the suggestions by various stakeholders including the Conservation Alliance and certification bodies. According to Kim and Zauberman (2009), the TM syndrome is seen as a blocking mechanism impeding individuals and organisations such as COCOBOD from considering future decisions even at the present time. Thus, TM syndrome affects organisational cognitive structures, such as the Cocoa Health and Extension Division (CHED) of the Ghana Cocoa Board, and certification bodies and prevents them from considering the consequences of these institutions' actions or decisions in the present. In addition, Japanese cocoa consumers over the past years have raised concerns about the 24D chemicals in most cocoa beans from Ghana (COCOBOD, 2019). These are harmful weedicides used in spraying cocoa farms. In response to these concerns from the Japanese about the sanitation laws concerning the detection of 2,4-D in Ghana cocoa beans, COCOBOD has banned the use of weedicides and is urging cocoa producers across Ghana to desist from their use, as it affects the quality of Ghana's cocoa and farmlands.

The head of COCOBOD has also advised Cocoa farmers who use toxic chemicals for spraying their farms to stop since it was inimical to their health as it destroys the nervous system. (Cocoapost, 2020; COCOBOD, 2019)

Nevertheless, despite the regulatory ban on weedicide usage, some cocoa producers were still using these weedicides in all the research sites visited in this study. It is important to state that, since the EU has banned most of the agro chemicals imported into Ghana, in effect, the long-term implication is that the EU and Japanese markets may stop buying cocoa beans from Ghana. Therefore, the regulatory agencies need to overcome TM and implement measures to restrict unapproved pesticide and weedicide usage in Ghana's cocoa sector.

5.1.3 Promote cooperatives/farmer groups.

Cooperatives are a group of commodity producers who play vital roles in organising practices on behalf of certification bodies such as Rainforest Alliance, UTZ Certified, and Fairtrade for awarding certificates to a particular farmer group. Cooperatives also ensure that their members disseminate the certification requirements to various cocoa producers and other stakeholders within the agricultural CVCs. In the cocoa sector, cooperatives work hand in hand with various loosely coupled actors to ensure that certification requirements are met as well as helping farmers to confront concentrated global agriculture challenges (Calkins and Ngo, 2010). Participants in the focus group discussions and interviews made the point that the cocoa sector has witnessed a low level of promotion of cooperatives over the years. However, it appears that few farmer groups are participating in cooperatives in the cocoa growing communities. Therefore, it may be better to emphasise the other benefits of promotion and cocoa producers' participation in cooperatives, which is embedded in the long-term vision of various certification standards in the cocoa sector (Basso et al., 2012; Garnevska et al., 2014). There was also a strong sentiment expressed by leaders of cooperatives about the low promotion of cooperatives by COCOBOD, but rather than focusing on promoting the activities of licensed cocoa buying companies in ensuring the required market

demand for cocoa beans is met, which in turn gives visibility to LBCs than cooperatives (Teague, 2022). One interviewee, a private consultant that conducts external auditing/inspection for cooperatives and LBCs revealed this in an interview:

We can see the regulator does not promote and support the activities of cooperatives under various certification bodies. Even if they want to distribute inputs to farmers, they still form gangs under LBCs, which in the long term, does not foster the growth of the cocoa industry and even enhances their sustainable initiatives, such as the certification programmes they are practising. (INC0129)

In 2002, the International Labour Organization's (ILO) conference issued the promotion of cooperatives' recommendation (No. 193), and a seminal international policy guideline that provides a modern framework for cooperatives in the CVCs (Nippierd, 2002; Levin, 2003; ILO, 2014). Since its introduction, nearly 100 countries have used the recommendation to amend and develop their cooperative policies and legislation (Smith, 2014). This recommendation supports prior studies' finding that "various governments through their regulatory institutions need to promote the cooperative concept which aims to encourage and empower people, especially farmers to mobilize themselves and to participate in economic and social activities" (Gamevska et al., 2014). Nevertheless, the Ghanaian cocoa value chain has witnessed less participation by the regulator in promoting cooperatives despite the ILO's recommendations and their own short- and long-term strategies in reaching their farmer groups across the cocoa growing regions. Despite the recommendation of ILO and the long-term policy launch by the COCOBOD to support of cocoa producers through cooperatives, it obvious from this study that there is low support from the regulatory body in implementing such policies. TM here serves as a blocking mechanism inducing policy makers to focus on LBCs where they can potentially capture value, thus in meeting the sales and market targets of cocoa beans purchase by LBCs rather than promoting cooperatives to level up in the

distribution of agricultural inputs and promote the wellbeing of respective cocoa producers in meeting certification objectives. Some cooperative executives shared their views on this subject.

There is low promotion of cooperatives in this community, and that is why our certification programme is not improving. Instead of COCOBOD to promote the local cooperative under a participating certification label and supply us inputs and other farm supports, they are rather asking the LBCs to form other farmer groups or gangs. (INC0128)

Indeed, cooperatives have very little visibility in the research sites. Though an effective mechanism to deliver inputs and service to the majority of cocoa producers through cooperatives in the rural areas, as the regulator emphasised, this is always not the case. Across the study area, this study could recount just one single active cooperative with few members, that is, less than fifty members compared to the size of farmer 'gangs' in the rural communities. This means COCOBOD was not able to integrate the cooperative policy launch in 2019 into full practice (COCOBOD, 2019). INC0124 a certification coordinator with the Cocoa Abrabopa Cooperative revealed how the lack of support from COCOBOD is affecting their certification practices.

In 2019, COCOBOD launched a policy on the formation of cooperatives without any consultation or inputs from us as a certification-participating cooperative, why is COCOBOD trying to form other cooperatives while they could have just channelled everything through us? If you supply these gangs or farmer groups with farm inputs without giving them proper training, then what is its importance? I think COCOBOD has lost the focus on its vision. (INC0124)

In an interview, a senior official at COCOBOD revealed that certification is voluntary; however, their interest as a regulator is to ensure that the cocoa farmers are not short-changed. He further stated that they have launched a new policy to support farmers in the local areas; thus, the local cooperatives and they are ensuring that adequate quantities of farm inputs are allocated to these farmer groups. They further emphasised that they understand there are

challenges, but they will continue to work with the various LBCs to ensure that the farmer groups are sustained.

Yes, COCOBOD has various farmer cooperatives across the country, even though most of them are not as active as expected; we are working with our District officers to ensure that membership of the local cooperatives is of good standing. (INR0222)

Evidence from this study shows that COCOBOD has not been able to integrate the cocoa farmers' cooperative policy, launched in 2019, which is set to remove intermediary actors from the cocoa value chain and put the ILO recommendations into full practice. They have ignored the cooperatives under participating certification labels which participants confirm are thriving compared to the farmers' gangs under the regulator. In conceptualising this organisational phenomenon among COCOBOD and other chain actors, it is clear how TM serves as a blocking mechanism by inducing the regulator and its subsidiaries to lose sight of the long-term vision (Li et al., 2022), thus engaging cooperatives in practice but focusing rather on short term farmers 'gangs', which are perceived to be unsustainable. Therefore, to overcome TM and improve certification practices, COCOBOD needs to support and strengthen the already existing cooperatives under certification labels, which in the short and long term provide opportunities for cocoa producers and devise strategic approaches to reach more cocoa producers rather than focusing on LBCs and small farmer groups (gangs) in reaching out to these farmers, who are the main stakeholders in the cocoa industry.

5.1.4 Develop attractive and educative training programmes.

An analysis of the activities undertaken by certification bodies showed that there is low uptake of the training programme by loosely coupled actors in the cocoa value chains. Evidence from this study shows that after a community sensitisation exercise and farmer groups/cooperatives have been formed, a train-the-trainers technique is used to teach the

cocoa producers about the necessary certification requirements. According to Ansah et al. (2020), these training programmes are conducted by capacity building organisations hired by the organising farmer cooperative or LBCs for a maximum period of six months. Yet the interviews and focus group discussions revealed that the on-farm and off-farm training offered by cooperatives and LBCs is not always as required. The certification requirements demand regular training of cocoa producers and other chain actors; however, it appears from this study that these cooperatives and LBCs participating in certification do not integrate the training needs, as presented in their long-term vision, into practice. They prefer short and one time training which is not reflected in practice; thus, the behaviour of cooperative executives and other loosely coupled actors produces a short-term advantage without considering the possible disadvantages in the long term. These arguments support the fact that the majority of cocoa producers from the research sites could not identify any training needs on pesticides and other practices in recent times during the focus group discussions and interviews at some of the research sites. Some cocoa producers expressed their views on inadequate training needs in their certification practices.

Yes, our cooperative executives have lost focus, and that is why we are facing a lot of hindrances in our certification programme now. When we joined the certification programme, we were told at least we would have regular training - a minimum of four times a year from our field officers, but that is not the reality. Meanwhile, it is stated in the policy document they gave us. (INF0462)

INF0466 shared a similar view:

I think certification has evolved over the years, and there is the need for us to match up with the current farming practice; even though our cooperative has a long-term development plan, it is not put into practice. They still train us on the traditional farming practices. The management of our cooperative is also behaving like the LBCs; they are thinking about the yield after production and not investing in adequate training for members. (INF0466)

Again, the narrative from cocoa producers shows that there is little training for participating farmers under cooperatives and LBCs, and this has contributed to the low productivity among certification labels, despite the long-term strategy of various labels to level up in practice. One cooperative executive with the Rainforest Alliance expressed his sentiment on how they had lost sight of their vision of enhancing certification practice, as the targets for educative and attractive training programmes for their members have not been met over the past decades:

He put it this way:

Yes, we understand we have not done much for our farmers at the local level; even though training is one of the important development needs for our farmers, the company sometimes substitutes the training programmes for other activities. We know it is not the best practices [but] unfortunately, we don't set the training programmes; they come from the national level. (INF0428)

Accordingly, the perception of time is an essential variable in understanding how people decide between these options. Decisions depend on the temporal constraints; thus, the outcome of a choice can be expected as well as the urgency that needs to be attached to achieve such an outcome (Wittmann and Sircova, 2018). Therefore, to overcome these drawbacks and reduce the impact of TM, Ghana COCOBOD, LBCs, and cooperatives should invest in and focus more on developing attractive and educative training programmes and make them available to cocoa producers across the cocoa growing regions.

5.2 Satisfaction with present certification practices and performance

According to Ye, Marinova and Singh (2007), changes in organisational structures can sometimes lead to an unforeseen decline in performance, and even when performance will improve in the future, it may sometimes decline before it improves (Ahearne et al., 2010). But, even if the performance of an organisation is declining because of the replacement of personnel, the output of the incoming individual should be viewed favourably by actors

within the chain in the long run. Thus, introducing proactive measures for new initiatives when an organisation's performance may decrease is difficult unless organisational managers are focused on short-term results, thus when they prefer to focus more on tried-and-true practices rather than innovative standards, such as certification and sustainability initiatives (Robinson and Dechant, 1997). Here, Opper and Burt (2021) described this organisational behaviour as TM inducing managers to ignore the long-term organisational standard structures and to consider an immediate initiative which makes it difficult to achieve the long-term goals.

5.2.1 Sustainable agricultural best practices for cash premium

One key underlying issue in commodity certification programmes in organising concerns the management of TM among loosely coupled actors. Roughly, TM is related to the long-term perspective and judgment regarding the present decision-making processes of certification bodies and other loosely coupled actors, thus affecting the entire performance of the certification programme. Evidence from this study shows that various loosely coupled actors take numerous present decisions without considering the long-term implications for the certification programme. This is described by Wittmann and Sircova (2018) as “warm” feelings at present, but a “cool” analysis of the future. However, TM plays out by inducing loosely coupled actors, especially certification bodies and their participating cooperatives, produce buyers, and farmers, to ignore the long-term objectives of the various certification labels, thus ensuring sustainable agriculture through compliance with best practices to cash premium as the ‘selling story’. Meanwhile, some key officials of the certification labels who were interviewed could also not foresee the implications of their short-term decisions, which

involved substituting sustainable agricultural best practices for a price premium. One senior certification official revealed in an interview:

Yes, we understand every farmer is trying to see certification as compliance and premium, which is all because we try to persuade them to accept our certification label. The issue is that if you don't tell these farmers the benefits of the certification programme at the beginning, we will not get the required number of farmers to register onto the programme, which will not help to sustain our business. Premiums as incentives has been the selling story over the years, and we can't change it. (INC0122)

Meanwhile, some other officials believed the apparent possibility of reaching the certification objectives increases the desire to reach them faster or even immediately with payment of a price premium as the driven incentive. Therefore, the certification bodies, cooperatives, the Ghana Cocoa Board, and the LBCs keep re-inventing the wheel over the years by using the cash premium to persuade cocoa producers just to capture the value of the certification programme. Here, the focus has been getting the required number of farmers to register onto the certification programme and getting the required tonnage of certified cocoa for their international partner, which will potentially earn them some income and sustain them in business rather than ensuring compliance in practice. One certification coordinator revealed the following:

You cannot implement a successful certification programme in Africa without paying some cash premium to the farmers. Certification means asking our farmers to comply with extra work; the only way they will comply with these standards is by inducing them with the extra cash as a premium, and that is also the immediate means to get our returns on the investment we are making. (INC0124)

From this perspective, it obvious how TM induces loosely coupled actors' certification practices in the cocoa value chain to switch between what they have been taught quickly and flexibly, thus focusing on the present without evaluating any options from the past or imagining the future while considering such options in the present (Zambrano et al., 2011;

Seginer and Lens, 2015). Arguably, decisions are thus always founded on the tripartite structure of temporal experience, which includes a past, present, and future (Wittmann and Paulus, 2009; Wittmann and Paulus, 2016). Yet, loosely coupled actors in the cocoa value chain were content with present practices and the performance of the certification programmes. Although TM induced these chain actors to substitute global standards with a cash premium in their present certification practices, they were unable to think within time streams of the negative implications of their present decisions in the long term, such as poor supervision. The short sightedness among loosely coupled actors did not differ even among officials interviewed at COCOBOD. INR0222, a Research Director at COCOBOD, shared his view on best certification practices substituted for a cash premium among LBCs and certification participating bodies. He stated:

Certification is voluntary, and if price premiums as the basis to get the required certified stock is their strategy, I don't think there is any issue. They have their own auditors; if there are any non-conformities, they should be able to deal with them and not COCOBOD. (INR0222)

Evidence from this study shows that the long-term implications of loosely coupled actors' present decisions on price premiums were 'memories to spring readily to the mind' (Wittmann and Sircova, 2018). Thus, the long-term implications of their present decisions were not considered by the loosely coupled actors and that compels them to decouple standards from practices leading to non-conformities in practices among commodity producers and other chain actors as shown in this study.

5.2.2 Unstructured spraying exercise among cooperatives, LBCs, and COCOBOD

One narrative from participants was the unstructured cocoa spraying exercise between the regulator, cooperatives, and LBCs in the cocoa value chain. The certification code of conduct spells out how spraying exercise should be conducted in the commodity industries. However,

it appears from this study that the regulator (COCOBOD), cooperatives, and LBCs have different seasons and periods for spraying exercises. It is obvious how these loosely coupled actors have different timelines for spraying, an exercise which is to be conducted based on the season and the level of pest infestation on a cocoa farm. Yet, TM induces these loosely coupled actors to consider spraying exercises as a routine practice rather than educating cocoa producers on good agricultural practices. Here, these loosely coupled actors were unable to think within timestreams of the future implications of excess pesticide application on their cocoa farms and the impacts on the cocoa beans. They were all content with the present routine spraying practice based on the number of yields they could potentially get from production, without considering the long-term implications from domestic and international consumers and trading partners. In an interview with officials at the Ghana Cocoa Board revealed that one important programme going on in the cocoa sector is the mass spraying exercise. Chris is the district director of CHED, a division within COCOBOD that assists in the distribution of cocoa seedlings, fertilizer, and mass spraying exercises for cocoa farmers. He commented on this exercise.

We have constituted the mass spraying gangs, which go round the various societies across the cocoa growing regions to do the spraying exercise. We do these a minimum six times per season to avoid pest infestations of the cocoa pods. Fortunately, the various farmer groups through their cooperatives and LBCs are also engaging in the spraying exercise and have helped increase the yield. (INR0221)

For INR0222:

COCOBOD have spraying gangs across entire regions, we ensure that regular spraying is done to avoid pest infestation. This is also a way to support our cocoa farmers; after the spraying, we also support them with fertilizers. We do all this to improve yield and to be able to meet our domestic and international market demands. (INR0222)

Even though certification officials of some cooperatives revealed that the feedback they received from their international partners on the high concentration of chemicals in the cocoa beans has compelled them to move to a traditional way of farming where they are encouraging their farmers to reduce the excess usage of pesticides in spraying their farms. In this regard, it is obvious how some immediate decisions can be problematic to decisions makers in the future. Despite the short-term advantage that the decision can offer, such as high production, TM induces these loosely coupled actors including the regulator (COCOBOD) to ignore the long-term disadvantage in the excess usage of pesticides, which can lead to the rejection of Ghana 's cocoa on the international market, or a reduction in the international market price, which, in turn, will have a negative impact on the Ghanaian economy and the cocoa sector. One certification manager with the Rainforest Alliance revealed how they are educating their farmers on reducing the use of pesticides despite the regulator's promotion of mass spraying exercise. He revealed:

Over the years, we have received numerous feedbacks from our off takers about the chemical content in our cocoa beans, that is why we have signed onto the integrated pest management programme, which emphasised on organic/traditional farming practices rather than pesticide usage. Pesticide application has been the underlying control mechanism over the years, and we are trying to reduce to avoid any future consequences. (INC0121)

According to Deppeler et al. (2014), higher yield in commodity production is a strategy that cannot be pursued forever, if sustainable production is the aim, as described in the respective standards. Here, the core objective of certification programmes, which is to encourage sustainable agricultural production, was not part of the strategy. TM serving as a blocking mechanism induces produce buyers and other key actors to ignore the long-term goal of sustainable production rather than encouraging short term measures such as regular spraying of the cocoa, which is set to potentially enhance yield within the short term. In addition, the

focus group discussions assessed how the certified producers were not able to think within the time stream and consider the long-term implications of regular spraying of their cocoa farms. Even though they might have been content with the current performance, they were unable to even consider the past implications of this excessive spraying exercise in contemporary times by the COCOBOD. One cocoa producer lamented:

Yes, as farmers, we are only interested in the yield; that's why some people are even spraying their farms with banned pesticides. I think we need to speak to some old farmers and ask them how they had sprayed their farms in the past, and at what age do the cocoa trees need more or less spraying. We need to consider all this before adhering to COCOBOD directives on this mass spraying. (INF0469)

Despite how satisfied loosely coupled actors are with output per yield for excess spraying of cocoa farms. It is against certification practice, which means there is a probability that consumers can stop buying both conventional and certified cocoa from Ghana if this practice continues to persist among chain actors. Therefore, there is the need for loosely coupled actors to overcome TM and consider the integrated pest management programme which aims to reduce excessive pesticide usage.

5.2.3 Decoupling in practice: Labels structuring at present

With respect to how TM plays out in commodity certification in organising, this study argues that the disparities in certification practices are based on decoupling, which emanates from the present decisions of loosely coupled actors in CVCs. Decoupling standards from practice sometimes enables commodity producers to maintain their traditional practices in the face of conflicting institutional demands; however, in a situation where certification bodies lack the confidence and ability to monitor whether commodity producers who formally adopt and implement these on-farm and off-farm global standards, do so based on their personal decisions (Haack and Schoeneborn, 2015). In that regard, decoupling will be perceived as

illegitimate, and certification bodies will enforce negative sanctions against commodity producers and other chain actors involved (Meyer and Rowan, 1977). Evidence from this study shows that TM induces loosely coupled actors, such as cocoa producers, to decouple standards from their on-farm and off-farm practices. Here, TM blocks cocoa producers' ability to foresee the long-term implications of ignoring sustainable agricultural best practices for their traditional farming practices. The data further suggest that these actors could not foresee the long-term effects of their social and environmental conduct in the present. Some of the cocoa producers interviewed testified that certification has increased their workload, but with fewer incentives to fulfil the standard requirement, and that compels them to revisit their traditional practices, and this has less supervision and fewer conditions. In a dialogue with one of the cocoa producers INF0475, she said:

I started with the UTZ certified standards, but I have stopped because it was difficult to adopt, and the LBC also does not have any inputs planned for us. Even though the LBC has stop operations in our community, I have acquired the necessary training from the LBC, I go by my traditional farming methods now. (INF0475)

Another cocoa producer, INF0443, with the Fairtrade shared a similar tone:

To be honest, all the LBCs are the same; even though I have registered with them, I don't practice their standards. I own my farm and do what I want to do with it. The worst part of it is that the LBC's certification inspectors do not even come for regular inspections but will still pass me after audits. (INF0443)

Arguably, it is obvious how differences in practice among commodity chain actors may result in the provision of different types of support, which ultimately shape their decisions or their ability to comply with the standards and enhance the social and environmental conduct especially among cocoa producers in the global south (Neilson, 2008; Raynolds, 2009; Giuliani et al., 2017; Sarpong et al., 2022). However, the tendency of commodity producers is to repeat behaviours that give them an immediate advantage, which in the long run are ignored by

certification bodies and other chain actors, such as the Ghana Cocoa Board; the long-term disadvantages are as a result of TM preventing these actors from foreseeing in the present the intended consequences in the future. An interview with a certification officer revealed that they ensure that cocoa producers who have signed onto a particular certification label receive the necessary training and supervision, but they have no control over the farms. He stated:

You know the farmer is a businessperson and wants to earn a good profit on his or her investment; we train them on the best practices to earn such returns, but it is up to them to implement it. Even though we issue warnings to some recalcitrant farmers about nonconformities. We sometimes consider the output of such farmer and ignore certain hard decisions on them. (INL0327)

Nevertheless, in general, drawing insight from the comments above, training the cocoa producers on sustainable agriculture is not a difficult issue. The difficult issue is ensuring that what the cocoa producers have been trained on is put into practice, and they have not decoupled such standards in their routine practices. Thus, determining and supervising what needs to be done to achieve the sustainable agriculture, as a desired goal of certification programmes. Although the narrative from loosely coupled actors shows a level of decoupling in certification practices, these actors were content with their present practices and the performance of the various certification labels since its introduction in the cocoa sector. TM induces cocoa producers to prefer behaviour that produces immediate benefits, such as traditional farm practices without considering the possible disadvantages from the repetition of such behaviour for their farms and the environment. In contrast, the interviews brought forward some views from technical coordinators of various labels on decoupling in practice. INC0126 a technical coordinator with the Cocoa Abrabopa, a Rainforest Alliance certification cooperative revealed that,

We train the farmers on best practices, but we receive low salaries. There is no motivation or incentives to certification. We have asked our leaders to consider

getting us sophisticated tools to trace these farmers on non-conformities but have not had any positive results. We still walk to their farms, and many officers can't walk, so they don't even go to inspect the farms, giving the farmer the freedom to ignore the standards we taught them. (INC0126)

INC0128 shared a similar view on decoupling in practice among cocoa producers participating under the Fairtrade label. He put it this way:

There is no punishment for farmers who ignore the standards requirements; that is why this threat persists. COCOBOD as a regulator is also interested in conventional cocoa, which limits the checks and balances among loosely coupled actors in the cocoa value chain. The farmers are unable to read and understand the long-term implications of not adhering to the global standards. (INC0128)

It is obvious how TM has become a blocking mechanism impeding cocoa producers and other loosely coupled actors to forego the long-term implications of their present considerations in traditional practices rather than the best global standards practices. Hence, lowering yield on certified and conventional cocoa production as indicated in Bloomberg recent report (Ghanaweb.com; Bloomberg.com).

5.2.4 Pulling it all Together: Certification and sustainability compliance.

In recent times, sustainable certification management in the CVC, has produce enormous impact on both produce buyers, COCOBOD, and international chocolatiers long-term financial performance and its short-term stock performance. However, according to Robinson and Dechant (1997), to achieve such diverse impact requires the ability of loosely coupled actors to focus on practices that contributes to achieving the certification objectives. Again, to achieve commodity certification objectives, however, involves a long-term cultural change, human resource management, requiring a significant commitment of time, resources, and leadership attention across the CVC networks. In interviews with officials of COCOBOD revealed that, the regulator supports sustainability agriculture and not certification. Even

though COCOBOD controls the entire cocoa value chain in Ghana, they do not have clearly defined objective for certification practices. They only receive certified cocoa beans from certification participating LBCs for export. One senior official revealed during the interviews:

He puts it this way:

As I said certification I voluntary, Ghana produces more conventional cocoa than certified. Those who are interested in certification are free to join but the focus of COCOBOD is to encourage sustainable agriculture and not certification. That is why we have and still introducing more sustainability initiatives to support the industry. (INR0222)

Drawing insight from the comment made by the senior officer at COCOBOD, shows the level of low acceptance to certification programmes in the cocoa value chain. The regulator could not foresee the long-term consequences of accepting to adopt sustainability initiative and forego certification. As described by Chiaburu et al. (2001), in a situation where organisation management consider present decisions such as high yield from the sustainability initiative without a thought of the future effect, there is nothing in their minds beyond the impetuous decision of considering sustainability over certification. In an interview with a certification coordinator with the Rainforest Alliance revealed that, they could foresee the level of isolation the regulator has put them to operate rather than working together, and that make it difficult for them to undertake some tough decisions in their operations since the regulator does not accept certification standards as the drive to promote sustainable agriculture in the cocoa sector.

COCOBOD does not recognise certification, but they gave us the license to operate in Ghana. I think they are unable to think about the long-term implications, for instance if there is high global market shift for certified cocoa than conventional cocoa, what will be the implication on Ghana. I think they should begin to think about their present considerations and predict the future implications. (INC0124)

Contrariwise, the bottom-line focus of some license buying companies (LBCs) was to implement both sustainability and certification programme. However, evidence from this study shows that the advantage for this multiple task initiatives by LBCs was immediate, thus, to be able to have competitive advantage in the cocoa purchasing space. In an interview with some LBCs participating in both certification and sustainability programmes revealed that, their focus is on sustainability programmes because there are small number of farmers engaged in certification and their off taker buys a small tonnage of their produce and that compels them to engage in sustainability programme which the regulator (COCOBOD) supports. They further revealed that Ghana has a greater market share for conventional cocoa and would not be prudent as an LBC and a profit-oriented entity to engage and invest more into an initiative which produces less returns. INL0327 revealed and put it this way:

Yes, we in business for profit, so we try as much as possible to engage our company in multiple initiatives in the cocoa sector. But you know the contribution of certified cocoa is minimal, so we try to engage more in sustainability initiatives to produce more conventional cocoa beans, which COCOBOD also advocating now, at the end they control the marketing and export space. (INL0327).

Again, the local advantage of LBCs engaging more in sustainability initiatives is immediate, they adopt this initiative to allow them to win out over other competitors in the cocoa purchasing space. Additionally, their involvement in sustainability initiatives allows COCOBOD to increase their marketing space and quality cocoa beans export, and to develop in terms creating more jobs for other stakeholders such agro-chemical sellers, and other farm inputs suppliers. Such permissive behaviour, when repeated over years, produces short term benefits such as an increase yields of conventional cocoa beans to meet global market demands, but produces a long-term disadvantage such the use of banned pesticides, because of the open market system of the agro chemical industry which COCOBOD finds it difficult

to regulate, which in the long-term calls for issue of traceability. One purchasing clerk participating in the Fairtrade certification programme under a cooperative shared some exciting stories during the interview.

In fact, LBCs are contributor to our floundering certification programmes, they try to focus more on sustainability programme because of the immediate benefits they get from COCOBOD but have not considered the long-term implication if the global markets demand for conventional cocoa beans fall, it going to affect the entire industry and the economy. (INC0127)

It has been demonstrated from this study that, the decision of some loosely coupled actors such as COCOBOD is inexorable. Therefore, there is the need to overcome TM inducing these key actors to foresee the long-term implication of COCOBOD promoting a single initiative in diverse industry. Henceforth, loosely coupled actors must work together in promoting both certification and sustainability programmes in order to compete in the global cocoa market, since both initiatives are driving the industry, and a market demand for conventional and certified cocoa beans produce under both initiatives. In that regard, however, requires loosely coupled actors to undertake educational campaigns to modify lifestyle of cocoa producers and other chain actors in their cocoa production processes.

5.3 Inability to escape the past certification practices.

The predominant tendency of loosely coupled actors in the CVCs to focus on either the past, present, or future, has been reliably linked to several achievement-oriented behaviours among these actors (Gjesme,1983). Therefore, there is the need to consider these behaviours in the present, and even consider how they were dealt with in the past to avoid future repetition of such behaviour in practice.

5.3.1 Re-inventing the past wheels in present— Blind to certification requirements and standards.

Evidence from this study shows how TM as a blocking mechanism induces loosely coupled actors to escape past certification practices. Thus, TM impedes these chain actors from changing their cognitive bandwidth to conform to unethical past practices such as the use of banned pesticides, excessive use of pesticides, weedicide use, and child labour and keep re-inventing the wheel in the present. Interestingly, TM induces these loosely coupled actors to focus on practices whereby they could potentially capture value in the certification programme. Arguably, the sole focus of these loosely coupled actors, comprising commodity producers, certification officers, regulators, and PBCs, was value capture, which prevents the actors from engaging in active thought about and analysis of their actions and decisions within the contingencies of global changing demands and requirements. The narrative from some cocoa producers shows how they engage in some non-conforming practices; they ignore the various certification labels' requirements and the global standards. Some cocoa producers lamented about how they have kept reinventing the wheel over the years while ignoring the various certification standards.

Yes, I know the field officers advised us three years ago not to use weedicides on our cocoa farms because of the integrated pest management programme they intend to implement, but as a farmer I cannot weed all my farms three times a year. So, I still use the weedicides to spray my farms even though we have been told not to use them on our farms now, but I still use them. (INF0425)

For: INF0451

Before joining the certification programme, we were told not to implement the old farming practices in our present certification practices. For me, to be honest, I still do because most of the things they have asked us to do are difficult and expensive to implement. For instance, use of motorised pruner than the cutlass - I am over sixty years old and can't use that machine, apart from I can't afford to buy it, so I keep using my cutlass for pruning. (INF0451)

In an interview with a technical field coordinator with Cocoa Abrabopa Cooperative, participating in cocoa certification under the Rainforest Alliance label revealed that they have done many reviews over the years of their certification standards. However, they have not been able to educate their farmers on all the reviewed practices, and that is why their farmers keep implementing some past practices in the present time. He put it this way:

Yes, we understand that some of our farmers keep re-inventing past practices in their present farms, but it is all because we have not been able to educate them on all such current practices. The worse part of it is some are technology driven, and our farmers are not technology inclined; that's why they keep doing the old things even at this stage. We are putting measures in place to ensure that we stop these farmers from implementing these old practices in their present practices. (INC0125)

On the other hand, some certification officials interviewed had a different opinion and argued that even the regulator of the industry (COCOBOD) has instigated many reforms but has not been able to implement them, and that has also accounted for these unacceptable practices among commodity produces and even the certification bodies. They further emphasised that the certification code of conduct and practices calls for annual and regular reviews of on-farm and off-farm practices; nevertheless, certification bodies are unable to think within timestreams and to offer the necessary training to cocoa producers when due, and that has accounted for most current non-conformities in practice among cocoa producers and even some certification officers. INF0450 revealed this during the focus group discussions:

We need to blame the certification bodies and COCOBOD for these practices, even though we are sometimes unaware of the long-term implications of our present practices; that's why they need to guide and supervise our routine practices, so that we don't go wrong. If we fail as farmers, COCOBOD and the certification bodies also fail. (INF0450)

The narrative from the cocoa producers shows that poor supervision by the regulator and certification bodies is a contributing factor to the perceived floundering of the various

certification programmes in the cocoa value chains. However, TM also serves as a blocking mechanism preventing these actors, such as officials at COCOBOD, certification officers, and cocoa producers, from thinking within timestreams and they keep re-inventing past practices in their present certification practices with a focus on short- and long-term value capture that ignores the global standard requirements.

5.3.2 Knowledge sharing—Inability to share past certification practices as reference

In conceptualising how TM may play out in the implementation of certification programmes in CVCs, this study argues that the overwhelming pressures on loosely coupled actors to meet present needs captures the attention of these loosely coupled actors, thereby decreasing their cognitive bandwidth and changing how they organise and make decisions related to creating and capturing value from the various certification programmes within the contingencies of the socioeconomic environment in which they are operate. Additionally, the focus is on certification bodies' short-termism, which this study defines as decisions and outcomes that pursue a course of action to capture the present value from the certification programme that is best for the short term but suboptimal for long-term consideration (Lavery, 1996; Opper and Burt, 2021). The narrative from loosely coupled actors in the CVCs has demonstrated how TM induces these actors, such as certification officers, to forego and even learn from other chain actors in the global north practices. Thus, they probably learn from their experience in certification practices, which could potentially as a reference point for loosely coupled actors in their present certification practices in the Ghanaian cocoa sector. Arguably, with reference to global lead firms' past practices, it would be better to loosely coupled actors in their present on-farm and off-farm practices. In an interview with a technical officer with the COCOBOD,

revealed that some certification bodies through their participating LBCs and cooperatives are refusing to learn from other commodity sectors in the global north.

I think the leaders in charge of certification are trying to run away from the labels' requirements; that is why they have not been able to think within timestreams to even benchmark or consider learning from other commodities or even the cocoa sector in other countries. I think if you are doing something which is being implemented globally, you can learn from other experiences and draw on their opportunities and weaknesses, which will serve as a guide in current practices and even in the future. (INR0227)

According to Lu et al. (2022), a focus on the past can enhance knowledge creation and learning behaviour through the analysis of the previous experiences and actions of other chain actors in related commodities, or within and across the CVCs (Shipp et al., 2009). Meanwhile, reference from past practices can create knowledge based on those experiences, which can further motivate loosely coupled actors to plan their succession and pass on their knowledge to future actors. In addition, the focus on the past normally involves reflection on the past practices for certification and the repeated application of past experiences in decision making among loosely coupled actors (Clark and Collins, 1993). Nonetheless, TM results in these loosely coupled actors' lack of foresight regarding management of or difficulties in foreseeing the importance of reflecting on past experiences, which could serve as a reference point in present and future certification practices in the Ghanaian cocoa value chains. In the search for an explanation for the inability to share past facilitating and impeding certification practices as a reference and a guide to present and future certification practices, some certification officers shared their views on this subject during the interviews.

Certification is a global practice, and if the managers of the programme in Ghana are unable to share any past experiences from other parts of the world, then there is a problem. Experience from the certification programme will serve as a guide for the present and even as a future strategy, so I think managers of the programme should rethink and consider past experiences with regard to the

current practices, which will go a long way to affecting the future of the certification programme. (INL0327)

INL0325, a sustainability coordinator with a cocoa merchant, a local cocoa LBC, shared similar view:

In this twenty first century, no organisation works in isolation, so if we are struggling to implement certification, and even if the regulator does not support it, well I think there is the need for managers of the programme to look at what other people have done from other parts of the world. Then we study it and do the same to save our certification programme. Anyway, the cost involved is also high. I think that is why they have declined to consider past practices as case studies in our present practices. (INL0325)

A common assumption is that loosely coupled actors vary in their cognitive abilities to plan and strategize in their certification routine practices. Thus, the temporal focus reflects the idea that loosely coupled actors in the cocoa value chains can have multiple temporal foci, allocating attention to the past, present, and future to varying degrees in a temporal focus profile (Zimbardo & Boyd, 1999). The ability of these loosely coupled actors to shift their temporal attention from not just the present but also the past describes their long-term strategy to meet certain future goals of the certification programmes. As argued by Sobol-Kwapinska and Jankowski (2016) and Zimbardo and Boyd (1999), past-focused individuals who positively evaluate past events are more likely to achieve their goals and to plan for the present and the future (Lu et al., 2022). Yet TM has induced these loosely coupled actors, especially certification bodies and their participating cooperatives and LBCs, to have a degree of control over the allocation of attention to re-consider past practices from global lead firms and other certification-participating countries in the global north, which could have potentially served as a reference point in present practices.

5.3.3 Bringing the past to bear on the present certification practices.

This study's findings suggest that the inability of loosely coupled actors to consider past activities, thus implementing strategies from other actors in their present practices, is due to the low level of education among these chain actors. Education on past certification practices springs readily to the minds of the managers of certification programmes. However, the approach of capturing cash premiums and high yields has affected the routine practices of various loosely coupled actors in the cocoa sector and resulted in them not taking up continuous education in practice. The focus group discussion with cocoa producers brought to light some factors impeding certification due to the low level of education in institutionalising past certification practices in the present. The cocoa producers revealed that they are affected by environmental issues, and they stated that the erratic rainfall patterns they are presently experiencing, as well as the increased prevalence of pests and diseases, are additional restraints. Unpredictable rainfall has the potential to be a crucial factor owing to farmers' insufficient storage facilities. Humidity can have a significant impact on bean quality, and farmers might suffer significant losses if these environmental conditions are not controlled. Drawing insights from these narratives, it is obvious how TM prevents certification managers from educating farmers on the perceived past rainfall and its impact on their farms and the environment. Certification bodies and their participating cooperatives and LBCs could not read within timestreams the past rainfall patterns. This could have given cocoa producers the potential outcome if there is any heavy rainfall in their present, which meant they could have put in place the necessary measures to overcome any disaster to their farms. The low education among chain actors is seen as a contributing factor to this environmental menace. Some cocoa producers shared their views on this issue:

The heavy rainfall this year has caused havoc to our cocoa farms and led to low production during the main cocoa season. To be honest, I signed on to this certification label because their leaders have the technical expertise to educate us on the weather patterns and their impact on our cocoa farms. But that has not been the case; there is low education about that, and every year we encounter same problem. (INF0467)

For INF0441:

I think the LBC has lost focus of their certification operations; even though we have acquired some field training, I think they should be able to liaise with the meteorological agency to educate us more. I think all that is part of encouraging sustainable agriculture, which will go a long way to improve our livelihood and not the havoc the rains have caused this year. At least they could tell us to spray our farms at a certain period before the rains start so we don't lose so many unripe pods due to heavy rains. (INF0441)

Even though loosely coupled actors in the cocoa value chain are well-aware about the benefits of certifications and sustainable production, yet the level of education to sustainable production is low. It obvious how TM induce managers of the various certification programmes to forego past strategies in their present practices, especially cocoa producers are contributing to massive havoc to their farm. Therefore, there is the need to overcome TM and educate cocoa producers on how past seasonal emergencies such as massive rainfalls, which may cause swollen shoot disease and flooding of farms were delt with from other communities in the global north.

5.3.4 Tried and true recipes from past certification practices

Over the past years, subjective temporal scholars have hinted that, the functionality of a specific time perspective is contingent on its suitability to specific environments (Nadkarni and Chen, 20140). This is because the past, present, and future focuses serve as filters in how, for instance, loosely coupled actors allocate attention and evaluate events based on their temporal significance; this focus may be associated with these chain actors' ability to recognise and address environmental and social economic demands in the CVCs (Nguyen Huy, 2001;

Nadkarni and Chen, 2014). According to Shipp et al. (2009), focusing on the past can enhance individual learning abilities when past practices are analysed, and the relevant lesson are learned. Arguably, the interpretation and comprehension of the past can easily be applied to comprehend the present in stable contexts when current conditions are similar to those of the past (Bluedorn, 2002).

Importantly, loosely coupled actors' strong focus on the past may provide a deeper understanding of the organising context for certification, which in turn, can facilitate greater opportunities for these chain actors in their present and future certification practices. Moreover, greater reliance on tried-and-true recipes from certification programmes can encourage greater reliability and minimise substantial delays in present and future on-farm and off-farm certification practices (Sarpong et al., 2017). Thus, loosely coupled actors' focus on the past may facilitate the smooth and timely conversion of the identified relevant ideas into present and future certification practices (Schwahn and Spady, 1998). However, evidence from this study shows that TM prevents these loosely coupled actors from foreseeing the essence of tried-and-true recipes for engagement from past chain actors which could have potentially given loosely coupled actors some new ideas for implementation in their present certification practices. One sustainability coordinator with Cargill shared in an interview why they ignored the past in their present certification practice:

We believe the ability of certification bodies and other stakeholders in the CVCs to engage in past certification practices from other countries, such as Malaysia, Germany, and Japan, could have potentially given them some fresh ideas, which may have a greater impact on and provide a strategy for the present and future practices, but that is not the case. The Certification bodies and LBCs are interested only in the present practices, that is, getting the number of yields, tonnage, and profit from production. (INL0329)

Insights from Cody et al.'s (2002) study on knowledge management among international business practitioners emphasised that a blend of knowledge improves organisational and business performance over time. In that regard, acquiring experience and knowledge from past certification managers and engaging with them to share their experience and knowledge from the past would have given certification bodies and other chain actors a fair idea about how challenges to and prospects of the certification programmes were dealt with in the past. Thus, as with the present and future certification practices mentioned earlier, a focus on the past may facilitate the smooth and timely conversion of the identified ideas into a new venture, which may potentially serve as a short- and long-term strategy for business entities (Smith et al., 2005). Yet TM induces Certification bodies to consider only the current certification officers and to ignore the previous managers and other countries participating in certification when it comes to present certification processes. One certification field officer revealed how this affects their practices:

One challenge to our certification implementation process is the absence of expert knowledge; it would be better if the Certification bodies invited foreign practitioners into our operations in the form of workshops and practical training. But that is not the case. To be honest, new recruits still receive the same training I received from my supervisors after recruitment three years ago. I think it is time for the Certification bodies and their participating cooperatives and LBCs to consider more reviews and expert hands from our international partners and combine experience certification personnel in our implementation processes. (INC0126)

Previous certification practices serve a preparatory function to establish the causes of events and to learn from mistakes, with memory contributing to a distinctive capability to illuminate the causal dynamics of the past and how it may influence present practices (Sarpong et al., 2019). Arguably, focusing on the past, where the outcome is already known, to predict the future means memories spring readily to the minds of the managers of the certification

programme, yet the implications of articulating the past in the present were limited in practice (Cunha, 2004; Sarpong et al., 2019). In contrast, TM induces Certification bodies and other loosely coupled actors to ignore the past, which consequently becomes irrelevant to the certification implementation process in the present and the future. Hence, it is obvious that CBs and other loosely coupled actors with a strong focus on the past may get trapped in an existing mind-set and thus fail to detect any new facilitating practices and market opportunities and develop them in a timely manner.

5.4 Inability to invest into future certification practices.

An organisations or individual's focus on the future can encourage goal setting, motivation, and the pursuit of goal (Fried and Slowik, 2004; Keough et al., 1999). Meanwhile, future-focused certification managers envisage the future and plan ahead to make the most of resources to meet short- and long-term needs. However, a strong focus on the future is related to thinking primarily about the future and anticipating future events (Nadkarni and Chen, 2014), which can raise the expectations of cooperatives and LBCs in terms of value capture in the certification programme.

5.4.1 "Cool" feelings at present certification settings and "warm" analysis of the future practices

According to Barham and Weber (2012) and Ansah et al. (2020), commodity certification programmes often employ market forces to change production and trading practices, which affect consumer and producer welfare as well as the environment in which they operate. However, in recent times, for instance, in Ghana, artisanal and small-scale mining continues to experience a remarkable expansion in most cocoa growing areas (Ofosu and Sarpong, 2022). These exploitative practices persist to supplement a subsistence livelihood due to the high

level of poverty among individuals in rural communities (Ofosu and Sarpong, 2022; Fritz et al., 2018).

Some evidence from this study suggests that cocoa farmlands has been affected by illegal digging and the use of mercury to extract gold and other precious minerals in the cocoa growing regions, which has led to a decline in cocoa production and resulted in some cocoa producers leaving cocoa farming to engage in other professions. Beyond artisanal miners taking over cocoa farmlands, a recent report by the Ghana Cocoa Board shows that the activities of these illegal miners, which are perceived to be creating employment for over 1.2 million people in the rural communities, have also led to a problem in cocoa farming by the early dropping of pods and the wilting and yellowing of the cocoa leaves, and have also led to low yield in certified and conventional cocoa production (Bryant and Mitchell, 2021). Emphasising narratives as the site for certification practices in the CVC, this study argues that the inability of loosely coupled actors to foresee the future implications of their present actions is due to the TM syndrome, which leads to a stronger focus on the present and means farmers 'push' the future farther away (Wittmann and Paulus, 2009; Wittmann and Sircova, 2018). This can be seen where farm owners sell their farmland to illegal miners at a high price without considering the impact of their immediate actions for cocoa production in the future. The following revelations emerged from interviews with some certification managers on how the activities of artisanal miners impede their certification practices:

In Ghana, there is no law against cocoa farmers selling their farmlands to artisanal miners. That is why these farmers are selling their farmlands. Activities of these miners are impeding our operations, and we are calling on the Ghana Cocoa Board and the Minerals Commission of Ghana to intervene. If not, we don't know what the future of Ghana's cocoa certification programme will be. (INL0326)

Another had this to say:

To be honest, we need to blame the regulators, that is, the Ghana Cocoa Board and the Ministry of Lands and Natural Resources, for all these environmental menaces. But we are very concerned about our investment at this current stage, to ensure we get the required tonnage of certified cocoa for our international partners. (INC0122)

Interviews with some of the certified cocoa producers showed that there is a huge problem of artisanal mining taking over cocoa farmland in rural communities. Confirming the 'mining-cocoa farming' complementarities in rural communities (see, for example, Okoh and Hilson, 2011; Persaud et al., 2017; Ofose et al., 2020;), one of the cocoa producers stated:

I don't own the cocoa farm; I am '*abunu*' (farm-sharer). Last month, my landowner came to tell me that we should divide the farm because he is selling his part to the artisanal miners; he has got a good offer from them compared to the returns he is getting on the cocoa farm. The worst part is if we finish sharing, these '*galemsey*' (illegal miners) will force me to sell my part to them, and if I don't, their activities will cause damage to my farm, which can't survive it over time, so I will sell it. (INF0465)

Emphasising how the cocoa sector is being derailed by artisanal miners and the inability of the regulator of the sector, chiefs of the communities, and landowners to foresee the long-term implications for the environment of their present decisions to sell farmland to artisanal miners for their immediate gains, one cocoa farmer commented on why they still prefer to sell their cocoa farms to these artisanal miners. One cocoa producer expressed the positive and negative effects in the following words:

For me, I prefer to sell my farmland to '*galemsey*' people than cocoa production because cocoa takes a long time to cultivate; the minimum harvest is from five years. Even though we are into farming, we are still poor, so I prefer to sell my farmland to these *galemsey* people and take bulk cash to build my family house and invest in my goat- and sheep-rearing business rather than being involved in cocoa production for years for which I cannot boast of any savings or property. I have taken this decision because of past records of farmers who have been in cocoa production for over thirty years but are still poor. (INF0436)

Piecing together mutually supportive evidence from loosely coupled actors on certification practices in the CVC, it obvious how present feelings may be so powerful that any

consideration of future practices is sometimes ignored (Wittmann and Sircova, 2018). In a competitive industry characterised by multiple actors, these actors are required to help in defining the desirable future from which they can work back to identify practices that will connect the future to the present (Sarpong et al., 2019). Nevertheless, insights from the interviews and focus group discussions with these loosely coupled actors in the cocoa value chain show how future certification practices are discussed less in the present language of certification officers and cocoa producers, which is consistent with those actors having a myopic focus in the present.

5.4.2 Trapped in myopic present views – value capture over sustainability.

Concurrently focusing on the past, present, and future, narratives facilitate cognitive time travel in ways that enable loosely coupled actors to plan for themselves backwards and forward in their certification practices (Suddendorf, 2007; Sarpong et al., 2019). From this insight, this study supports Cunha's (2004) arguments that the narrative from the past, present, and future could potentially contribute some level of experience to loosely coupled actors which will allow them to probe into and create their future. In contrast, evidence from this study shows that the syndrome of TM impedes loosely coupled actors from considering previous practices and foreseeing plans of the present, while shaping specific future certification structures and practices were pushed further away (Suddendorf and Corballis, 2007; Wittmann and Sircova, 2018; Sarpong et al., 2019). Thus, loosely coupled actors were content with a stronger focus on the present certification practices and were willing to 'push' the future farther away. Further to that, long-term issues, such as climate change, environmental conservation, child labour, and other social practices that confront cocoa producers and their communities, figured less in the conversations of the regulator and

certification bodies; instead, they were focusing more narrowly on what they could potentially capture from certification programmes in the present without considering the future implications of their present actions. Some certification officials alluded to this fact during the interviews:

In fact, climate change has become a major challenge to our operations here, but to be honest, I don't know the plans put in place by our regulators to curtail this, which is causing some of our certification requirements to fail. I think we need to focus on this at this stage than just the profits. (INC0124)

Interviews with a technical field coordinator of the Cocoa Abrabopa farmers' cooperative show that the farmer group and its certification bodies, and thus the Rainforest Alliance, have not done much to anticipate the future implications of such an environmental challenge. He expressed it thus:

Most of the old cocoa farms are dying because of climate change, and even the cocoa seasons are also changing; excess rainfall at pre-season and no rainfall when needed most. In some areas, artisanal miners are taking over cocoa farmlands, while others are farming in forest areas. Well, if our leaders don't take charge of this present situation, then I don't know what the future of our cocoa industry and certification is going to be... (INC0126)

However, given the ongoing debate about the influence of climate change on Ghana's cocoa yield, the future appears dismal considering the consequences of climate change on the adoption of environmentally friendly production systems via the rehabilitation and refurbishment of old cocoa farms (Oyekale, 2021). Yet, the regulator (COCOBOD) and other loosely coupled actors ignore both the past, which normally includes the context in which they operated, and the future, that is, the socio-economic and environmental implications of their uncoordinated present practices that are leading to climate action on their future value capture.

5.4.3 Short-sightedness to future prospect and limits in present practices

Organisational and individual practices in CVCs unfold continuously, with expectation as the characteristic of distention, which includes the ability to bring about future events, or what is referred to as prospects of and limitations to the present practice (Sarpong and Maclean, 2016; Sarpong et al., 2019). Arguably, the ability to foresee the future prospects and limitations lies in the immediate decisions undertaken by loosely coupled actors in their certification practices in the CVCs. However, evidence from this study shows that these loosely coupled actors were short sighted regarding the potential future possibilities of and challenges to the certification programme in the present. They could not foresee or predict the future of the certification but were content only with their present practices and would keep re-inventing the wheel just to capture the present value from the certification programme rather than inventing into the future to see the potential prospects and limitations that the programme is likely to face. It is obvious how certification managers and the regulator were short sighted regarding the future prospects for and some underlying challenges to the certification programme during the interviews. One certification manager remarked:

Anyway, it is difficult for me to comment on the future of our certification label; I know we are putting in much effort to sustain the programme at present, but we should also know that the future will only be known based on the outputs we are getting from the programme now. Our focus now is to ensure more farmers are signed onto the programme and they are conforming to the standards, so we can derive our profit as an association. But I can't comment further on the future of the programme. (INL0326)

Another certification technical field coordinator with the Asetenapa Farmers' Cooperative commented:

We can't determine what the future will be because we still have a lot of challenges in our certification practices; if we are able to resolve and not just concentrate on profit and premium, then I can say the future will be good despite the challenges that might come our way. (INC0128)

Some certification officials could not foresee the future prospects for and the limitations to certification programmes in their present practices, and the same stories emerged during interviews with some officials at COCOBOD. One senior official revealed:

We keep saying certification is voluntary, even though we are the regulator of the industry, and we don't manage their activities. We are championing sustainability, and that is our focus to ensure that cocoa in Ghana is produced away from any unethical practices, but for the future prospects for and limitations of certification we have no idea; I think the certification bodies are the right people to know. (INR0223)

However, TM served as a blocking mechanism inducing these loosely coupled actors to think within timestreams. Hence, they could not foresee the long-term prospects for and limitations to certification in their present practices, which would enable them to potentially plan for and invest in them. Instead, they see certification as the payment of a price premium and the level of value which they could potentially capture in their present practices.

5.4.4 Configuration present of present practices over refiguration of the future

According to Sarpong et al. (2019), the ability of individuals or organisations to foresee the temporal connections of the past, present, and the future is their ability to occupy the intellectual space which brings these memories, expectations, and attention in practice, that is, the ability to bring into practice the current events of the present, which brings together past and present collaborations and experiences to improve the future. In that vein, this argument from Sarpong et al. (2019) supports Slawinski and Bansal's (2015) study, which presents a multiple case study of collaborations that facilitates the development of future-oriented strategies in the present. The study further emphasised that in the absence of such outreach strategies, organisations and individuals were more likely to focus on short-term

efficiency goals and to develop a myopic focus on the present with neglect of the future (Opper and Burt, 2021). However, evidence from this study shows that loosely coupled actors were trapped in current configuration practices from which they could potentially capture value from the certification programme over the refiguration of such practices in their long-term strategies. Thus, certification bodies and cocoa producers were unable to invent the best practices that would provide immediate benefit in the present that could be translated into their future practices. Here, these loosely coupled actors were interested only in short term benefits without any refiguration of the future contribution of such best practices to future organising practices. The following excerpt from a certification manager with an Asetenapa Cooperative, a Rainforest Alliance certification farmer group, is illustrative of this:

To be honest, all interventions introduced in the programme are for short-term gains. I joined the organisation in 2012, and we stopped all the good interventions we had introduced, including the farmer field school. Our problem is the sustainability and maintenance culture. We pay too much attention to the immediate needs but are not able to put together all the experience in the present to improve the future. (INL0321)

In an interview with a previous IMS officer with Federated Commodities, an LBC, revealed that they could not sustain their water matter sustainability and certification programme because the management of the programme were trapped in the present and could not foresee the importance of bringing together the past experiences from other societies and companies to improve the future, and that had led to the collapse of the certification programme. He lamented:

Our problem is that we are able to bring together past experiences, but we are unable to re-invent such experiences into our future practices; all initiatives to improve our certification aim to ensure short-term benefits. The worst part was some of our staff left the company and with them went all the experience; unfortunately, the new technical officers were inexperienced, and that led to the halt of the certification programme in our district. Even though we had our own internal challenges, there was no spirit of continuity in future. (INL0323)

The narrative from these loosely coupled actors posits that the cultivation of distinctive ability, particularly in contemporary certification practices, can help strengthen our reflective capacity to discern future outcomes in current certification practices (Barben et al., 2008; Sarpong and Maclean, 2016; Sarpong and Hartman, 2017)

5.5 Chapter summary and conclusion

This chapter highlights how TM accounts for the floundering of certification programmes in CVCs. The study empirically shows how the everyday situated practices of loosely coupled actors may constitutively combine to contribute to the floundering of certification programmes in CVCs. In view of the research question driving the empirical enquiry on how TM accounts for the floundering of certification programmes in the CVC, four major themes and sub themes were discussed to provide a fascinating insight into these floundering accounts in Ghana's cocoa value chains. The first theme drew on the articulation and assimilation of the certification vision in practice. It highlights some key factors that loosely coupled actors have articulated into their certification vision, but they have not been able to integrate them into practice due to the TM syndrome inducing these actors to ignore the long-term implications of their actions. The second theme emphasised how TM induces loosely coupled actors in the CVC to be satisfied with their present certification practices and performance. The study argues that the overwhelming pressures on actors regarding meeting present needs dominate the attention of actors, thereby decreasing their cognitive bandwidth and changing how they organise and make decisions related to creating and capturing value from the certification programmes within the contingencies of the socio-economic environment in which they operate. The third theme looked at how these actors are unable to escape past certification practices and keep re-inventing the wheel in the present at the blind

side of global standards. The narrative from some loosely coupled actors shows the inability of COCOBOD and certification bodies to control the activities of cocoa producers and the agro-chemical industry which contributes to these unethical practices among these loosely coupled actors leading to the floundering of certification programmes in the Ghanaian cocoa industry. This study argues that this is as a result of TM inducing these loosely coupled actors to focus on the present value capture, that is, the value they could potentially capture from certification programmes without considering the long-term implications of their present actions. For instance, some cocoa producers were still using banned pesticides on their farms, the open market system of the agro chemical industry has paved the way for these sub-standard practices in the cocoa sector. In the fourth section of this chapter, this study shed light on how TM has become a blocking mechanism preventing loosely coupled actors from even envisaging the future of the certification programme. Some cocoa farmers were trapped in their present practices and keep implementing practices which are against global certification requirements. Meanwhile, other actors were also short-sighted with regard to seeing the future prospect and limits to their present certification practices.

In conclusion, the purpose of this chapter was to explore how TM accounts for the floundering of certification programmes in the CVC. The study suggests that despite the EU having banned most agro chemicals, these chemicals still make their way through to Ghana. This study argues that the inability of the regulator and other chain actors to foresee the future implications of their present situated practices is a result of TM inducing these actors. They were blind to the future implications of the use of banned pesticides on cocoa beans and the environment in which they operate. In that regard, there is the need for the Ghana Cocoa Board and certification bodies to overcome TM and implement measures to restrict

unapproved pesticide and weedicide usage in Ghana's cocoa sector. Further, this study's finding shows that TM induces various loosely coupled actors to have different competing interests and were therefore content with their present certification practices and performance, especially the regulator, who was keen about the present output (yield) and performance (meet global market demand) of the cocoa industry. Others were also content with the substitution of global certification standards with a price premium; this meant they were unable to think within timestreams to foresee the future implications of their embedded situated present practices. In addition, the interviews and focus group discussions show that the regulator was not in full support of certification programme but rather preferred sustainability initiatives, and that also contributes to the floundering of certification programmes being investigated. In that vein, there is the need for the regulator to work together with certification bodies in promoting both certification and sustainability initiatives to meet the global market demands for Ghana's cocoa. This study is not without limitations, which in turn, opens up opportunities for further research. First, the study has revealed how the competing interests of loosely coupled actors combine to contribute to the floundering of certification programmes and has highlighted the inability of the regulator to regulate the agro chemical industry that is causing damage to cocoa beans and lowering the global market demand for Ghana's cocoa. Therefore, this study indicates how future studies can investigate how these loosely coupled actors can overcome TM and put in measures to curtail these unethical practices in the cocoa sector. Second, this study contributes to the TM literature and highlights potential opportunities for further theoretical and empirical inquiry into organising practices in commodity certification. Future studies could also go further to investigate how TM plays out in the performance of the organising practices of other related commodities,

especially in the global south. In summary, this study has emphasised how alternating between the past, present, and the future practices might account for the floundering of certification programmes and serve as a foundation for further research on commodity certification programmes in organising. The next chapter presents the practices that facilitate or impede certification programmes in the CVC.

CHAPTER 6

EXPLORING PRACTICES THAT FACILITATE (OR IMPEDE) COMMODITY CERTIFICATION PROGRAMMES IN ORGANISING

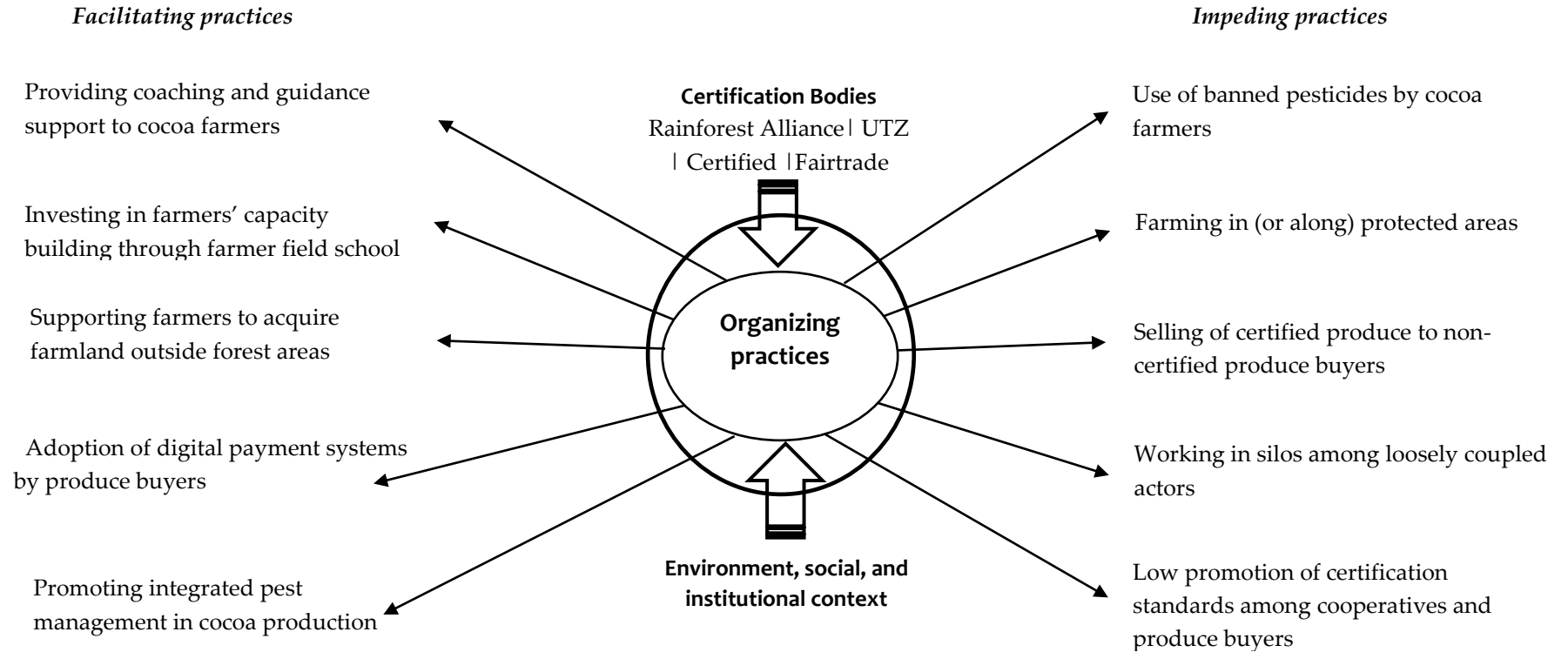
This chapter explores the organising practices that facilitate (or impede) commodity certification programmes in organising, and in turn, the CVCs. It aims to answer the third research question underpinning the empirical enquiry: *What are the practices that facilitate (or impede) certification programmes in CVCs?* It is structured as follows. First, it unpacks the practices of loosely coupled actors that facilitate commodity certification programmes in organising under two broad themes: fostering the commodity industry transition and optimising certification practices in CVCs. Second, it focuses and elaborates on the factors impeding certification labels in CVCs under two salient themes: commodity producers' and produce buyers' complexities and regulatory bodies and labels' bureaucracies. Finally, a summary of the chapter is presented.

6.0 Certification practices: untangling the complex loosely coupled actors organizing practices.

Enforcement of certification requirements in CVCs has proven to be far less effective in practice than the intentions of those trying to implement those standards (Waldman and Kerr, 2014). The ineffectiveness in implementing these certification standards is dependent on several organising practices of the loosely coupled actors, which may operate in combination or serially to facilitate (or impede) certification programmes in CVCs. Here, emphasis is placed on how the environmental, social, and institutional factors may interact with the

certification requirements, rubrics, and standards to precipitate a range of organising practices that may operate in combination or serially to enable or impede the certification programme. Figure 6.0 shows how the 'moderating effects' of certification bodies, and the environmental and institutional contexts within which the certification is realised may lead to mutually constitutive practices which are delineated along five lines.

Figure 6.0 Unpacking practices facilitating (or impeding) certification programmes in organising.



‘On wheels’ to a better certification programme: Organising practices facilitating the certification programmes in CVCs.

6.1.1 Providing coaching and guidance support to cocoa farmers.

Coaching, as the term is used in organising the research findings, refers to the process where label officials provide training and guidance support for respective cocoa farmers. As practical-oriented individuals, farmers have unique learning abilities which need to be enhanced with tailor-made coaching to enhance these practical skills especially in the cocoa sector. The three cocoa-certifying bodies operating in the research sites through their cooperatives and LBCs espouse an expectation that coaching cocoa farmers on certification standards have enhance the various labels in these communities. As one certification official operating under an LBC put it:

For us at Cargill, we engage our farmer in one-on-one interactions. We go to their farms to inspect and guide them to ensure they are adhering to the certification requirements. I think that is the best way to ensure compliance to the standard requirements and as a way of improving our certification practices. (INL0329)

At the same time, some cocoa producers shared their views about how the coaching and guidance practices by the technical field coordinators from their cooperative have helped improve their farms and increase their yield. One cocoa farmer pointed out:

One time, I was spraying my cocoa farm and got a call from a technical officer. In fact, he came and guided me through the whole spraying exercise, all to ensure that I am complying with the certification requirements. I think it is a good way to improve the certification programme. (INF0449)

Other officials during the interviews reported that the aim of coaching of cocoa producers on their farm practices is to help improve sustainability and certification initiatives in the Ghanaian cocoa value chain. Members of COCOBOD emphasised that they also provide farm support and guidance in the form of pruning, shade tree planting, and mass spraying exercises for farmers across the cocoa growing regions. They added that they assist farmers in

these activities to ensure that they are adhering to various agricultural best practices, such as certification.

6.1.2 Investing in farmers' capacity building - farmer field school (FFS)

The certification standards require cocoa producers to undergo various developmental on-farm and off-farm training courses to implement various agricultural best practices (Oya et al., 2017). In this study, participants such as LBCs and cooperatives indicated that they provide capacity building training through FFSs, an approach which provides participatory training for cocoa producers through observation and experimentation within their own communities (David and Asamoah, 2011; Witteveen et al., 2017). The data show that these FFSs are to provide education, training, and other capacity development activities for cocoa producers who have registered onto a particular certification label in the cocoa value chain. This goes a long way to improve certification practices in the cocoa sector. One sustainability manager expressed his view on how FFSs are improving certification practices in the cocoa value chain:

He put it this way:

Yes, the introduction of the farmer field school has provided additional practical training to our cocoa farmers. Now cocoa farmers have adapted to land use planning and management practices that incorporate natural resource management and biodiversity conservation objectives. This is believed to help prevent cocoa producers from farming near protected areas. (INL0329)

Evidence from the data further shows that through the FFSs, some cocoa producers have been educated on environmental conservation, pesticide application, pruning, and many other farm activities. Most cocoa producers can now take charge of these farm activities without the direct supervision of a certified technical field officer. Some farmers expressed their sentiments on how they have benefited from attending an FFS:

I have learnt a lot from the adult education. It is practical and more pictorial; the instructors had time to demonstrate everything in the classroom and on the farm. It is the best way of improving our certification practice; through this farmer field school and the previous training I received, my cocoa production increased last year and this season. (INF0448)

In evaluating the impact of FFSs in the cocoa growing communities in this study, certified cocoa producers stated that they had experienced a significant positive change in the soil fertility of their farms compared to six years ago. One significant element of the FFS to certification organisations is that cocoa producers can easily share knowledge and express concerns in their native language; the training manuals and materials are translated into the local language for farmers. According to Waddington et al. (2014), the FFS initiative also gives opportunities for farmers to experiment with and observe new practices, particularly if farmers are to be empowered with lifelong skills in capacity development.

6.1.3 Adopting digital payment system in the cocoa value chain.

Over the years, cash has traditionally been the most prevalent method of payment for cocoa bean purchases by LBCs in Ghana (worldcocoafoundation.org; Hinson and Tettey, 2022). However, undoubtedly, cash transactions along the cocoa supply chain carry a high level of risk to actors, such as farmers, purchasing clerks, and their participating LBCs. Besides, both LBCs and cocoa farmers have experienced the fear of being robbed at gunpoint of millions of cedis, and in the worst cases, people have lost their lives. Moving to digital payments decreases the risks associated with cash payments, such as fraud and theft. Cocoa purchasers can obtain digital records of the payments made to farmers via digital payment services, which helps trace the route of cocoa sales from the individual farmer to the produce buyers. Conceptually, financial inclusion through digital payment systems presents cocoa producers' households with the opportunity to access credit, operate savings accounts, receive remittances, and

patronise insurance products, which could enhance their agricultural activities and improve certification (Peprah et al., 2020). Arguably, achieving financial inclusion will help cocoa producers overcome the basic socio-economic challenges and help improve certification practices in the cocoa value chain. In the interviews, some LBCs indicated that, recently, the World Cocoa Foundation in collaboration with the 'Better Than Cash Alliance' has started a process to support the growth of digital payments in the cocoa value chain (worldcocoafoundation.org; betterthancash.org) in an initiative that will help LBCs move from cash transactions by exploring available options in fulfilment of the objective of increasing the provision of financial services in support of the cocoa value chain. One purchasing clerk (PC) revealed how a digital payment system will cushion their operations and help improve certification.

In fact, paying farmers digitally is more secure and faster. It will also remove the risk I go through carrying huge sums of money in sacks to pay our farmers. It is also an avenue for certified cocoa producers in our database to have accurate records of their transactions, which will help in the payment of their premiums. (INC0127)

For COCOBOD, some officials revealed that a digitised cocoa value chain will provide safe, rapid, and secure transactions as well as empowering cocoa producers in Ghana to use existing digital financial instruments to access financial services and close the gap in financial inclusion that the sector has faced over the years. INF0456, a certified cocoa producer with Asetenapa Cooperative (Fairtrade), shared his view on the importance of the digital payment system. He stated:

Yes, if the LBC now wants to pay us through mobile cash transfers, I think it is a good idea. I can keep track of all my transactions, including payment of premiums. Also, I don't need to go to the big city to buy pesticides; I can order via a phone call, and it will be delivered. It will save us time and money as farmers, so we can concentrate and improve our certification requirements (INF0456).

For INF0483:

The digital payment system is good, but we must have multiple payment systems and not only the mobile cash transfer. The LBCs should work hand in hand with the commercial banks; I prefer my money to be kept in my bank account rather than in my mobile money wallet. It also gives me the opportunity to get financial support from my bank in the future. (INF0483)

Even though most participants interviewed accepted the adoption of the digitalised payment system as an innovative way to improve sustainable agricultural practices in the cocoa value chain, nonetheless, some cocoa farmers had an opposing view and revealed that they preferred physical cash because of trust issues with their LBC and other transactional charges. Evidence from the data further shows that most cocoa producers lack basic education, are not internet savvy, and do even not understand the mobile cash transfer systems. In that regard, they are against the introduction of the digitalised payment system. One cocoa producer lamented:

I don't trust our PC; even when paying us in cash he is cheating us by adjusting the weighing scale and not paying the required amount of premium. I think it is a way for him to cheat us more because he knows most of us are illiterate and do not understand the digital transfer system and its related charges. (INF0462)

6.1.4 Investment in shade trees and pruning initiatives.

Some of the officials at COCOBOD and certification managers interviewed indicated that planting shade trees and pruning forms part of the sustainability and certification initiative. Certification requirements specify pruning as a mandatory practice for farmers who have signed onto a particular label. The checklist of the Rainforest Alliance certification organisation analysed in this study shows that pruning is to be regularly conducted to obtain optimal tree structure and health across all the cocoa regions. CHED officials from COCOBOD and field coordinators of cooperatives and LBCs train cocoa producers on the recommended pruning as indicated during the field interviews. Meanwhile, these institutions also confirmed that they are providing more shade trees to support cocoa farmers. According to Babbar and

Zak. (1995), de Jesús-Crespo et al. (2016), and Verbist et al. (2010), this will help significantly to protect the cocoa farms and the environment in which they operate. One official from CHED shared his view on how the regulator is investing in shade trees and pruning in the cocoa sector:

We are supporting our farmers by assisting them with a more innovative way to prune their farms: the motorised pruner as a mechanised method to substitute the traditional method. We also supply shade trees as a way of providing shade to the cocoa farms and the environment. (INR0221)

Some of the certification officials interviewed also indicated that they are providing their farmers with shade trees as a way of conserving their farms and improving certification practices. One senior certification official revealed:

We are supporting our registered cocoa producers with shade trees for their farm conservation. It is all a measure to improve our certification practices. Last year, after our general pruning exercise, we supplied each farmer with shade trees. We are getting incredibly good results from our farmers now. (INL0326)

Some cocoa producers during the focus group discussions recounted their stories on the importance of pruning and shade trees to the farms:

Last year, after the pruning exercise, the officer gave me four (4) shade trees to plant in my farm to protect the cocoa trees from excess sunlight and wind in the future. The trees are growing well, and I am seeing a massive change in my farm now. (INF0433)

For INF0429:

The pruning exercise and the shade tree planting have helped improve my farm, now all the shade trees I planted have grown, which is preventing excess sunshine and heavy winds which may cause disturbance to my farms. We thank the LBCs and COCOBOD for this farm initiative, which is one of the best sustainable agricultural practices in the cocoa sector. (INF0429)

Indeed, all the participants interviewed revealed that the pruning exercise and planting of shade trees by COCOBOD, cooperatives, and LBCs have contributed to sustainable agriculture and have also improved the certification practices in Ghana's cocoa sector.

6.2 Optimising certification practices in commodity value chains

6.2.1 Integrated pest management (IPM) initiative

One facilitating programme introduced through the Rainforest Alliance-UTZ Certified partnership to promote and improve certification practices in the cocoa value chain is the IPM programme. This programme seeks to reduce the over-dependence on pesticides for controlling diseases and pest infestations on cocoa farms across the cocoa growing regions in Ghana. The project also aims to improve cocoa producers' access to quality farm inputs as well as the adoption of alternatives to Highly Hazardous Pesticides (Osei-Owusu et al., 2022; Misango et al., 2022). Besides, the IPM programme will further promote sustainable agriculture due to the proliferation of several marketing and distribution outlets for agro chemicals, many of which are selling unapproved pesticides in the cocoa value chain (conservealliance.org). Meanwhile, farmers were also encouraged to use pesticides only as a last resort rather than using them at the first sight of a pest or disease, which has far reaching consequences for humans and the environment (Sonwa et al., 2002; Dormon et al., 2007). Arguably, achieving successful certification programmes requires sustainable agricultural initiatives such as the IPM programme. Interestingly, the interviews and focus group discussions raised diverse contributions on how the IPM programme is improving certification practices in the cocoa value chain. One certification manager with Cocoa Abrabopa, a UTZ-RA certifying farmer organisation, revealed how the IPM programme is facilitating certification practices in the cocoa sector. He put it as follows:

Over the years, cocoa consumers have kept complaining of the high content of chemicals in our cocoa beans. That is why we are educating our farmers on organic farming rather than excess pesticide usage. The introduction of the IPM programme is helping us to educate our farmers to reduce the use of chemicals on their farms. Since we started, we can see a massive improvement in our produce and certification practice. (INC0121)

During the focus group discussions with cocoa producers across the research sites, they indicated that the IPM programme has helped them in diverse ways; as well as improving their certification farm practices, it has also helped improve their finances. Some cocoa producers shared their views on the IPM programme:

Since I started implementing the IPM practices, I have managed to reduce the level of pesticide usage on my farms. Now I have also saved some money. Previously, I was buying about three litres of pesticide for spraying my cocoa farms, but now I buy only two litres. I have managed to save one litre because of the IPM strategy I adopted two years ago. (INF0440)

For INF0463:

The most interesting thing about the IPM programme is that after they taught us how to reduce the use of pesticides on our cocoa farms, they also educated us on pruning, weeding, basal chupon removal, farm sanitation, and the planting of shade trees. This is to strengthen our already established certification practices, and we thank the Conservation Alliance for such initiatives. (INF0463)

An interview with one certification field coordinator with the Rainforest Alliance revealed that they regularly conduct spot checks to ensure that their farmers are complying with the IPM practices in addition to the Rainforest Alliance standards. He shared an exciting conversation he had with his farmers in this study:

So, any time we meet our farmers, I ask them, 'Who amongst you will take any medicine when the person is not sick? It the same thing with your cocoa farms. You can't be spraying them regularly when you have not seen any signs of pest infection; the more you spray and prune, the more the cocoa tree loses it nutrients and the probability of the trees dying early.' (INC0121)

6.2.2 Supporting farmers to acquire farmland outside protected areas.

Farming in protected areas is against the regulations of certification. However, evidence from this study shows that to improve certification practices in the CVCs, certification organisations and their participating LBCs and cooperatives need to support their cocoa producers to acquire farmland outside protected (forest reserve) areas. This is a way to ensure that certified cocoa is not sourced from protected areas in the CVCs. An interview with a sustainability

manager with Agro-Eco revealed that they are educating various farmer groups and LBCs to support their farmers to acquire farmland outside protected areas. INC0129 revealed:

Across the cocoa growing regions, we have started a sensitisation exercise by educating and ensuring the leaders of various participating farmer groups assist their farmers in acquiring farmland outside protected areas. This is a way to ensure a sustainable certification practice in the cocoa sector. For some time now, I have been able to see the progress from the farmer groups. If they don't comply, we recommend that their licence be held after an external audit. (INC0129)

A different and slightly conflicting account was expressed by a cocoa farmer:

Well, let me tell you the truth, I am the organiser of this cooperative and a farmer. If the cooperative says they going to support farmers to acquire farmland outside protected areas, how are the farmers going to fund that? You know, the farmland is not for free; you need to buy it from the chiefs, or someone buys it for you, and we can't afford the cost involved. I think there should be an agreement signed between the farmers and the cooperative. Even with farm inputs, you can't support us with how much more acquiring farmland. (INF0480)

In line with this stated dissatisfaction, another cocoa producer and an executive member of a cooperative expressed a similar view:

I must admit that this initiative by the cooperative will be helpful, but it does not solve the problem of farming along protected areas. If they want farmers to stop, they should rather speak to the chiefs to stop selling farmland along the forest reserves. COCOBOD and the Forestry Commission should also have clearly defined protected areas for the chiefs who own the lands. By the way, there are a lot of corruption issues; even if the Forestry Commission's officers arrest farmers for farming along forest reserves, in a few minutes, you will hear a government official calling for the release of such a farmer. (INF0464)

On the other hand, a certification and sustainability manager with the PBC, a state-owned LBC, indicated that they are supporting some farmers who farm within and close to protected areas to acquire farmland outside such areas. He emphasised that the idea is to stop farmers from continuously farming in such areas and instated allow the forest to be restored.

The best way of improving our certification and sustainability programmes is to support our farmers to acquire farmland outside forest reserves. We also need the support of the regulator (COCOBOD) and the Forestry Commission to

champion this initiative. We have started speaking to various chiefs and landowners not to sell farmland around protected areas. (INR0227)

It is evident from the data that farming along and within protected areas is against certification standards. Therefore, certification bodies and other actors in the cocoa sector are supporting farmers to acquire farmland outside such areas. The data further suggest that this initiative has contributed to a total reduction in issues of traceability, which over the years, cocoa buyers and consumers have faced within the agricultural food chain.

6.2.3 Supporting community development projects-cooperatives and produce buyers.

Over the years, various certification organisations have had several, highly diverse community development projects. These projects are in the form of financial support for the renovation of various dirt roads, school supplies, and pipe-borne water in the cocoa growing communities (Shapiro and Rosenquist, 2004; Carodenuto, 2019). These types of support are also a source of motivation for participating farmers, as certification seeks to improve the livelihood of farmers and their communities. Evidence from the data shows that certification bodies, such as UTZ-Rainforest Alliance and Fairtrade, have all engaged in various kinds of community development projects as a means of improving the livelihood of cocoa producers and their communities. In an interview, a sustainability officer at Cargill revealed that they have engaged in series of community development projects as a way of helping to improve the livelihood of the implementers of the certification programme, that is, cocoa farmers and their respective communities. He lamented:

We believe that improving the livelihoods and well-being of our farmers, their families, and the communities in which they live is the best approach to ensure the future of cocoa. So far, we have constructed six schools to support the communities we source our cocoa from. It is also a way to motivate our farmers, which goes a long way to improving our certification practices in such communities. (INL0329)

Apart from that, some cocoa producers in Kakrakrom could not hide their joy as they revealed that they have not had access to pipe-borne water since they settled in the community, but with the support of Federated Commodities (LBC) through their certification programme (Water Matter FEDCO Sustainability Programme), they now have pipe-borne water in the community. The chief of the community shared his thoughts during the focus group discussions.

Even though they have stopped the certification programme in this community because of the LBCs' own internal problems, we would welcome them back anytime. The whole community can now boast of pipe-borne water, something we have not had for decades. (INF0468)

Again, a certification manager with the Cocoa Abrabopa Farmer Association, a UTZ-Rainforest Alliance cooperative, revealed that as per the Rainforest Alliance standards, on top of the cash premiums they pay to their certified cocoa farmers, they also allocate a portion of the premium for community development within their contractual period.

Since 2017, we have provided about twenty-five solar powered boreholes to some cocoa-growing communities in which we operate. After the needs assessment and discussions with our farmers in these communities, water was their highest priority, and we have provided it to them. We are doing all this to fulfil our certification programme promises, as the label's requirement seeks to improve the livelihood of farmers and their communities. (INC0122)

6.2.4 Incorporating community-award schemes in certification programmes.

When discussing the enabling practices for certification programmes in the cocoa value chain with loosely coupled actors, especially cocoa producers, one topic that often comes up is community award schemes for participating certificate farmers. Since the introduction of certification programmes in the cocoa value chains, cocoa producers, who are the main implementers of the various labels, have not witnessed any community awards for their contribution to certification practices in the cocoa sector. In that regard, some cocoa producers

across the research sites indicated that to improve their on-farm and off-farm practices, they are appealing to the label bodies, their cooperatives, and LBCs to devise a local award scheme for best participating certificate farmers for their contribution to sustainable agriculture in Ghana. Some cocoa producers commented how this practice could improve certification practices:

In fact, to be honest with you, there is no motivation for participating in this certification programme; rather, it is extra work they have assigned to us. But I still comply, and we deserve an award for best practising farmers in this community or our society. Awards for cocoa farmers are only at the national and district level, which is very competitive. We are into certification, and we deserve a society or community award, which is a motivation and a way to sustain the certification programme and even attract more farmers to join. (INF0487)

INF0464 shared similar view:

We are pleading with the certification bodies, LBCs, and our cooperative to do a visibility study on community awards for best certification farmers in terms of practice. It can even be a partial or full scholarship for our children. This is a way to motivate us to promote the certification programme, but I have heard that our leaders are about to introduce such an initiative, and we will be in full support. (INF0464)

INC0122, a certification manager with Cocoa Abrabopa, shared a similar view on how their cooperative is incorporating an award scheme for serious participating certificate farmers in the various societies. Arguably, COCOBOD, and the certification bodies through their cooperatives and LBCs have supported farmers in diverse ways to improve their livelihood and communities over decades. INC0122 expressed his view on this subject as follows:

We understand the contributions our farmers are making in the cocoa sector. We can boast of the two billion dollars annually that cocoa contributes to the Ghanaian economy, which is a combined effort of our farmers, and we owe them gratitude. We are doing a visibility study on the award schemes for hardworking cocoa farmers in various clusters, and we shall communicate to them when we are done. (INC0122)

The evidence from the data suggests that there is some facilitating on-farm and off-farm practices to certification programmes, and further shows how loosely coupled actors' practices combine to improve certification programmes in the Ghanaian cocoa sector. The data further show that despite the impeding practices to commodity certification in organising, nevertheless, there are potential organising practices that could shore up the growth-boosting outcomes of various certification labels.

6.3 Unpacking the practices impeding the certification processes in CVCs: Complexities of commodity producers and produce buyers.

6.3.1 The use of banned pesticides by cocoa farmers

As indicated in the Rainforest Alliance certification standards, regulations, and guidelines, the use of banned chemicals or pesticides on cocoa farms is against certification practices in the cocoa value chain. 'Banned' pesticides include agro chemicals that have been blacklisted by COCOBOD as a sub-standard pesticide for farm use (Fosu-Mensah et al., 2016). However, the majority of cocoa producers are unaware of the pesticide types, level of poisoning, safety precautions, and potential hazards to health and the environment, and to some extent, they have resorted to the use of pesticides banned by the regulator on their farms (Denkyirah et al., 2016). Many countries have banned organochlorine pesticides like DDT and Dursban due to their durability, toxicity, and mobility in the environment, their bioaccumulation in food webs, and the contamination of the cocoa beans (Kongor et al., 2017). Even though several of these pesticides were found to be environmentally damaging, and a threat to certification practices, many cocoa producers in Ghana continued using them for various reasons. As indicated by some certification officials, banned pesticides are toxic chemicals, and their

presence in the environment warrants close attention. One certification official with Rainforest Alliance revealed:

As a certification organisation, we educate our cocoa farmers against the use of banned pesticides on their farms; this is against our standards. We know the regulator; thus, the Ghana Cocoa Board has also outlined some banned chemicals, and we always advise our farmers to desist from using such chemicals. However, we still have some recalcitrant cocoa farmers who still use these banned pesticides, and this is impeding certification practices. (INC0126)

The data further revealed that various factors contribute to the usage of banned pesticides by cocoa producers. It is obvious that every single cocoa producer interviewed from the various research sites agreed they had received basic education and training on the implications of using banned pesticides on their farms, but they were still using them in spraying their cocoa farms. One cocoa producer shared his view on why he still uses banned pesticides on his cocoa farms:

We were trained not to use banned pesticides in spraying our farms, however, I use them because I cannot afford the price of the prescribed pesticides outlined by Rainforest Alliance. They are expensive in the market, and as a small-scale cocoa producer, I don't have the money to buy that, so I just buy some of these unapproved pesticides and use them on my farm. They are cheap, and sometimes, they even give them to me on credit. I understand it is against the certification practice, but I have no option now. (INF0455)

INF0458 shared a similar opinion on the use of banned pesticides on their farms. He put it this way:

I know the use of banned pesticides is not good for our farms, but most of us farmers are illiterate and accept only what we see; we can't read and write. These agro chemical sellers come here every market day to convince us to buy them; some even have their stores here. Well, they are cheap, too; most of our leaders are aware and see them every day but are not able to put any measures in place to stop them. (INF0458)

INC0128, a technical field coordinator with Asetenapa cooperative under Rainforest Alliance, shared his view on this subject:

We know some cocoa farmers use banned chemicals, but we will blame the regulator, that is, the Ghana Cocoa Board (COCOBOD) for all this illegal practice. It is their duty as a regulator to ensure that banned chemicals are off the market. But there is an open market system in the agro-chemical trade; people are just selling unapproved chemicals to cocoa farmers, and COCOBOD is not able to sanction them. That is why we still have a lot of banned pesticides on the market, which is not helping the progress of our certification programme. (INC0128)

6.3.2 Declaring right farm size for mapping and certification.

According to Dompheh et al. (2021), the Ghana Cocoa Board (regulator) and NGOs play a key role in certification implementation at the farm level, providing lobbying, farmer training, research, and in some cases, direct funding to encourage certification adoption at the local level. These institutions also ensure that certification practices are carried out in the designated mapped cocoa growing communities, which can be monitored by label implementors and the regulator. However, some cocoa producers who have signed on to certification have failed to declare the right acreage for mapping for several reasons. This behaviour among small-scale cocoa producers has delayed the progress of certification practices over the years. The implication of cocoa producers not declaring the right farm size to certification bodies, cooperatives, and LBCs is the risk of duplicating farmland in mapping exercises because certification is done independently, and certifying organisations do not share data among them. One participant commented on how these practices impede their operations as a cooperative under the UTZ-Rainforest Alliance certification label:

Sometimes, when we go to inspect the farms for mapping, some farmers do not declare the number of farms and even the right farm size. This hinders the progress of our certification programme because we find it difficult to have information about the characteristics of the farm from which the cocoa is supplied. (INC0128)

Some cocoa producers shared their views during the focus group discussions. One cocoa producer commented:

I did not declare all my farms when the officers came to inspect them. They told us to sell our certified cocoa to their LBC after the harvest, which I cannot do because I have other LBCs, I sell my conventional cocoa to, so I declared only one farm and left the other two. Even the premium they are paying is not enough, so there is no need to go through all these new requirements, which is extra work for me. (INF0459)

For INF0427:

Yes, I did not declare all my farms for mapping because the farm does not belong to me alone; it is between my husband and me, and my husband is not a cooperative member. So, I declared only the one he had given to me. We cannot pay double dues as well, so we prefer to declare only one. (INF0427)

On the other hand, some participants revealed that there are sometimes delays by technical officers in mapping and certification, and that is why most cocoa producers are refusing to declare the correct farm size. One cocoa producer whose farm is not mapped but who is a registered cooperative member revealed:

When I joined the cooperative, their technical officers came and inspected my farm. But it is over two years now, and my farms have not been mapped to even pave the way for certification. I have decided to declare only one farm, but I have four farms in the same area. (INF0446)

6.3.3 Selling of certified cocoa to non-certified produce buyers.

The certification standard states that all post-harvest certified cocoa should be purchased by a designated LBC through their purchasing clerk, who must have undergone the necessary certification training. However, it was revealed during the interviews and focus group discussions with participants across the various research sites that some cocoa producers tend to sell their stocks to other LBCs who are not even participating in any certification programme; they do this for their own personal reasons without incurring any sanctions or penalties for such a practice. One certification official shared his view and emphasised that such behaviour by cocoa producers is impeding their operations at the farm level. INC0127, a purchasing clerk with the Fairtrade organisation, explained:

During sensitisation, we educate and train our farmers on post-harvest procedures and on how they will be able to sell their produce to our LBCs and enjoy the premium price. Even though we signed contracts with them, they sometime overlook this and sell the cocoa to other LBCs. These practices are not helping the progress of the certification programme in terms of getting the required tonnage and accurate data of certified cocoa purchased. (INC0127)

Notably, due to competition among LBCs in meeting their required tonnage and their profit-making motives, some LBCs tend to build extensive networks and establish cordial relationships with cocoa producers even before they have harvested and dried the cocoa beans (Aidoo and Fromm, 2015; Roldan et al., 2013). This makes some certified cocoa producers ignore their contractual agreement with the certified LBCs and sell their produce to these non-certified LBCs for ready cash. During the focus group discussions, most cocoa producers admitted that they sometimes sell some of their certified cocoa to non-certified LBCs based on their long-term relationship with the LBC,

Yes, I have sold my certified cocoa to non-certified LBCs on several occasions. It takes too long for our certified LBC to pay us when you sell the cocoa to them. I depend only on my cocoa for my livelihood, and because he doesn't pay on time, any time I hear other LBCs have cash, I send the cocoa to them. (INF0485)

For INF0441:

To be honest, I don't sell all my cocoa to our certified LBC because I was already selling my cocoa to other LBCs before I joined the certification programme through the Asetenapa cooperative, so I still sell some of my certified cocoa to them. I am aware this is not a best practice, but I need to have a compelling option, since it's my only source of livelihood. (INF0441)

However, one technical coordinator with the Rainforest Alliance certified company (Cocoa Abrabopa) revealed that the reason most of their cocoa farmers sell their produce to other LBCs is based on the democratic principles and nature of the LBCs' chain of operations at the local level. He emphasised that there are no laid down sanctions or penalties for these cocoa producers who engage in such practices or for the LBCs involved. He put it this way:

To be honest, we will blame the regulator of the sector (the Ghana Cocoa Board) as the cause of all these non-compliance behaviours of our farmers in selling certified stocks to other LBCs; they have not been able to draw up a national policy for certification practices which could have outlined the appropriate penalties against any of these recalcitrant cocoa producers and the LBCs involved in such practices. (INC0125)

6.3.4 Farming in (or along) protected areas.

The southward shift of the human population was especially acute following the recent involvement of youth in agricultural initiatives introduced by the government of Ghana (MOFA, 2022), with many young men and women venturing into cocoa production in Ghana. While loosely coupled actors are concerned with information about the conditions under which the cocoa was produced and transported (Saltini et al., 2013; Perez et al., 2021), conservation managers in charge of monitoring and protecting forest reserves have not considered the objective of certification, and this has paved the way for cocoa farmers to farm around and within most protected areas. The slow pace of the monitoring by the Forestry Commission and COCOBOD has resulted in the rapid establishment of permanent human settlements, an increase in cocoa farming, gold mining, and an escalation of hunting within the country's protected areas (Woods, 2003; Norris et al., 2010; Bitty et al., 2015). One external auditor in the cocoa value chain revealed how this practice is impeding certification implementation in the cocoa sector. He commented:

The Forestry Commission and COCOBOD have not clearly defined the boundaries for protected areas; that is why we still have some cocoa farmers farming within and along forest areas. (INC0130)

Importantly, protected areas are a means for conserving forests and biodiversity. Nevertheless, the inability of managers of these protected areas to achieve favourable conservation outcomes is a possible threat to cocoa production and even certification practices in emerging economies (Hill, 1997; Ruf et al., 2015; Smith et al., 2018; Abu et al., 2021). In

tropical Africa, where most commodities are produced, studies have shown that effective management of several protected areas is deficient and that protected areas continue to be exposed to threats such as wildlife hunting, logging, artisanal mining, and farming (Lambin and Geist, 2003; Tranquilli et al., 2014; Bitty et al., 2015).

Recently, the two major cocoa producers in the world Ghana and Ivory Coast, have witnessed over one million people living in protected areas, as they are attracted by the potential for generating a daily income to support their livelihood and their families through the exploitation of these natural resources (Watson et al., 2014). Meanwhile, Asare et al. (2014) and Bitty et al. (2015) reported that buffer zones around protected areas with varied levels of human activity, such as cocoa agroforestry, have been proposed as a management approach in Ivory Coast and Ghana to limit the impact of surrounding land-use activity on the biodiversity of protected areas. Their study further emphasised that, even though cocoa farming in protected areas has been documented by industry regulators and stakeholders, the lack of any comprehensive mapping of cocoa boundaries in these two countries (Ghana and Ivory Coast) has prevented any comprehensive assessment of cocoa producers' encroachment into and around protected areas in contemporary times (Norris et al., 2010; Wegmann et al., 2014; Bitty et al., 2015).

In an interview with some loosely coupled actors, they revealed that some cocoa producers' farms are close to and even encroach upon these protected areas. They further emphasised that the lack of a proper monitoring system and of clearly defined protected areas by the Forestry Commission of Ghana and COCOBOD has contributed to these unethical practices among cocoa producers. One certification manager with the Rainforest Alliance expressed his view on this practice:

Yes, certification standards prohibit production and cocoa sourced from protected areas, but we have no control over our farmers; we only ensure they adhere to and comply with our certification requirements, which they have signed up to. It is the duty of COCOBOD as a regulator of the cocoa industry to ensure that farmers do not farm near protected areas or even encroach upon the proposed sites. That is why we are calling on the Forestry Commission of Ghana and COCOBOD to have a clear demarcation of the protected areas to prevent encroachment by cocoa farmers. (INL0322)

INL0326, a senior manager with an LBC, shared a similar opinion on this practice:

This unethical practice among cocoa producers is impeding our certification progress, and if we don't take care as an LBC, we can lose our licence if these practices continue in the cocoa sector. No international chocolatier would like to source from protected areas. (INL0326)

Even though some loosely coupled actors indicated that protected areas could provide critical insurance for Ghana 's biodiversity, the data show that protected areas in Ghana are increasingly threatened by the encroachment of agriculture. The data further show that it is unlikely that the regulator of the industry, that is, COCOBOD, will have the resources required to halt cocoa production in and along all protected areas across the cocoa growing regions in Ghana.

6.3.5 Managing workloads of produce buyers in cocoa value chains.

One of the practices undermining the progress of certification programmes in the CVCs certainly depends on the workload of LBCs at the local level. Certainly, LBCs occupy the cocoa purchasing space and provide farm training, such as seedling planting, fertilizer application, weedicide application, pesticide spraying, mapping, and pruning, as well as education on environmental and social practices. These operational activities of LBCs mean they are too stretched to undertake certain certification practices and supervision. Although some cooperatives participating in certification programmes under Rainforest Alliance and Fairtrade have argued that LBCs participating in certification are the cause of the floundering

of certification programmes, it is worth mentioning, as the field data emphasised the workload of LBCs as contributing to their inability to adhere to the various certification requirements. Some participants shared their views on this subject during the interviews. One cocoa producer stated:

I think there is too great a workload on my LBC; that is why they are not able to comply with all the certification requirements. Their interest is in conventional cocoa rather than certified. After they come to train us on the Fairtrade best practices, they don't even come for inspections to check if cocoa producers are complying with the certification requirements. (INF0424)

For INF0451:

Yes, for me, LBCs managing both certified and conventional cocoa is not good practice; they tend to concentrate on the purchase of conventional cocoa more than certified, all because they want to beat the costs and incentives associated with certification practices, and that is not helping the progress of the programme. They are profit oriented and don't even have correct data on certified cocoa. (INF0451)

Certification standards also require extensive record-keeping of on-farm and off-farm activities among participating LBCs, but very few cocoa producers can read and write and so few are able to keep track of their sales of certified cocoa beans and acquisitions of inputs. However, as the existing officers often lack any capacity in certification management, with a focus on purchasing more conventional cocoa as a profit-making entity, LBCs are unable to have a clearly defined scope in their workload and are often seen with divided operations. Thus, LBCs in the CVCs tend to give more attention to the purchase of conventional cocoa than of certified cocoa (Dompreh et al., 2021; Ansah et al., 2020; Brako et al., 2021). One external auditor in the cocoa value chain shared his view on the workload of LBCs in management and implementation of certification programmes, which is impeding certification practices in the Ghanaian cocoa value chain. He put it this way:

I understand the various LBCs are in business for profit, but they cannot 'put their two eyes in one bottle'; their operational workload impedes their certification practices. They can just focus on conventional cocoa and leave the certified for

others. But buying both certified and conventional stocks is not a best practice. For instance, they sometimes even mix the stocks (certified with uncertified), before quality control do their inspection and seals. (INC0130)

Data from this study further revealed that the level of workload, such as purchasing, transporting, drying, weighing, and assisting Quality Control Company in sealing and transporting the beans to harbour for export, have overburdened LBCs, and this limits their input to and support for certification activities. Some cocoa producers confirmed that LBCs have no time to even listen to them when they request some farm support; this has compelled most of them to stop the certification programme. One cocoa producer shed light on this attitude among LBCs which is impeding the progress of certification programmes in the Ghanaian cocoa sector. He commented:

For me, I think there is too great a workload on my LBC; that is why the certification programme is not going well - they need to outsource some of this workload. Sometimes, when is time for training and workshops, they reschedule it several times or even cancel it because they are drying cocoa at the depot or loading their trucks. This is not a best practice and is hindering the progress of certification programme. (INF0482)

6.3.6 Sharing data among produce buying companies

Evidence from the study data shows that there are challenges of data sharing among participating LBCs in a particular certification or in sustainability programmes in the CVCs. All the LBCs interviewed revealed that they have no previous history of their participating cocoa producers in a certification programme. An interview with a senior external auditor with Agro -Eco undertaking an audit on behalf of the Rainforest Alliance revealed that there are no shared data among LBCs, and that has created a room for cocoa producers to move from one certification programme under one LBC to the other. This culture among farmers and some LBCs does not help certification bodies and external auditors to have accurate data

on cocoa producers under a particular LBC. He explained how this practice of LBCs and cocoa producers works to impede certification practices in the CVCs:

If you go to the communities where certification programmes are organised, you could notice that there is no orderliness among the LBCs. One farmer may belong to different LBCs implementing certification, and there is the risk of traceability, and issues of transparency also become a challenge. So, if LBCs can share data, then of course we will know that this farmer belongs to this LBC and has sold this quantity of cocoa to an LBC which they claim is certified. (INC0129)

In addition, the study shows that no statistical data are shared among LBCs participating in a particular certification programme in the Ghanaian cocoa sector. To confirm that this issue is impeding certification practices, none of the loosely coupled actors interviewed could give the exact number of LBCs and cocoa producers participating in a particular certification programme or even the percentage of certified cocoa produced in Ghana; each participant interviewed gave a different answer. One certification coordinator with an LBC shared his view on issues of data sharing among LBCs.

Well, for me, I think because there are no data shared among LBCs, that is why our certification programmes are not progressing as expected; if all LBCs were able to share data of their participating farmers, especially LBCs who have even stopped the programme, then those who are now starting certification programmes would know the strategy to employ to overcome any challenges. (INL0328)

6.3.7 Working in silos: Loose relationship between LBCs, cooperatives, and cocoa farmers.

In recent times, developing innovative methods with combined organisations' unique knowledge is a winning strategy for creating long-term value in CVCs (Mason et al., 2017). Yet, this will not occur unless organisational members are given the opportunities and resources to collaborate productively across silos (Casciaro et al., 2019). According to Reynes (1999), one important expectation of actors in CVCs embarking on a new project is to have significant contact and interaction with other actors in silos compared to previous

engagements. It is important to engage these actors because there can be different functional entities and human resources with different skills, structures, procedures, and operating technologies (Verburg, 2015). To certification bodies and other loosely coupled actors in the Ghanaian cocoa value chain, this situation is regarded as one of the most important to consider since the cocoa industry is made up of diverse actors and stakeholders, both public and private. Indeed, loosely coupled actors working in silos will certainly impede the progress of various initiatives, which aims to drive sustainable agriculture. The interview with produce buyers revealed how actors within the cocoa value chain continue to work in silos and other LBCs shifting from the main certification requirements and implementing their own on-farm and off-farm strategies in silos without the inputs of other chain actors. One certification manager revealed:

Working in silos is one of the practices impeding our certification programme here in Samreboi; if we don't work together and share common knowledge and technology, we cannot improve and sustain our certification programme. Every LBC is hiding in their own corner pretending to be implementing certification standards; this is the reason why our certification programme is floundering. We need to collaborate and stop working in silos. (INL0326)

Consequently, this compelling issue impeding certification practices in the cocoa value chain has led to a reduction in certified cocoa production among producers and exports. This is a result of chain actors, especially cocoa producers and produce buyers, working in silos and implementing their own certification strategies rather than working together and adhering to the global standards. One quality control officer (QC) with QCC, a division within Ghana Cocoa Board, confirmed this practice of LBCs during their routine inspection, grading, and sealing of certified and uncertified cocoa beans.

Sometimes, during inspection, we notice different grades of certified cocoa from different LBCs implementing the same certification standards. This is because most of them are working in silos and do not collaborate with other LBCs to

implement the standards, even if there are new changes in pesticide applications. Due to that, some cocoa purchased as certified by LBCs is later confirmed and sealed by the QC as conventional and others from grade one to slaty beans. (INR0224)

Like the above views of produce buyers and other loosely coupled actors working in silos, INL0325, a 40-year-old sustainability coordinator participating in the Rainforest Alliance certification programme under an LBC, shared his view on this issue:

As we speak, cooperative and other farmer groups are complaining that LBCs implementing certification is the reason why the certification programmes are floundering, and if we continue to work in silos without collaborating and working with global certification standards, I will not be surprised that, in future, certification bodies will only renew and issue licences to cooperatives and will forgo LBCs. (INL0325)

From this study, it is obvious that to unleash the potential of horizontal collaborations, loosely coupled actors in the cocoa value chain must equip especially produce buyers to learn about, relate to, and collaborate with one another across management, technology, and logistical divides. This, in turn, will help to break silos in the Ghanaian cocoa value chain.

6.3.8 Premium payments and distribution structure

Certification codes of conduct clearly specify the net amount of extra money that certified cocoa producers should receive as price premiums and distribution structure among members of farmer groups (Nalley et al., 2012; Iddrisu et al., 2020; Ansah et al., 2020). However, the focus group discussions and interviews with cocoa producers, produce buyers, and other loosely coupled actors did not show this to be the case. It appears from the data that the LBCs unilaterally make decisions regarding price premiums (Ansah et al., 2020). Although such an approach might enable LBCs to maximise the returns on their investments in the certification programme, it seems to contradict the certification programmes' codes of conduct and requirements. Arguably, the focus group discussions and interviews brought together

opposing views from LBCs and cocoa producers on premium payment and disbursement in the cocoa sector. Some cocoa producers were of the view that the improper payment and disbursement of premiums are why some of them are not complying with the various certification standards and why others move from one LBC to another just to have a good price premium for their certified cocoa beans. In a dialogue with one cocoa producer in Akyem Nkorosu, he revealed:

Our purchasing clerk (PC) pays the premium at his own discretion and not according to the actual bags of cocoa sold. Even with the little amount we receive as a premium, they also don't pay on time; they are using our premium to enrich themselves. Last year, I gave my PC over ten bags of certified cocoa beans, and I received only one hundred Ghana cedis as a premium. (INF0460)

Some participants also stated that LBCs capitalise on price premiums to buy more cocoa beans to enjoy more profit and do not pay a lump sum to the farmer group. This means some cocoa producers are compelled to sell their certified produce to other LBCs who are under a different certification programme but who have ready cash. One cocoa producer shared her displeasure on premium payments:

Before we registered onto the certification programme, our LBC told us we would be paid a premium at the end of the cocoa season, but that is not the case; they are using the money to buy more cocoa even when cocoa season is closed. When you ask the purchasing clerk (PC), he tells you he has not received the premium, something we know they have already received at the beginning of the cocoa season. I have started selling my cocoa to other LBCs who pay on time; even though their amount is small (GH 12.00) per bag but is better than none. This behaviour by LBCs is not helping the progress of the certification programme but is rather collapsing it. (INF0462)

For INF0426:

For me, I think the competition among LBCs in premium payment is contributing to this challenge; if we have an equal amount of premium across LBCs, cocoa producers will not move from one LBC to the other. A price of a bag of cocoa is equal (GH 660.00) across LBCs, so why can't they set the premium price same. Because of this, many farmers have stopped implementing the best practices

because they spend a lot of money on their farm and receive lower returns. (INF0426)

However, the data suggest that this claim by cocoa producers is always not the case. One certification manager with an LBC revealed that they pay the required premiums to their farmers to support their livelihood and families:

I know our premiums are not enough, and that is why most cocoa producers are moving from one LBC to another and others withdrawing from the certification programme. We pay GH 15 per bag of certified cocoa. It helps most cocoa producers during the off season when they have nothing to rely on. (INL0326)

6.3.9 Registering and record keeping of certified cocoa farmers.

Evidence from the data revealed that LBCs and cooperatives first register the farmers onto a particular certification label and keep track of the volume of cocoa sold to them. However, farmers' record keeping by LBCs and certification bodies can be difficult as they supply cocoa beans in small amounts from multiple sources to multiple buyers. This study also revealed that cocoa producers sometimes convince PCs to buy their uncertified cocoa as certified cocoa, which is against the certification standards. The underlying challenge to this is that there is no software and there are no effective procedures to check whether it is certified or uncertified cocoa beans that end up in the shed of LBCs before quality control inspections are done. This practice among LBCs and cooperatives is hindering the progress of certification programmes in the cocoa value chains. INF0437, a 61-years-old cocoa farmer, commented during the focus group discussion:

Many cocoa producers in this community have lost trust in our LBC under the UTZ Certification label. They gave us all the training, but we have other LBCs we supply our cocoa to, and they don't have good supply records. Last year, there was variation between the supplies recorded in my passbook and what they had in their records, so I lost a percentage of my premium. (INF0437)

Additionally, INF0477 shared a similar opinion on this subject during the individual interview:

Our LBCs are the reason why the certification programme is not going on as expected, all they need is the numbers, thus number of cocoa bags they can purchase. They are profit oriented; if you register with them, whether you adhere to the certification practices or not, they will still buy your cocoa as certified - there are no proper monitoring systems in place to check all these practices. These are some of the reasons why Water Matter failed (INF0477)

6.3.10 Low promotion of certification standards by LBCs and cooperatives in rural communities.

Across the cocoa regions in Ghana, LBCs are mandated to purchase cocoa from farmers and sell to the cocoa marketing company. Meanwhile, these LBCs are also to provide on-farm training, such as seedling planting, fertilizer application, weedicide application, pesticide spraying, mapping, pruning, and other farm practices in cocoa production, as well as education on environmental and social practices. Although less than 25% of LBCs have fully embraced cocoa certification, most LBCs have been piloting certification in a handful of their chosen cocoa growing communities. Due to the lack of certification promotion, cocoa producers across these communities continue to use traditional farming practices, which may be inadequate to improve cocoa certification in Ghana. Some cocoa producers shared their views during the focus group discussions.

Yes, there is low visibility of our certification programme in this community; so many farmers don't even know there is a certification programme going on. I think the LBCs need to do more promotion. Even if you go to the cocoa shed, you won't see any label pasted there. (INF0431)

For INF0428:

During sensitisation, the organisers gave us T-shirts with the RA and cooperative label embossed on it five years ago; apart from that, there is nothing else. They have not given us any souvenirs to promote the certification label and the programme in this community, and that is why we still have a low number of registered farmers in this community. (INF0428)

Evidence from the data shows that there is low visibility of various certification labels in the cocoa growing communities. LBCs and cooperatives are not doing much to promote the

various labels as the certification standards require. Nonetheless, despite the low promotion of the various certification programmes, this study could recount some community development projects signpost which had the cooperative and the certification label displayed.

6.4 Regulatory and label bureaucracies

6.4.1 Promotion of agrochemicals by Ghana Cocoa Board (COCOBOD)

According to the evidence from the field data, COCOBOD's recommendations on agrochemicals and fertilizer usage by cocoa farmers impede the operations of various certification-participating LBCs and cooperatives in the cocoa value chain. As a regulator and state-owned institution, some loosely coupled actors interviewed confirmed that COCOBOD engages in those practices to score political points. Most importantly, certification standards require a total reduction in the application of agro chemicals by cocoa producers on their farms; however, in recent times, COCOBOD is championing and educating cocoa farmers on the use of agro chemicals, but this contradicts certification requirements. One certification manager with the Rainforest Alliance (RA) shared his view on why these activities of COCOBOD are impeding their operations:

The RA standards require a reduction in the use of agro chemicals in spraying cocoa farms. In that regard, we have educated our farmers to reduce the use of chemicals in spraying their farms. But COCOBOD is over promoting the use of agro chemicals just to score political points. We are trying to reduce the use of pesticides based on feedback from our international chocolatiers, and COCOBOD is also promoting it, just to have more yield to meet their setup target. (INC0121)

During the focus group discussions, some cocoa producers shared their views on this practice by COCOBOD. INF0454, a cocoa producer at Adasewase, which is participating in certification under Fairtrade, revealed:

In fact, every three months, COCOBOD technical officers come to this community and educate us on pesticide application and introduce new pesticides to us. We already have our agro chemicals recommended by our cooperative, but COCOBOD is also telling us to buy what they have introduced. Even though the pesticides recommended by COCOBOD are cheap and are on an on-credit basis but are not giving us more yield unlike the 'Confidor' our cooperative recommended for us. (INF0454)

An interview with a senior official at the COCOBOD revealed that as a regulator of the industry, they always ensure that the cocoa producer is not short-changed. However, a recommendation to use pesticides for their farmers is regular advice they receive from their research and technical team based on their field and farm surveys. He indicated:

We have our technical officers all round, so if there is any new development to improve cocoa production, we recommend and ensure our cocoa farmers adhere to it. We sometimes give these pesticides to them on credit through the various LBCs - not just pesticides, even fertilizers. (INR0223)

6.4.2 Poor adoption of cooperatives and certification standards

Cocoa farmers in Ghana receive certification training, inputs, and premiums via the local farmer group or cooperatives. However, in the cocoa-growing communities, most of these farmers do not belong to any cooperative or farmer group. In fact, this study revealed that cocoa farmers who were once members of a cooperative and have since dropped out blamed their decision on the activity of PCs, who sometimes serve as leaders of the various farmer groups in the communities. Arguably, cocoa prices for farmers are low; they also receive low rewards, which might lower net gain owing to certification costs, thus making the system unattractive for the farmers, and discouraging them from promoting the certification programme at the farm level (Gockowski et al., 2013; Fenger et al., 2017). An interview with some cocoa farmers in Akyem Nkorosu revealed that despite the unattractiveness of certification practices for participating members, it is the negative attitudes of cooperative executives towards farmers that make them lose interest in the certification programme. The

leaders of the cooperatives do not respect them or their decisions during meetings, and that compels them to even withdraw from the programme. One cocoa farmer lamented:

Well, the progress of the certification programme depends on the leaders mandated to supervise activities at the local level; if they don't respect us as farmers, how are we going to promote the cooperative activities for others to see and join? (INF0447)

For INF0435:

Well, for me, I have not stopped the cooperative, but I don't attend their meetings and training. There is nothing beneficial from the cooperative. Last time I needed some money as a loan to pay my son's school fees, the PC didn't even look at my face. (INF0435)

In an interview, a PC with a cooperative revealed that the claims by farmers are always not correct; they understand there are a few challenges in the structure of the cooperative, but they are doing their best to ensure that the objective of the certification programme is achieved, and the welfare of their farmers is not undermined.

I understand there are lot of challenges in our cooperative, but if we don't put our individual differences aside and work towards a common goal, that is, promotion of the Fairtrade label, then we will fail as a cooperative. (INC0127)

6.4.3 Timing of CHED pruning and calendar spraying exercise for cocoa farmers

One on-farm practice impeding certification in Ghana's cocoa value chain is the mass spraying exercise of the CHED of COCOBOD. The CHED is a division under COCOBOD responsible for the control of cocoa swollen shoot virus disease and the rehabilitation of old and unproductive cocoa farms and extension services (Bandanaa et al., 2016; CHED, 2022). However, some certification managers and cocoa producers from the research sites indicated that the wrong timing of the CHED pruning and calendar spraying exercise in the cocoa growing communities is affecting their operations. In the interviews and focus group discussions, some participants revealed that the timing of the CHED pruning exercise affects their certification operations. CHED does not consider the season and the calendar periods of

the certification bodies, their cooperatives, and LBCs; they go to the various farmers and begin pruning their farms which, in the long term, affects production and can damage the cocoa trees. Some cocoa producers shared their thoughts on this devastating exercise of the CHED:

Two years ago, COCOBOD technical officers came to our community to educate us on how to prune our cocoa farms. Those who applied their advice on their farms, most of their cocoa trees died because they asked us to prune without also considering the season and the shade trees. It was a dry season, which does not favour such an exercise, as our LBC had educated us earlier, but CHED also came with their strategy, and it has affected our farms negatively. (INF0474)

For INF0478:

For me, I think it is the incompetent technical officers that CHED brought to educate us on the pruning exercise and the timing that caused this negative effect on our farms. We have been in cocoa production for years, and we know the right farm tools to use on our farms. We are not resisting a change, but it should be timely and not in the dry season. CHED should next time consider the season when they are introducing a new innovative way of farming, such as the 'motorised pruner' they have introduced. (INF0478)

In addition, INC0121, a certification manager with Cocoa Abrabopa indicated that CHED's pruning, and calendar spraying exercise is impeding their operations at the farmer level and is a threat to the certification programme. He explained further:

The new Rainforest Alliance standard does not recommend calendar spraying. We need to resort to integrated pest management (IPM) techniques, but now CHED is also doing calendar spraying with the mass sprayers. We are training our farmers to avoid the use of pesticides frequently, but CHED's approach through the mass spraying is not allowing our certification requirements to be achieved. (INC0121)

6.4.4 Portion of price premiums paid to the Ghana Cocoa Board

A recurring theme from the interviews with certification managers and other loosely coupled actors in the cocoa sector was that they pay premiums as extra money to incentivise farmers to adhere to and promote sustainable agriculture. The Ghana Cocoa Board sets the price for both conventional and certified cocoa beans, with the premiums for certified cocoa paid either directly to farmers (through their farmer group accounts) or through LBCs. The actual

modalities of premium payment and usage depends on the standard, e.g., use a pre-determined fraction of the premium for direct payment to farmers, commit premium funds to development projects such as schools, clinics, standpipes), or use premiums to purchase agricultural inputs for cocoa producers (Dompkeh et al., 2021). Even though the managers of certification programmes agreed that the premiums paid to cocoa producers are not attractive enough to support their livelihood, families, and communities, they further revealed that COCOBOD as a regulator also demands a percentage of the premium from LBCs. One certification manager with the Rainforest Alliance revealed how the percentage of premium paid to the regulator is impeding certification practices in Ghana's cocoa sector. He commented:

Well, certification thrives on premiums, and that has been one major benefit. However, COCOBOD also demands a portion of it, which means only a small percentage goes to the farmers who are the main beneficiary. (INC0122)

INL0327, a certification officer with an LBC, also narrated how this practice by COCOBOD is affecting their certification activities.

COCOBOD demanding portion of premium cash is the basis for the floundering of certification programmes; the premium is the major post-harvest benefit of certification. We are not able to increase the amount because the regulator is also demanding a portion of it; if we take our administrative charges and pay our staff, it is only little that goes to the farmer. (INL0327)

Indeed, LBCs and cooperatives bear the costs related to certification premiums and certain internal and external support services. However, they are frequently unable to bear these various costs directly and sometimes call for external support from their international partners based on their contractual agreements (Ansah et al., 2018; Gboko, Ruf and Faure, 2021). Nonetheless, the regulator (COCOBOD) also demands a portion of this pre-finance amount meant for cocoa producers. These words revealed that the motivation for engaging in certification by cocoa producers is not always the reality but, instead, they are short-

changed by the managers of the programme. One internal management service officer at Federated Commodities revealed how this charge has hindered their operations at the local level to even stop the certification programme five years ago. He stated:

We found that our leaders at the national level were hiding a lot of things from us at the local level: the premiums were not paid, and even our technical staff were also complaining all the time they were not paid. So, as an LBC, to redeem our image, we stopped the certification programme. I am told the programme is being run at other societies, but here we stopped five years ago. (INL0323)

6.4.5 Shipping certified cocoa - warehouse and port charges

Evidence from the field data reveals high port charges incurred by cooperatives and LBCs for the shipping of certified cocoa beans from Ghana to international partners. Thus, COCOBOD charges the LBCs \$20 per ton before shipping the certified or special cocoa. Some certification managers operating under cooperatives and LBCs complained about how this charge by COCOBOD is affecting their certification operations. INC0121, a certification manager with Rainforest Alliance cooperative revealed:

Aside from other charges at the port, COCOBOD also demands \$20 dollars for every ton of special cocoa we ship to our international partners; all other cocoa is free. Because our cocoa is referred to as 'special' or certified cocoa, it comes with extra charges. Given our budget for the year and that COCOBOD is also charging this amount, it is not helping us to expand and sustain the certification programme. (INC0121)

This study further reveals that LBCs are unable to purchase the required tonnage of certified cocoa annually due to this extra charge by COCOBOD, and even some technical field staff have resigned to join other professions due to the inability of their LBC to pay their field allowances. He put it this way:

Some of my colleagues have stopped doing this job because there is no motivation to do it; the regulator is over burdening us with charges, and all these charges affect us, the employees. An amount of cash which is meant to be a motivation for field and administrative staff ends up in the pockets of the regulatory body. So,

most of our staff are leaving their roles; we are losing competent and experienced staff, which is not helping the progress of the certification programme. The regulator is a key contributor to the floundering of the certification programme. After all, they don't even recognise certification. (INC0125)

6.4.6 Sanctioning procedures for non-conforming cocoa farmers

Evidence from the study shows that one off-farm activity impeding certification practices in the cocoa value chain is the level of sanctioning of farmers who are not conforming to the standards by the certification bodies. Based on recorded responses and corrective action from external audits, the study revealed that certification bodies, such as Rainforest Alliance, UTZ, and Fairtrade, do not have any outlined sanctions for these recalcitrant farmers who do not comply with the certification requirements. They continue to implement the same old practices. One technical coordinator with the Rainforest Alliance revealed how these non-conforming farmers' activities are affecting their certification practices at the local level. He stated:

We believe that to enhance the development of our certification programme, farmers are required to conform to the set standards. Our major challenge is that there are no proper sanctions for non-conforming farmers after the external audit. One of my bosses told me that they need the numbers so if they start sanctioning these farmers, they will form a cartel and stop the programme, which will go against our cooperative. (INC0128)

Again, the narrative from participants makes it clear that there are no serious sanctions against cocoa producers for non-conformity as argued by the certification bodies. One cocoa producer who was issued a warning for non-conformity after the external audit revealed:

During the audit, the auditor detected that I had used an unapproved pesticide to spray my farm. He documented it and warned me not to use it again. Well, the approved chemicals are expensive and are not even available in this area unless I go to the big cities. So, I still buy this unapproved one to spray the farm; they see them every day, but the certification bodies can't even sanction those selling the pesticides, so how about me the farmer? I know it is against certification and is

not best practice, but the government should subsidise the price of the approved ones so we can buy some. (INF0442)

Through these narratives from loosely coupled actors in the cocoa value chain, it became clear that there are no substantive sanctions against cocoa producers who do not comply with the label's requirements.

6.4.7 Mapping and manual inspection of cocoa farmlands

According to Siaw et al. (2022), the steady increase in the demand for digital technology across CVCs is a result of consumers' and chain actors' aim to maintain efficiency, increase production capabilities, and enhance economic growth especially in emerging economies. However, evidence from the data suggests that certification bodies and other loosely coupled actors in the cocoa value chain have not been able to keep up with digital technology in their certification practices and still resort to traditional methods in practice. Arguably, some certification officers were of the view that their inability to adjust to the fourth revolution is impeding their practices both on farm and off farm.

The data suggest that certification officers and auditors use manual methods and tools in inspection and mapping, an era where the CVCs are driven by technology. As highlighted below in an extract from a technical field coordinator with Rainforest Alliance, the supervision and the monitoring of various certification activities are done manually, and managers of the programme have not been able to keep up with recent technology in their practices.

We have not been able to keep up with digital technology in our operations; as we speak, we still do manual inspections, with no drones to check the operations of field coordinators. The slow pace of technology in our operations is impeding the progress of the certification programme. Even though our managers have assured us we will be going digital soon, we are still waiting to hear when we will be migrating onto a digital platform. (INC0128)

The data further suggest that these claims by certification officers are not always applicable. One certification manager had an opposing view to that when interviewed. He revealed that the Rainforest Alliance certification programme has gone digital, which has enhanced certification practices and operations in Ghana:

Since 2017, we have gone fully digital with the point of interest mapper (POI mapper), so currently, we don't do our internal inspections using any form of activity by means of hard copy or document. In this way, we have reduced possible errors that might occur using the manual method. The digital makes the work easier; the software is more innovative and captures geo location data of our inspectors and farmers. Thus, it helps to ensure compliance, quality, and assurance with our farmers. (INC0121)

6.4.8 Weak training among farmer groups and produce buyers.

The certification standards require cocoa producers to undergo capacity building training to implement various agricultural best practices. This certification requirement among cocoa producers makes a significant contribution in farming practices and has also allowed cocoa producers to gain access to various on-farm and off-farm resources that have enhanced their ability to implement these certification requirements (Oya et al., 2017). Evidence from this study shows that most cocoa producers do not receive the necessary on- and off-farm training as the certification standard requires, and that is affecting the progress of various certification labels in Ghana. One certification field coordinator revealed how this weak training among farmers is affecting their operations in various clusters.

I have over two thousand (2000) cocoa farmers under me in my society who need to be trained on pruning, planting of shade trees, and agro chemical application. When we schedule a training exercise for these farmers, most of them don't turn up; we end up training about 1,200 out of the 2,000 farmers in my society. This is not helping to develop our farmers and improve our certification programme. (INC0125)

In a dialogue with one cocoa producer at Adasawase, she revealed:

Yes, our leaders told us from the beginning that we need to attend regular training, which will help us to improve our farming skills, but you know the dates and time for the training do not favour me. I need to be on my farm so, for the whole year, out of about three training sessions, I was able to attend only one. (INF0463)

The low amount of training received by farmers is partly a result of farmers' poor participation in cooperatives, which makes it difficult for COCOBOD, certification bodies, and LBCs to arrange more systematic meetings and training sessions. In sum, the economic dependency on cocoa is relatively high because it is still the main source of income for many farmers in Ghana. The implementation of certification programmes in the cocoa sector, to some extent, has helped cocoa producers to address some of the challenges they face in adhering to sustainable agricultural practices. Nevertheless, evidence from this study shows that various on- and off-farm activities of loosely coupled actors impede the successful implementation of the various certification labels in the cocoa sector. The views shared by various loosely coupled actors further demonstrate that these practices impeding certification are also a contributing factor to the perceived floundering of various certification programmes in Ghana's cocoa sector.

6.5 Chapter summary and conclusion

This chapter presented the findings of the interviews and focus group discussions conducted with those loosely coupled actors in the CVC whose practices enable (or impede) commodity certification programmes in organising, namely, the Ghana Cocoa Board, certification bodies, cooperatives, produce buyers, and cocoa farmers. Given the rapid rise of certified cocoa across the world and these bodies' apparent lack of support for commodity certification practices in the global south, the study aimed to explore the enabling and impeding practices for various certification labels.

The first theme looked at some enabling practices contributing to sustainable certification programmes in CVCs under two salient themes, namely, fostering the commodity certification transition and optimising certification practices in CVCs. The data show how some enabling practices, such as providing coaching and guidance support for farmers, investing in capacity building of cocoa farmers through farmer field schools, adopting digital payment systems, investing in shade trees, and pruning activities among loosely coupled actors combine to promote sustainable commodity programmes in the Ghanaian cocoa sector. In addition, practices such as the promotion of the integrated pest management programme, support for farmers acquiring farmland outside protected areas, support for commodity development projects, and the incorporation of community award schemes in certification practices for serious participating certified cocoa farmers were all revealed during the interviews and focus group discussions with some loosely coupled actors as facilitating practices of certification programmes in the CVCs.

The second theme unpacked the impeding practices to certification programmes in CVCs; it emphasised the on-farm and off-farm practices of some loosely coupled actors, that is, cocoa farmers and LBCs. The data show that various practices, such as the use of banned pesticides, farmers not declaring the right farm size for mapping, farming in protected areas, the excess workload of produce buyers, the lack of data sharing among produce buyers, and the low promotion of certification standards by produce buyers and cooperatives, are all underlying practices impeding the success of certification programmes in the Ghanaian cocoa value chain.

The third theme emphasised the regulatory and label-based bureaucracies in Ghana's cocoa certification programme. Evidence from the data shows how certain practices of the regulator, that is, the Ghana Cocoa Board, and certification bodies combine to impede certification programmes in organising. These practices include the promotion of agrochemicals by the

regulator, low adaptation of cooperatives and certification standards, CHED mass spraying exercise, percentage of premiums paid to the regulator, and weak training for farmer groups and produce buyers, all of which help to impede certification programmes in the CVC.

In conclusion, very diverse loosely coupled actors engage in cocoa certification programmes in Ghana. These actors have very different agendas and perspectives on the organising practices in certification programmes. Yet most loosely coupled actors identify market-related factors, such as premiums, consumer demand, and competitiveness among produce buyers, as some of the important benefits of certification among chain actors. Prior studies suggest that the adoption of certification standards in CVCs is associated with positive economic and environmental impacts, such as income generation, farm productivity gains, and reduced deforestation and pollution (Fenger et al. 2017; Ingram et al., 2018; Ansah et al., 2018; Dompok et al., 2021; Gboko et al., 2021). However, it was evident from the field data that various practices of loosely coupled actors, such as the promotion of agrochemicals by the regulator, the low adaptation of cooperatives and certification standards, CHED mass spraying exercise, the percentage of premiums paid to the regulator, and the weak training for farmer groups and produce buyers, are perceived to impede certification due to the effect on organising practices. In that regard, it would be necessary for the regulator (COCOBOD), certification bodies, and other loosely coupled actors to resolve the issues with such impeding practices and create stronger synergies among themselves to improve the uptake and performance of certification standards in the Ghanaian cocoa value chain. Meanwhile, the study have discussed some of the most promising facilitating practices to certification programme in Ghana's cocoa sector. Having presented the findings and analysis of this study, it is clear there are still some gaps in knowledge that need to be filled.

First, the study has shown that loosely coupled actors may have adopted some requirements that impede certification practices in the CVCs. As the study reveals, if there are produce buyers working in silos, weak adoption of the certification programme in the local communities, and no data sharing among LBCs, international chocolatiers and consumers are keen to know the practices regarding the certified cocoa beans, and if these impeding practices continue to persist, consumers may stop buying Ghana's certified cocoa and look for other markets thereby depriving farmers and other actors of jobs and premiums. Therefore, the study directs future research to investigate LBCs' organising practices for commodity certification in other related labels.

Second, this study makes a welcome contribution to the literature on commodity certification, more specifically, the organising practices related to certification programmes (Gockowski et al., 2013). The limitation of this study is that the findings are based on qualitative results from a limited number of loosely coupled actors from a single country. Hence, further research is required on a larger sample of loosely coupled actors in Ghana and other West African cocoa-growing countries. A more in-depth investigation is needed to develop the greater detail of the enabling and impeding practices to commodity certification programmes in organising.

CHAPTER 7

CONCLUSION

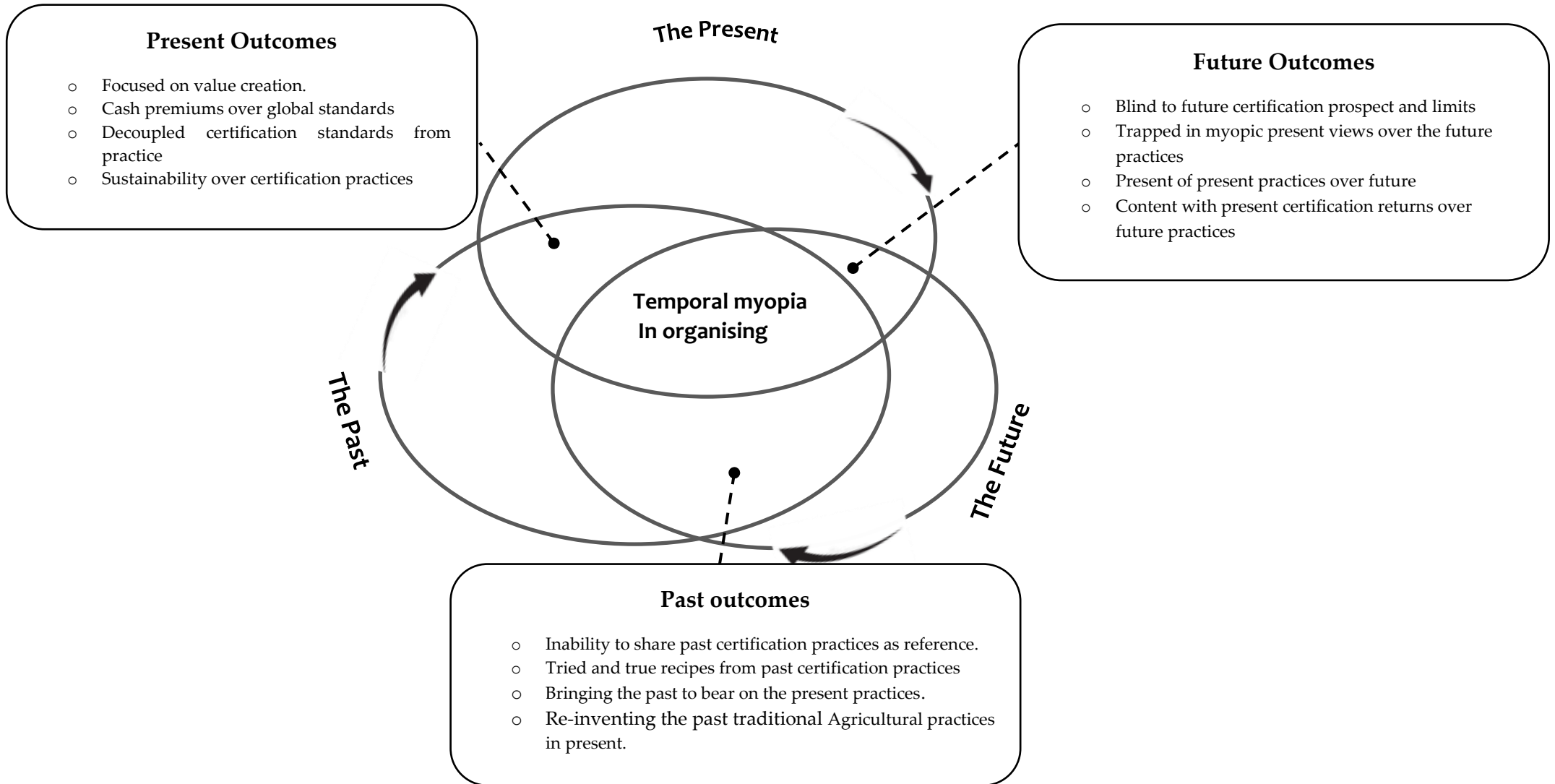
This study began by exploring the state of the art, how TM plays out in commodity certification programmes in organising, and the practices that facilitate (or impede) certification programmes in CVCs. Certification programmes are global standards designed to encourage sustainable agricultural production and improve the livelihood of commodity producers, their families, and their communities, however, this study have shown that certification programmes in commodity food chains across emerging economies are floundering in practice. Conceptualised as sustainable agricultural practice, third-party certification programmes typically use market mechanisms to change production and trading practices that, in turn, affect consumer and producer welfare, their families, and the environment (Barham and Weber, 2012; Ruben and Zuniga, 2011).

The overall aim of this study was to explore certification programmes in CVCs and understand how TM plays out in organising. Serving as a blocking mechanism to thinking in time streams (Sarpong et al., 2019), TM makes it difficult for the loosely coupled actors in the CVC, made up of farmers, certification officers, regulators, and buying companies, to escape their past practices as they keep 're-inventing the wheel' and focusing closely on what they could potentially capture from certification programmes in the present. The actions and decisions that go into capturing value from the programme are decoupled from the past and the future. In doing this, the actors ignore both the past, which normally includes the context in which they operated, and the future, that is, the socio-economic and environmental implications of their uncoordinated present practices on their future value capture. Thus, the study sheds light on how TM induces chain actors in their practices to ignore the past and the

future and focus on a single direction, that is, the present in their certification processes. Using the multidisciplinary and organisational management approach, this study transcends disciplinary boundaries to draw on notions and insights from disciplines ranging from sociology, geography, economics, and regional studies, to bring in a wider array of influences to the theory and practice of certification programmes in CVCs. In the context of the Ghana cocoa sector, two cocoa growing regions and one administrative capital served as the empirical research sites. This study adopted an exploratory qualitative research approach, and data for the empirical enquiry were collected using the qualitative method of interviewing, focus group discussions, and analysis of archival documents.

The main objectives of this study are three folds. First, it seeks to add to our knowledge of the organising practices and underlying challenges to commodity certification programmes. Second, it explores how TM plays out in commodity certification programmes in organising. Third, it sheds light on those practices that facilitate (or impede) certification programmes in CVCs. For the sake of brevity, this concluding chapter is divided into five main sections. First is the summary of the main findings and present a framework to illustrate how TM plays out in commodity certification in organising. The second section is a synthesis of the general contribution of the research to management theory and practice. In the third section, a general exposition of some highlights of the research, in the form of theoretical reflections, is presented under the broad categories of the implications for theory and for management practice. The penultimate section is an overview of some identified limitations of the research. Finally, some directions for future research are presented.

Figure 7.1 Temporal myopia in commodity certification programmes in organising.



Looking at figure 7.1, it shows how temporal myopia play out in certification practices in the Ghanaian cocoa sector. TM makes it difficult for the 'loosely coupled actors' in the CVC, made up of farmers, certification officers, regulator (the Ghana cocoa board), and produce buying companies to escape their past practices such as use of unapproved pesticides, engaging in traditional agricultural practices as they keep 're-inventing the wheel' and laser focusing on what they could potentially capture from certification programmes in the present. As shown in figure 7.1, TM serves as a blocking mechanism inducing loosely coupled actors to be content with their present practices, even though they decoupled certification standards from practice at present, they were more focused on the value (i.e., high yields) they could capture from the certification programme. In that regard, managers of the certification programmes were paying cash premium to capture the minds of cocoa producers rather than enforcing compliance. As suggested by Cunha (2004) and Sarpong et al. (2019), focusing on the past, where the outcome is already known, to predict the future means memories spring readily to the minds of the managers of the certification programme. Nevertheless, TM induce loosely coupled actors from engaging in active thought and analysis of their actions and decisions within the contingencies of global changing demands and requirements. A detailed of the study outcome is presented below.

1 Summary of the main findings

The main findings emanating from this study can be divided into three categories with each finding corresponding to one of the three broad questions driving the empirical enquiry on certification programmes in CVCs. First, the state of the art, that is how loosely coupled actors respond to certification programmes in CVCs. These responses include the organising architecture, structures, and processes which implicitly (or explicitly) specify regulatory and

institutional power structures, control mechanisms, and certification implementation processes.

7.1.1 The organizing structures, processes, and challenges to commodity certification programmes

An organisation interested in participating in the three audited certification programmes, namely, Rainforest Alliance, UTZ Certified, and Fairtrade (Paschall and Seville, 2012; Deppeler et al., 2014), first registers with the Ghana Cocoa Board (COCOBOD), the regulatory institution in charge of Ghana's cocoa sector. Before registering a certification organisation, the regulator ensures that the certification body and its participating cooperatives or LBCs meet all the regulatory requirements. These cooperatives and LBCs, as indicated, are farmer groups which certification bodies and other participating organisations need to align themselves with to be approved by the regulator for certification in Ghana's cocoa sector.

In the certification implementation process, the participating organisation (cooperatives and LBCs) first assesses potential cocoa producing communities. If the leaders of the chosen communities approve of moving with a particular certification label and its processes, then the certifying organisation embarks on a community-wide dissemination exercise, where cocoa producers aged 18 and above are free to join the cooperative or LBC to undertake the certification process and practices (Lemeilleur, N'Dao and Ruf, 2015; Gboko, Ruf, and Faure, 2021). After the community sensitisation exercise (awareness creation), participating cocoa producers' farms are inspected and mapped for certification. This means the members of the participating farmer group have agreed with the certification code of conduct and practices and have signed a contract and paid the required annual membership subscription fee with the cooperative or the LBC to engage in the certification programme.

To ensure compliance, internal and external inspections are conducted to guarantee that the cooperatives and LBCs are adhering to the global standard practices (Iddrisu, Aidoo and Wongnaa, 2020; Ingram et al., 2014). However, to achieve certification compliance, internal inspections need to be conducted periodically to pave the way for the external inspection, which is an annual exercise. Internal inspections are conducted by IMS managers especially with LBCs, while inspections of the cooperatives are normally conducted by the executives of the cooperatives and some selected farmers from the farmer group. Observed as a quarterly exercise by the IMS, an internal inspection determines which cocoa producers could potentially be at risk with regard to the certification programme (Donovan, Blare, and Poole, 2017; Uribe-Leitz and Ruf, 2019). Hence, these farmers need to be prepared, and this paves the way for the external audit with the certification bodies. In ensuring compliance, the external inspection is a surveillance audit, which is conducted annually on basic principles such as if the farm is close to a protected area, if there is a high risk of child labour, and others. Contrary to the above, external auditors consider three sources of evidence, that is, documents, which include reviews, interviews, and observation. After the external audit, the cooperatives and LBCs are given ten weeks to close non-conformance assessments before the certification body can conduct a final review and approve a renewal licence for them.

In contrast to the above, some deeply embedded, interrelated challenges to certification labels in the CVC were discussed. Decoupling in certification practices an institutional or an individual challenge which makes it difficult to distinguish between dominant organisational practices (Giuliani et al., 2017). As certification seeks to encourage sustainable agriculture, some actors decoupled their certification standards from practice and were engaging in traditional agricultural practices just to capture the immediate value from the certification programme rather than adhering to the global standard requirements. To this end, these

compelling issues surrounding certification practices in the cocoa value chain have led to a reduction in certified cocoa production centred on the non-conformity in practice. This makes it difficult for external auditors to measure and report on the standards and actual practice of cocoa producers and other loosely coupled actors during and after the external audit. Also, artisanal miners are taking over certified cocoa farmland in rural communities, especially in the research sites. Artisanal and small-scale mining was rampant in communities such as Adasewase, Akyem Apedwa, and Nkorosu. However, this illicit activity in the communities offers job opportunities to families since cocoa farming is the only major source of occupation in those communities. The incompetence of the regulator, that is, the Ghana Cocoa Board, to monitor and regulate activities in the cocoa industry contributes to the environmental threat. Furthermore, there were few reports of the various certification labels being undertaken in the Ghanaian cocoa sector, and the process was not as visible as expected. For instance, in some research sites, the number of registered cooperative members of the Rainforest Alliance certification label had remained the same since they began to operate in the area. This shows that the tales of various certification labels have not been fully communicated; some uncertified cocoa producers in the research sites visited were not even aware of the cooperatives and various certification labels working in the communities. Therefore, the Ghana Cocoa Board and certification bodies have not done much to disseminate and champion the objectives of certification in the Ghanaian cocoa sector.

Also, the substitution of global standard best practices for cash premiums was a key challenge underpinning certification practice. Interestingly, the main implementers of the certification programmes (cocoa farmers) could not foresee the main objectives of certification—encouraging sustainable agriculture through global standard best practices while improving the livelihood of commodity producers, their families, and the environment in which they

operate. About 80% of cocoa producers were very concerned about the premium they could potentially receive for engaging in certification, and not so concerned with the compliance requirements. To some extent, some cocoa producers have stopped the certification programme, while others have moved to join other cooperatives and LBCs due to variations in the premium. For the regulator (Ghana Cocoa Board), paying a premium was a means to obtain the required yield of cocoa to meet the global market demand. Even though some loosely coupled actors were aware of the objective of certification programmes in the cocoa value chain, it was not the focus in practice; instead, the focus was value capture through premium payments. In understanding the practices contributing to the floundering of certification programmes in the Ghanaian cocoa sector, it was identified that there was no national policy for certification. Even though the regulator confirmed that certification is voluntary, there was no single unit purposely dedicated to certification despite the regulator's assent to certification bodies operating in the cocoa sector. The absence of a national policy makes room for certification bodies to operate according to own their standards, that is, the chain of custody and code of practice which has become the official regulatory documents for certification labels operating in the cocoa sector in Ghana (Ingram et al., 2014).

7.1.2 Influence of temporal myopia in certification practices

The second finding from the study is related to how TM plays out in commodity certification in organising. TM is an individual's or organisation's predominant tendency to focus attention on either the past, present, or future (Gjesme, 1983; Lasane and Jones, 2000). The TM syndrome induces loosely coupled actors in their situated practices to consider the present value capture from the certification programmes without considering the past lessons or the future implications of their decisions in the present (Wittmann, and Paulus, 2009; Wittmann and

Sircova, 2018). The finding here shows that certification bodies, the regulatory bodies (COCOBOD, the Forestry Commission of Ghana), and other loosely coupled actors have articulated the vision to map and monitor the protected areas they have clearly defined in their long-term strategic plan. However, these actors have not been able to integrate the short- and long-term vision of these activities into practice. Instead, they tend to overlook the future implications of farming in and around protected areas (Baudron et al., 2011; Hendershot et al., 2020). The regulatory institutions were unable to anticipate the importance of integrating into practice the vision of protecting forest areas. The TM syndrome discourages the regulatory institutions from mapping and monitoring these protected areas. Meanwhile, although the Forest 2020 programme on combating deforestation requires the Forestry Commission of Ghana to trace and monitor protected areas, to date, COCOBOD and the Forestry Commission of Ghana have not been able to integrate the initiative by Ecometrica into practice.

Besides, the ban on unapproved pesticides was documented in the long-term vision of the regulatory institutions. Despite the EU and the COCOBOD banning use of these unapproved agro chemicals, they still make their way into the Ghanaian agro chemical market space. As indicated in this finding, COCOBOD is interested only in the short-term benefits from cocoa production, that is, a high yield to meet the global market demand and not the long-term consequences of using unapproved pesticides by cocoa farmers on their farms. TM induces the regulatory institution and cocoa farmers to forego compliance measures that prevent these farmers from using banned pesticides on their farms. Also, the certification standards require the ongoing training of cocoa farmers and other chain actors by the regulatory institutions; however, this finding indicated that the cooperatives and LBCs participating in certification do not put into practice the training requirements outlined in their long-term strategy. They

all engage in short-term strategies, which does not support the long-term objectives of certification.

In addition, this finding shows that actors involved in various certification programmes were content with their current practices and performance. By identifying this behaviour, the findings re-enforce the idea of Opper and Burt (2021) that managers may sometimes forego the long-term standard structures and consider immediate initiatives instead, which makes it difficult to achieve the long-term organisational goals. Regarding certification practice, loosely coupled actors were content with the present performance of the certification programmes in the Ghanaian cocoa sector. For instance, this finding shows that TM induces certification bodies and their participating cooperatives, produce buyers, and cocoa producers to forego the long-term objective of the various certification labels, that is, ensuring sustainable agriculture through compliance with best practices and instead preferring to use a cash premium as the 'selling story' for certification practices. Notwithstanding the long-term implications of ignoring the importance of sustainable agriculture at the present stage, the various loosely coupled actors were content with the performance of the various labels and the outputs of certified cocoa production.

Furthermore, TM induces cocoa producers to decouple certification standards from their situated practices. As the main implementer of certification, TM limits their ability to foresee the long-term implications of foregoing sustainable global agricultural best practices and instead using their traditional farming practices, that is, engaging in traditional agricultural practices rather than certification practices. However, some cocoa producers revealed that certification has increased their workload but offers fewer incentives to meet the standard requirements, thus forcing them to return to their traditional practices with less regulation and fewer conditions. As this finding revealed, the proclivity of cocoa farmers to repeat

behaviours that provide them with an immediate advantage, which in the long run, is ignored by certification bodies and other chain actors such as the regulator (COCOBOD), the long-term disadvantages are the result of TM preventing these actors from foreseeing the intended consequences at the time (Suddendorf and Corballis, 2007; Shipp et al., 2009). Instead, these actors focus on the output and the present value that they could potentially capture from the certification programme. Therefore, TM has become a stumbling block preventing cocoa producers and other chain actors from considering the past lessons and even the future consequences of their current application of traditional methods of farming rather than the global standard practices. As stated by a recent report by Bloomberg, certified and conventional cocoa production in Ghana has continued to decline in recent times (Bloomberg.com).

Apart from that, COCOBOD, the regulator, supports sustainable agriculture and not certification. Even though COCOBOD oversees all the activities in the Ghanaian cocoa sector, there are no clearly defined objectives for certification standards. They receive both certified and conventional cocoa beans from LBCs for export. COCOBOD, however, could not foresee the long-term effects of adopting and supporting sustainability over certification in an era where there is high demand for certified cocoa beans across the world. For instance, the Rainforest Alliance certification body revealed that the level of isolation COCOBOD has imposed on certification organisations to operate means it is difficult for them to make certain tough decisions in their operations. This is because COCOBOD as a regulator does not recognise certification as a means of promoting sustainable agriculture in the cocoa sector. In contrast, certain produce buyers prioritised the implementation of both sustainability and certification programmes. As this finding shows, the benefit for produce buyers' multiple task

initiatives was immediate, allowing them to gain a competitive edge in the cocoa purchasing space in Ghana.

In echoing these findings, the inability of loosely coupled actors to foresee the importance of reflecting on the past experiences of certification officers and other countries' success stories regarding the present certification practices is known as the TM syndrome, which discourages them from engaging in their active taught in sharing past practices as a reference in the present. Most importantly, the ability of these loosely coupled actors to shift their focus from not just the present but also the past describes their long-term approach to meet certain future certification objectives (Lu et al., 2022). Past-focused individuals or organisations who positively evaluate past events are more likely to achieve their present and future goals (Sobol-Kwapinska and Jankowski, 2016; Zimbardo and Boyd, 1999). Yet the finding shows that TM induced these loosely coupled actors to exert a degree of control over the allocation of attention to re-consider past practices from global lead firms and other certification participating countries in the global north. For instance, successful certification countries such as Japan, Malaysia, and others, which could have potentially served as a reference point in the present, were not in the thoughts of these certification managers.

In sum, the inability to implement strategies from other certification-participating chain actors in present practices in Ghana's cocoa sector is due to the low level of education among loosely coupled actors. It is clear that education on past certification practices springs readily to the minds of certification officers and other chain actors. This is because LBCs and other chain actors are much more focused on the present value capture and cash premiums rather than on educating their registered certified farmers and members. For instance, this finding shows that erratic rainfall and the increased prevalence of pests and diseases are additional restraints

causing damage to cocoa farms. However, TM prevents cooperatives and LBCs as well as COCOBOD from educating farmers on past rainfall patterns and their impact on their farms and the environment. This education could have given cocoa producers an overview of the past rainfall and its impacts on their farms as well as effective measures to overcome future disasters. The low level of education among cocoa producers and certification managers is described as a contributing factor to the environmental threat, which in turn, leads to the floundering of certification programmes. Again, cocoa producers were selling their certified cocoa farmland to artisanal miners in the rural communities in Ghana. These farmers were content with the immediate offers from the artisanal miners without considering the future implications of the mining activities on the environment and their livelihood. The 'cool' feeling in the present and the 'warm' outcome in the future is a result of TM persuading these farmers to accept high offers and sell their farmland to these miners without considering the future implications of their present actions. As emphasised by Wittmann and Sircova (2018), it is obvious how present feelings may be so powerful that consideration of future practices is sometimes forgone.

7.1.3 Enablers and inhibitors to certification programmes in organising.

The third finding from this study draws on the practices that facilitate (or impede) certification programmes in CVCs. Providing coaching and guidance support to certified cocoa farmers was one practice adopted by various cooperatives and LBCs participating in cocoa certification programmes in Ghana. With the practical expertise in agriculture, certified technical officers from the various certification bodies, cooperatives, and LBCs provide a tailor-made coaching practice to enhance the already practical skills of cocoa producers in meeting the global certification standards (Dala et al., 2021). The regulator, that is, the Ghana

Cocoa Board, provides farm support in the form of pruning, shade tree planting, and a mass spraying exercise for farmers. They ensure that these farmers in the cocoa sector are guided and coached to execute these farm practices.

Another fascinating practice that has been introduced by certification bodies to overcome the floundering of certification programmes in the cocoa value chain is the introduction of the FFS. This offers developmental on-farm and off-farm training opportunities for cocoa producers to develop their practical skills in their field of practice. The FFS also provides cocoa producers with a participatory-based training through pictorial, observational, and experimental, as well as knowledge-sharing avenues where farmers can express their concerns in their native language. The training manuals and materials are also translated into the local language.

Furthermore, local LBCs have introduced a digital payment system to replace the physical cash payment system. The migration to digital payments decreases the risks associated with cash payments, such as fraud and theft, as well as removing the dread of being robbed at gun point. It also presents cocoa producers' households with the opportunity to access credit, operate a savings account, receive remittances, and apply insurance products, which could enhance their agricultural practices and livelihood. To the produce buyers, obtaining digital records of payment in the cocoa sector via digital payment services, such as bank transfers and mobile cash transfers, will help trace the route of transactions from the farmer to the produce buyer. For COCOBOD, a digital payment system provides safe, rapid, and secure transactions, and empowers cocoa producers in Ghana to use existing digital financial instruments to access financial services and close the financial inclusion gap in the cocoa sector.

Additionally, the Rainforest Alliance in partnership with the Conservation Alliance in recent time have introduced an IPM programme. The programme was introduced to reduce the over-dependence on pesticides for controlling diseases and pests in cocoa production. The IMP also aims to improve cocoa producers' access to quality farm inputs as well as the adoption of alternatives to HHPs. Besides, it will also ensure sustainable agriculture due to the proliferation of several marketing and distribution outlets for agro chemicals, as many retailers and distributors are selling unapproved pesticides in the cocoa value chain. Further to that, this finding shows that investing in shade trees and pruning initiatives by the Ghana Cocoa Board, supporting community development projects by cooperatives and LBCs, and incorporating award schemes for hard-working certified cocoa farmers and their families were all initiatives introduced by certification bodies through their participating cooperatives and LBCs, and the Ghana Cocoa Board, to facilitate certification programmes in the Ghanaian cocoa sector.

Notwithstanding the above practices enabling sustainable certification practices in the cocoa sector, there are inhibitors in these practices. The use of banned pesticides by cocoa farmers was one inhibitor to certification practices. Despite the Rainforest Alliance and the Ghana Cocoa Board's guidelines and regulations on banned pesticides, some recalcitrant cocoa producers were still using these blacklisted substandard pesticides on their farms. However, most cocoa farmers in rural communities were unaware of banned pesticide types, their hazards for health and the environment, and the necessary safety precautions. Furthermore, the approved pesticides are expensive and in short supply, and that compelled them to buy these unapproved chemicals to spray their farms. The implication for their decisions is that there is a reduction in production, and some of their cocoa trees are also dying.

Also, declaring the right farm size for mapping by cocoa producers was a massive challenge to certification practice in the Ghanaian cocoa sector. The findings from this study show that most cocoa producers were not willing to reveal the correct farm size to certification officials for mapping, the reasons being that certification practices are an extra responsibility for them. In addition, they cannot afford the annual dues and subscription charges from the farmer groups. These reasons compel some cocoa producers to declare just a small portion of their farms for mapping. This behaviour among cocoa producers in the Ghanaian cocoa sector is an impeding factor to certification practices since it does not contribute to there being accurate data on certified cocoa farmlands. Meanwhile, some certified cocoa producers were also selling their certified harvested produce as conventional cocoa to produce buyers. The competition among LBCs in meeting their required certified and conventional tonnage from their purchases compels LBCs to build an extensive network with their cocoa farmers, where some even forego the contractual agreements with their certified produce buyers to favour uncertified buyers or other certified label produce buyers for immediate cash or farm inputs. Likewise, farming in (or along) protected areas in the Ghanaian cocoa sector was another inhibitor to certification practices. These findings show that the regulatory institutions (COCOBOD, the Forestry Commission of Ghana, and the certification bodies) have not been able to monitor and protect the forest reserves, thereby allowing these cocoa producers in the various cocoa growing regions to farm within and along these reserves, which is against the certification code of practice. Even though the study shows that farming in protected areas has been documented by the industry regulators, the lack of well-demarcated boundaries of protected areas is also a contributing factor to the encroachment of cocoa producers in and along these protected areas.

Apart from that, loosely coupled actors – cooperatives, certification bodies, LBCs, the Ghana Cocoa Board - working in silos was another impeding practice identified in this study. This institutional and individual behaviour among chain actors was identified in this study as a hindrance to certification operations and sustainable agriculture in the Ghanaian cocoa sector. Although, certification bodies were working hand in hand with their cooperatives, this finding shows that some LBCs were ignoring the certification standard requirements and implementing their own certification and purchasing strategies in silos without the involvement of other actors in the cocoa sector. This has led to a reduction in certified cocoa production and export in Ghana. Apart from that, premium payment and disbursement was another inhibitor to certification practices in the CVC. Even though paying a premium has been the strategy to persuade more farmers to register onto the certification programme, certification managers undermine the payment and distribution procedures. It is revealed that LBCs make premium price judgments on their own. Although such a strategy may allow these LBCs to maximise the rewards on their certification programme investments, it appears to contravene the certification programmes' codes of conduct and criteria.

Moreover, there was low promotion of certification standards by LBCs and cooperatives in the cocoa growing communities. LBCs offer on-farm training in these areas, such as seedling planting, fertilizer application, weedicide application, pesticide spraying, mapping, pruning, and other farm practices in cocoa production, as well as education on environmental and social practices in the cocoa sector. In contrast, this finding shows that only 25% of LBCs in Ghana are engaging fully in certification; the rest are piloting the programme in their respective zones in the cocoa sector (Dompheh, Asare and Gasparatos, 2021). Due to the lack of promotion of certification, cocoa producers continue to adopt traditional agricultural practices, which does not support sustainable agriculture, something certification seeks to

achieve. There is a lack of awareness about various certification labels, such as Rainforest Alliance, Fairtrade, and UTZ Certified, in the cocoa growing regions. Other inhibitors, such as no data sharing among LBCs, poor registration and record keeping of certified cocoa producers, timing of CHED pruning and calendar spraying exercise for cocoa farmers, no sanctioning procedures for non-conforming farmers, are all practices contributing to the floundering of certification programmes.

The analysis of the organising practices and the underlying challenges to commodity certification regarding organising, the complexities in temporal coordination, and the practices that facilitate (or impede) certification programmes fleshed out some useful insights which provide conditions for the floundering certification programmes in the CVC. This is in sharp contrast to the assertion by Barrientos and Smith (2007) that certification programmes have contributed to the development of commodity production and livelihoods in the global north. This study lends support for the view of the 'temporal myopia approach' as the syndrome affecting loosely coupled actors' cognitive bandwidth, thereby changing how they organise and make decisions related to creating and capturing value from the certification programmes within the contingencies of the socio-economic environment in which they operate.

7.2 Contribution of the research

Certification programmes are standards for production and management practices. They also ensure the sustainable production of commodities and guarantee that the product meets a set of social, economic, and environmental standards while satisfying consumers consumption preferences. The study conceptualises certification programmes as sustainable practice, which not only ensures compliance but also facilitates organisational process and enhances

producers' well-being over time. It also presents implicit or explicit understanding about how the organising practices of loosely coupled actors combine to precipitate the floundering of certification programmes in CVCs. The study makes three main contributions to fill the knowledge gap in certification programmes in the CVC literature.

First, regarding the state of art of commodity certification programmes, an important potential outcome was conveyed in the empirical account of how loosely coupled actors in the CVC respond to certification practices. Highlighting the organising practices in certification programmes, this study contributes to the literature on certification programmes (Aidoo and Fromm, 2015) by shedding light on the certification architectures, organising structures, and procedures and some underlying challenges in practice. This study delineates the historical pathways towards certification practices in an emerging economy, namely, Ghana. Although there has been a call for scholarly attention to the role of government policies in improving sustainable agriculture through certification (Gockowski et al., 2013), much of the existing literature has focused on advanced economies in the global north with relatively stable institutional environments (Neilson and McKenzie, 2016). This study attempted to extend understand of this by addressing this issue and examining the organising practices of loosely coupled actors in an unstable institutional environment in Ghana as a developing country. Relatively few studies on certification programmes in CVCs have considered the state of the art, that is, the organising practices and underlying challenges in practice. This study enriches this line of research by demonstrating how the competing interests of loosely coupled actors contribute to the floundering of certification programmes. In so doing, this study responds to the calls by scholars (e.g., Blackman and Rivera, 2011; DeFries et al., 2017) for the need to

consider certification as a mechanism for ensuring sustainable agricultural production in CVCs.

Second, the study provides a theoretical explanation of the practices that enable (or impede) certification programmes in organising. Therefore, insights into the practices of loosely coupled actors that enable value capture and hinder certification operations were provided. This will be a significant contribution to the literature on value chain actors, as it highlights the practices of various value chain key actor's actions and decision in the cocoa value chain, which in turn leads to the floundering certification programmes (Ansah et al., 2020).

Third, the study contributes to understanding how the complex taken-for-granted everyday organising practices of chain actors could combine to facilitate (or impede) the rapid demise of certification programmes in the CVC. Also, by integrating the TM theoretical approach, this study derived a new measure, the TM framework, which shows the importance of organising practices over the existing structure and processes to certification programmes in the CVC. By doing so, this study contributes to the already vast and informative research on certification programmes. This study has also provided evidence as to how the TM syndrome affects loosely coupled actors in their situated practices, thereby decreasing their cognitive bandwidth and changing the organisation and decision-making related to the creation and capture of value from the various certification labels in the CVC.

By drawing on the TM approach, the findings from the empirical inquiry and the study as a whole contribute to the existing burgeoning literature on certification programmes and the more recent emerging literature on CVCs (Ingram et al., 2014; Oya et al., 2017; Fenger et al., 2017; Oya et al., 2018; Ansah et al., 2020) by showing how the TM syndrome affects loosely coupled actors in their everyday organising practices in CVCs. From this perspective, the key

contribution is in narrowing the widening gap between the theory and the practice of certification programmes and highlighting how the pressures on actors to meet present needs captures the attention of the actors, thereby decreasing their cognitive bandwidth and changing how they organise and make decisions related to creating and capturing value from the certification programmes within the contingencies of the socio-economic operational environment.

Furthermore, the study contributes to understanding how the desire to capture price premiums drives the actions and decisions of actors in CVCs. However, the study does not only extend our understanding as to why certification programmes in some CVCs may be more successful than others through the payment of cash premiums; it goes a step further to show how taken-for-granted everyday organising practices and the substitution of global certification standards for cash premiums could combine to facilitate (or impede) the rapid demise of a certification programme.

7.3 Limitations of the Research

This study offers several insights into certification programmes in CVCs, but these are bound by some limitations. First, this study was based on a single-country, Ghana. We believe that the theoretical rationale the study presented – temporal myopia in commodity value chains – will be relevant in other emerging economies as well. Similar studies on commodity certification programmes in other emerging economies could validate the findings of this thesis and establish the generalizability of this study findings.

Second, data limitations precluded this study from including cocoa producers engaging in sustainability practices, which also seek to address General Agricultural practices (GAP) in

the analysis of this study finding on certification programmes in the commodity value chains.

Addressing this limitation will further enhance the generalizability of this study findings.

Third, this study involved a large sample, especially cocoa farmers who are the main implementers of particular certification programme. A more focused qualitative study of select institutions and transnationals could complement this study findings and tease out further nuances of certification programmes in organising.

Finally, this study does not comprehensively account for the number of inspections conducted by cooperatives, license buying companies and their certifying bodies. However, prior studies suggest mixed results on how certification bodies conduct inspection in other related commodities, even though some actors indicated in this study that inspections under LBCs are low, a more comprehensive study on internal and external inspection to certification is required in the sector.

7.4 Implications of the research for theory

Outlining how the blocking mechanism (TM) restricted various loosely coupled actors in their certification practices, this study has provided a fine-grained understanding of how TM plays out in commodity certification in organising. Thus, in conceptualising how TM may play out in the implementation of certification programmes in the CVC, the study adds to a theoretical understanding of how the overwhelming pressure on actors to meet present needs captures the attention of these actors, thereby decreasing their cognitive bandwidth and changing how they organise and make decisions related to creating and capturing value from the certification programmes within the contingencies of the socio-economic environment in which they operate. By adopting the concept of TM from institutional and individual perspectives (Karniol and Ross, 1996; Michel and de La Croix, 2000; Kim and Zauberger,

2009), this study illustrated how the attentional practices of these actors shape a key strategic decision in organising practices in certification programmes. This finding is especially notable because the literature has conceptualised TM at the organisational level. For instance, the social network of TM has emphasised that in the absence of any outreach strategies, organisations and individuals are more likely to focus on short-term efficiency goals and to develop a myopic focus on the present with a neglect of the past or the future (Schwahn and Spady, 1998; Slawinski and Bansal, 2015; Opper and Burt, 2021). Similarly, the strategic foresight literature has stressed that the ability of individuals or organisations to foresee the temporal connections of the past, present, and the future is their ability to occupy the intellectual space which brings these memories, expectations, and attention into practice (Shipp et al., 2009; Catino and Patriotta, 2013; Sarpong et al., 2019). Neither stream has addressed the organising practices of loosely coupled actors in determining how the past, present, and future practices combine to contribute to the floundering of certification programmes in the CVCs.

The paucity of research on this topic is especially striking because TM theory scholars have long recognised that the short-sightedness of chain actors have a significant impact on organisational practices (Amit and Schoemaker, 1993; Nadkarni and Chen, 2014). Hence, this study suggests that loosely coupled actors' temporal focus may serve as an attentional fitter in determining the degree to which past experience, present practices, and future orientation drives commodity certification in organising practices (Shipp and Aeon, 2019; Guo et al., 2012). Moreover, the Ghana cocoa board's myopic orientation has a weak relationship with the focus of certification bodies, cocoa producers, and producer-buyers. This suggests that the regulator (COCOBOD) has a different interest compared to certification bodies and other

loosely coupled actors. By drawing on the TM framework from CVCs, this study informs how consideration of TM in commodity certification programmes can stem from loosely coupled actors' organising practices. In this way, this study explicates the foundation of how time is manifest in strategic decisions and behaviours among loosely coupled actors in organising in commodity certification programmes. By considering the past, present, and future focus among chain actors as distinct dimensions, the multidimensional TM framework presents an integrated understanding of how thinking within timestreams is manifest in organising practices in certification programmes (Katelaris, 2011; Blagoev et al., 2021). Adopting a holistic perspective to TM in practice (Fredrick, 2002; Ridge et al., 2014; Opper and Burt, 2021), this study provides a searing insight into how the actions and decisions of a range of loosely coupled actors embedded in CVCs within the contingencies of global changing demands and requirements may contribute to the rapid floundering of certification programmes in the Ghanaian cocoa sector. In summary, the conceptual framework of this study helps bridge apparent discrepancies in prior studies and creates new opportunities. Through the TM lens, scholars can develop more coherent and logical theoretical arguments on TM than is currently possible with the prevailing conceptualisation of TM in the international business literature.

7.5 Implications for practice

The findings from this study have several positive implications for managers. First, this study encourages loosely coupled actors especially the regulatory institutions, that is, the Ghana cocoa board, and certification bodies to eliminate measures that contribute to short term advantages to organising practices in commodity certification. Therefore, there is the need to overcome the long-term perception that certification can only improve by paying cash premiums to farmers, which has been the notion over the years. This study may encourage

certification bodies and the government of Ghana through COCOBOD to overcome TM and design effective policies which will be a disincentive to the short-term measures such as payment of cash premiums, excessive pesticide usage, and many other short-term strategies in certification practice which this study finding revealed. Second, the Ghana cocoa board, the Forestry commission of Ghana and the certification bodies should reconsider the boundaries of protected areas for cocoa farmers—a key impeding factor for Ghana was the inability of certification bodies to have a clearly defined boundaries of protected areas in the Western and Eastern Region by simply allowing cocoa farmers not to farm around such areas which limits the certification bodies intentions of expanding across other regions. Third, the most significant part of this study is how these cocoa farmers who do not adhere to certification practices, for instance, this study findings shows how farmers who use unapproved pesticides are able to sell their cocoa beans as certified or conventional without considering the future implications on their farms and their country. Therefore, this study suggests that certification bodies need to review the certifications code of practice, where there can be sanctions in the form of punishment and non-conformance fines for cocoa producers who do not adhere to the global standard requirements. In the long term, these sanctions would discourage farmers from engaging in traditional farming rather than certification practices.

7.6 Directions for future research

First, this study contributes to the TM literature and highlights potential opportunities for further theoretical and empirical inquiry into the organising practices in commodity certification programmes. Future studies could also go further to investigate how TM plays out in practices in the performance of related commodities in other emerging economies. These suggested lines of inquiry should help both academics and managers to better

understand the organising practices of certification programmes in the CVCs, and how they could overcome TM to create and promote sustainable Agricultural best practices in the commodity sector. Second, although the data collection for this study was carefully organised, this study can only be classified as a cross sectional analysis of the practices of loosely coupled actors due to the short period in which the different certification labels were explored in the Western and Eastern region of Ghana. Because the relationships and behaviours of these loosely coupled actors may change over time, the research findings may not provide a comprehensive picture of the floundering certification programmes if a longitudinal view of practice is lacking. In this regard, a longitudinal study on the organising practices duplicating this research findings may be required to determine whether more investigation might be conducted. In addition, such a longitudinal study may go further explore the current performance of the various certification labels in relation to competing sustainability practices in the CVCs. Third, future researcher could explore further and develop in greater detail the state of art, the practices that facilitate (or impede) certification in organising in order to address the deficiencies in such practices. Finally, this study could revitalise research on certification programmes in commodity value chains (CVCs), this study findings support the thesis that certification bodies and their respective cooperatives, and license buying companies (LBCs) have placed more emphasis on external inspections and little focus has been given to internal inspections in the CVCs. Further empirical research is needed to better conceptualise and understand the frequencies of inspection under LBCs participating in certification programmes in CVCs.

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APPENDIX

Overview of the Themes and Questions included in the Interview Guide

How have certification programmes come to be labelled and identified as floundering in commodity value chains?

Name, gender, age, can you tell me a bit about your job? How many years have you been working in this sector?

1. Can you please tell me which third-party certification programmes you have adopted into your industry and why? UTZ Certified, Rainforest Alliance and Fairtrade and SAN-RA, Fairtrade Label Organisation (FLO) etc.
2. Can you please tell me what criteria are used in the selection of farmers onto the certification programme/ certification requirements?
3. Which year did you begin certifying farmers and what was the early response. What has been the response from other stakeholders within Ghana's cocoa industry.
4. Is there any cost associated with the selection criteria for any of these certification programmes? UTZ, Rainforest Alliance and Fairtrade FLO, FLO, etc./ Am aware farmers' membership fees and how often and how is it paid?
5. Can you explain to me why you think certification has become popular and important in the commodity industry these days?
6. I understand institutions and other stakeholders play a key role in the certification implementation process. Can you tell me a bit about their level of engagement in the certification programme? What are these institutions?
7. Certification programmes such as UTZ, Fairtrade, Rainforest Alliance, SAN-RA are seen in other African countries as struggling to meet their objectives. Do you observe the same in the cocoa sector, and if yes, what do you think might have accounted for this?
8. From your perspective, what do you think are the factors accounting for these floundering effects in the implementation of these certification programmes? Are there any chain barriers?
9. From your perspective, do you think the certification programme has been materialized in Ghana's cocoa sector? If yes, at what level?

10. What mechanisms can be put in place to curb these floundering effects of the certification programme? In your view, is there any advice for stakeholders managing certification in the cocoa industry?

11. How often do internal audit and external verification for compliance to certification programmes done, how often is this activity done? How often is inspection done by both the internal and external auditors? Seems.

What are the practices that facilitate (or impede) certification programmes in commodity value chains?

1. What do you think are some of the practices that have facilitated or contributed to the growth of certification programme over the years in Ghana's cocoa industry. And what are the factors that impede the certification programmes in the cocoa industry.

2. Can you tell me the motivation behind farmers entering into certification irrespective of its associated cost?

3. What factors do you think have sustained the certification programmes throughout the years?

4. I am aware certified farmers are paid premiums and other incentives on the sale of their cocoa beans to licensed buying companies. In your view, how attractive are these premiums and incentives, and how often do farmers receive them?

5. What do you think stakeholders (COCOBD LBCs, lead firms, and many others) can do to promote and improve certification programmes in Ghana's cocoa sector?

6. Are there any barriers impeding the implementation of cocoa certification programmes from local, regional, national, or global levels? From management and producers' perspective.

7. I am aware, farmers need to go through series of training before their farms can be inspected and verified for certification, do farmers recognize the objective of certification during the verification period? Do farmers comply with certification practices? If not, why?

8. There are times when certified cocoa farmers sell their cocoa beans to conventional organizations without considering the licensed buying companies. What do you think might

account for this behaviour among cocoa farmers? Why are certified cocoa beans sold to conventional buyers?

9. Can you share with me the level of certified farmers' awareness about the certification objectives? What of non-certified cocoa farmers' level of awareness of certification objectives, in less agreement with requirements, and perceived lower expected benefits from certification?

10. Can you kindly share with me the auditing process in the certification programmes. How often are farmers /associations and other stakeholders audited?

How does temporal myopia account for the floundering of certification programmes in the CVCs?

1. What is the strategic plan for implementing certification programmes in the commodity industry?

2. From your perspective, did you see any rush by certification officers in implementing certification programmes at the beginning? Also, how are stakeholders responding to the certification programmes in present times?

3. What has been the response from farmers against cocoa certification from the past? Has there been any resistance?

As a cocoa farmer, do you have any reason why you think your farm should be certified? What are the certified farmers groups, and what are some of the decisions you make about certification programmes?

4. How sustainable is the certification programme in the cocoa industry? Has it served its intended purpose over the years?

5. Can you tell me if there has been any benchmark from other countries on the implementation process of the certification programme from the past?

6. Why do you think certified cocoa farmers are still poor despite proposed incentives and premiums for certification?

7. What do you think has accounted for the collective turnover (departure) of farmers from the certification programme?

8. Can you tell me if there is any sense of decoupling arising aftermath of certification? and in which form, please?

9. Child labour is a major issue confronting the cocoa industry. Can you tell me why these deviant vices still persist in the cocoa growing areas? Do you consider this in your certification requirements?

10. What are some of the benefits of certification programmes to Ghana's cocoa industry, LBCs, cocoa farmers?

11. From your perspective, how do you see the future of certification schemes in Ghana's cocoa industry?

PARTICIPANT INFORMATION SHEET

Study title: Exploring certification programmes in commodity value chains: A temporal myopia perspective.

Invitation Paragraph

Thank you for your time – you are being invited to participate in a research study. Prior to deciding on the request, it is crucial that you are fully made aware of the purpose of the study and what it entails. The below information sheds further light on this and you are welcome to talk about it with others if you would like. What is more, please do not hesitate to revert with any questions within 48hours before the interview and about the study to make an informed decision.

What is the purpose of the study?

The study aims to explore third-party certification programmes in the cocoa commodity value chain. specifically focuses on the organising practices of loosely coupled actors in the commodity value chains whose practices have direct impact on certification. The issue of certification was chosen as it is something that over the years consumers have raised concerns about the unethical practices surrounding the commodity agricultural food chain. This is of great significance to stakeholders and to commodity producers who over the years have gone through unethical environmental and social practices in production. The research in particular touches on third-party certification programmes in the commodity industry, and collective myopia as a lens to examine the organizing practices of loosely coupled actors and understand why certification programmes in the commodity industry has not been materialized over the years. the study will be fully completed by ending of December 2021 and a full report with the findings will be compiled by ending of 2022.

Why have I been invited to participate?

You have been chosen to participate as you have met the criteria for inclusion to take part in the study:

- 1) Be an actor in the cocoa sector (certification officer, certified auditor, license buying company implementing certification, cooperative/farmer group, certified cocoa farmers) in the commodity value chain who plays or has previously played a key role in the implementation of certification programmes.
- 2) A cocoa farmer either certified or license revoke from the programme.
- 3) The actor must have involved in the implementation and supervision of the certification programme (direct or indirect).

Do I have to take part?

As participation is entirely voluntary, it is up to you to decide whether or not to take part. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part, you are still free to withdraw at any time and without giving a reason.

What will happen to me if I take part?

After gaining consent from yourself, you will be invited to take part in a face-to-face semi-structured interview at a set date, time, and place that is convenient for yourself and the researcher. The interview will last around 50-60 minutes. You will first be briefed. This involves being told that your voice will be recorded, made aware you will be given a pseudonym in the write-up of the report, and asked not to repeat the information spoken about during the interview. You will also be told about your right to withdraw by 31 December, 2021 of the interview if you are uncomfortable and do not wish to carry on participating. The actual interview is separated into sections related to how third-party certification programmes have been implemented in the commodity industry, the role of

certification officers within the commodity value chain, and how commodity producers have adhered to certification programmes over the years. Once the interview is ended you will be given a debriefing sheet to keep. You will also be allowed to speak about any of their concerns that you may have with the researcher. Contact details of the researcher will also be found on the debrief sheet.

The audio from the interview will be recorded on a voice recorder, saved stored on a secure, password-protected, Brunel server and transcribed thereafter. Specific quotes may be used from the transcription to demonstrate certain points for my research. Anonymity will be guaranteed, and a pseudonym will be assigned to each participant. Also, all responses from the interview regarding your experience will be kept confidential. Once transcribed all audio recordings will be destroyed. As a doctoral researcher, my supervisor (Dr David Botchie, David.botchie@brunel.ac.uk) will be the custodian of the research data. Also, data for the empirical research will be retained for a period of at least ten years which is subjective to the data protection policy and guidance of Brunel University. During the ten years period, the data will be stored and kept strictly confidential password-protected, Brunel server per Brunel university data protection policy, the General data protection regulation (GDPR), and the UK data protection law.

Please note that the interview will be conducted under strict covid-19 safety protocols. You will be required to wear a face covering and remain distance between you and the interviewer. Also, you will be required to sanitise your hand with alcohol base sanitisers that will be made available at the interview. Should you, and/ or the researcher, show any symptoms or test positive for covid-19 less than 10 days after the interview, all other participants, including the researcher, will be required to take covid-19 test and adhere to self-isolation rules and guidelines if necessary. I will kindly adhere to all, and any further covid-19 safety instructions BEFORE, DURING and AFTER the interview.

Are there any lifestyle restrictions?

You are required to give consent if you wish to and then participate in the interview. In the interview, please feel free to answer as you wish. There are no lifestyle restrictions that will stop you from taking part and as stated you have met the inclusion criteria to participate.

What are the possible disadvantages and risks of taking part?

It is highly likely that there is no risk from your participation. However, if you do find any of the questions uncomfortable to answer, then you will always have the right not discuss anything you do not intend to. Importantly, as a participant, you can always answer how you would like to and always have the right to withdraw at any point during the research.

What are the possible benefits of taking part?

As mentioned, the study aims to investigate the floundering third-party certification programmes in the commodity value chain, precisely the cocoa industry in Ghana. Drawing on temporal myopia as a theoretical lens to examine the organising practices of loosely coupled actors in the successful implementation of the cocoa certification program. By taking part, you will be given the right to access the final copy of the report of the study. This may potentially help you to understand loosely coupled actors' contribution to certification programmes in organising. Please note these are only prospective benefits of taking part in the study.

What if something goes wrong?

If you are harmed by taking part in this research project, there are no special compensation arrangements. If you are harmed due to someone's negligence, then you may have grounds for legal action, but you may have to pay for it. Please note that, all information collected about you during the course of the study will be kept strictly confidential. Thus, procedures for handling, processing, storage and destruction of data are compliant with the Data Protection Act 2018, Brunel data protection policy. However, if evidence of harm or misconduct comes to light, then, in line with research guidelines, confidentiality will have to be broken. We will tell you at the time if we think we need to do this, and let you know what will happen next. Should you have any questions please feel free to get in touch with the College of Business, Arts and Social Sciences Research Ethics Committee Chair – Professor David Gallear (Cbass-ethics@brunel.ac.uk)

Will my taking part in this study be kept confidential?

All information that is collected about you during the research will be kept strictly confidential.

Will I be recorded, and how will the recording be used?

The researcher will record an audio from the interview and will be recorded on a voice recorder, saved stored on a secure, password-protected, Brunel server and transcribed thereafter. Specific quotes may be used from the transcription to demonstrate certain points for my research. Anonymity will be guaranteed, and a pseudonym will be assigned to each participant. Also, all responses from the interview regarding your experience will be kept confidential. Once transcribed all audio recordings will be destroyed.

What will happen to the results of the PhD?

Only the researcher, will have access to the actual raw data. Upon the interview being transcribed and analysed, selected quotations will be used in the results/findings section of the final report. Anonymized transcripts will also be included in the appendices of the report. All the results and the discussion are likely to be completed by ending of 2022. Once fully complete, please do not hesitate to get in contact with me for a copy of the full report. To reiterate your identity will not be exposed in the report and so full confidentiality is guaranteed.

Who is organising and funding the research?

The research is funded and being conducted by myself, Daniel Siaw in conjunction with Brunel University London.

What are the indemnity arrangements?

Brunel University London provides appropriate insurance cover for research which has received ethical approval.

Who has reviewed the study?

The College of Business, Arts, and Social Sciences Research Ethics Committee has reviewed the study and granted me as the researcher permission to conduct it.

Research Integrity

Brunel University is committed to compliance with the Universities UK Research Integrity Concordat. You are entitled to expect the highest level of integrity from our researchers during their research.

Brunel University London is committed to compliance with the Universities UK [Research Integrity Concordat](#). You are entitled to expect the highest level of integrity from the researchers during the course of this research

Contact for further information and complaints. Researcher name and details:

Researcher: Daniel Siaw, Management Studies PhD Student, Brunel Business School, Brunel University London

Contact Email: daniel.siaw@brunel.ac.uk

Supervisor name and details:

Supervisors: David Botchie, Senior Lecturer in Sustainability and Global Value Chains, Brunel Business School, Brunel University London

Contact Email: david.botchie@brunel.ac.uk

Professor David Sarpong, Professor of Strategy Brunel Business School, Brunel University London

Contact Email: david.sarpong@brunel.ac.uk

For complaints, Chair of the Research Ethics Committee:

Contact Chair of Research Ethics Committee: David Gallear, Professor of Operations Management, Brunel Business School, Brunel University London

Contact Email: david.gallear@brunel.ac.uk

